

## CHAPTER - I

### INTRODUCTION

#### 1.1 Background of the Study

The interest rate is the price charged to borrower for taking loan. In very general term, interest rate is the price paid for credit. So, it is computed dividing the cost of borrowed fund in rupees by the amount of money actually used by the borrower. An interest rate is the cost of borrowing money. Without it, people would not be willing to lend or even save their cash, both of which require a deferment of the opportunity to give up spending in the present. But prevailing interest rates are always changing and different types of loans will offer various interest rates. The interest rate is expressed in an annual percent basis. As the interest rate provides the price signal in the financial system, thus it is important to all the participants: the borrowers, the lenders, savers, and investors for example, higher interest rate encourages savings in greater volume and increases the lending activities of funds. Lower interest rate, in other hand, discourages the savings and reduces the lending activities as well. Interest is the price that one pays for utilising a certain amount of money for a specific period of time. Interest can thus be considered a cost for one entity and income for another. Interest is the opportunity cost of keeping your money as cash under your mattress as opposed to lending. If you borrow money, then the interest you have to pay is less than the cost of forgoing the opportunity to have the money in the present. It is the rent paid for using money provided by a lender.

Interest is both a payment and receipt for the use of money. Interest, therefore, can be considered from the above two points. If the interest is paid, it can be considered as a 'cost'. On the other hand, if interest is received, it can be considered as a 'return'. Since, money can earn a return over a period of time; interest rates are often considered as an expression of the time value of money and are expressed in percent. All business organizations or individuals are responsive to interest rate of the banks and financial institutions in one way or another. A variety of interest rate risk exists in the financial markets. However, in the context of Nepal, interest rate is regulated by the central bank during the early stage of financial market, development taking the period from 1955 to 1965. But gradually dramatic change had been made in the regulation on the interest rate by the central bank i.e. Nepal Rastra Bank according to the compatibility of the banks

and financial institutions through liberalization. In the early mid 1980's Nepal has adopted liberal economic policy as a result of which many banks and financial institutions came into existence. Regulation of the financial system aimed at control of the economy rather than foster safety and soundness of financial system. But the interest rate deregulation, curtailment or elimination of directed credits, lifting entry and exit barriers for financial intermediaries, restructuring of banking system and institution of regulatory and supervisory mechanism are some of the components which open the door of such liberalization. There was full discretions to NRB in determining interest rate structure of banks and financial institutions from the period 1960 to 1975 as it was the sole and whole institution authorized to determine the interest rate as per NRB act .

Essentially, there are three components in the interest rates – risk free rate, risk premium and adjustment for inflationary or deflationary situations. Risk-free rate is paid as compensation for deferred consumption by the borrower to the lender. As a borrower derives satisfaction well in advance by bringing forward his consumption, he is required to pay some price, which can be considered as risk-free part of the interest rates Risk-premium depends on the credit worthiness of the borrower. Higher the perceived risk on part of the lender, more risk premium is added to the risk-free rates and vice-versa. An interest rate also has adjustments for inflationary or deflationary economic situations. When value of money is going to fall in inflationary economy, equivalent amount of premium is added to the interest rates, whereas in deflationary economies, interest rates are discounted to factor increase in the value of the money (Peter, 1997).

The market rate of interest is that percent return per year which has to be paid on any safe loan of money, which has to be yielded by any safe bond or other type of security, and which has to be earned on the value of any capital assets (such as a machine, a hotel building, a patent right) in any competitive market where there are no risks or where all risk factors have already been taken care of by special premium payments to protect against risk. Thus, in an ideal capital market, the risk less rate of interest might be set by supply and demand (Samuelson, 1967).

Thus, we see that interest rate paid to savers depends in the following ways:

- On the rate of return, bank expects to earn on invested capital
- On Saver's time preference for current versus future consumption
- On the risk of the loan and

- On the expected rate of inflation

Deposit collection and mobilization is one of the major sources of capital formation. Deposit mobilization is primary and crucial function of any commercial bank. Bank provides facility of saving to general public and provides funds to investors, which help in mobilization of public fund in fruitful purposes, which helps in country's economic development. The collection of deposit and its mobilisation are the two sides of the same coin, in the absence of one, another cannot work i.e. without the collection of deposit, mobilisation of deposits would be quite impossible and vice versa. They both get along with another under favourable condition, interest rate being the most. Interest is the main factor in fund activities of commercial banks. Interest rate affects on the collection of deposits mobilisation of saving position.

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 amounts on the different loans provided for productive and priority and full deprived sector. However, there were limitations on certain sectors of lending such as the rate of maximum of 15 percent on the priority sector loan. And for other kinds of loans, financial institutions were given freedom to maintain the interest rate structure. In this way the government has provided freedom as well as limitations on the determination of interest rate.

Interest rate in the free market economy is determined by the free interplay of the demand and supply forces. Although interest rate is influenced by various factors the main factors which determine the interest rate are demand and supply of loanable fund. If supply increases and demand remains constant, interest rate in the market decreases. Similarly if demand for loanable fund increases and supply remain constant, interest rates in the market increase. But Nepalese economy has not developed up to that level so that free market can determine the interest rates. Nepal Rastra Bank as a guardian, fixes the terms had conditions regarding the interest and other activities of financial institutions in Nepal. But in recent years banks are permitted to fix the interest rate they charge and offer on loan deposits.

## **1.2 Statement of Problem**

Banking sector has always been the promising sector giving high return and value to its promoters and shareholders; their down looking financial scenarios has created very less investment alternatives and comparatively lower return. Our country showed several

banks within short period of time fighting for small amount of market share, which requires excessive force making high operational cost. Interest rates as a major tool to change the fortune of the bank it has always been modified as per situation and economy.

Interest rate is an essential tool in the field of finance and economics. Generally other things remaining the same increase in deposit interest rate promotes saving and while it is decrease encourages investment. The interest rate plays important role for the banking development. The favorable investment climate makes appropriate interest rate. They are facing the problems on refund of investment like government owned bank more but in another parts commercial banks were making good profit in competition each other. They are generating the new ideas and provide the various facilities to accuracy the bank customer. The interest is a price of money.

The interest rate is different for depositor and lender. That differences margin in the gain of bank. The interest rate charged and offered of a financial institution and commercial banks was regulated by central bank until before few years, but now these institutions are free to fix their interest rate. Commercial banks can play vital role by adopting effective interest rate policy on deposits and lending for encourage investment in every sector of economy. But it is true that commercial banks established with proper motives and interest rate may affect its profits too. An appropriate interest rate can divert investment in proper field. In short interest a deposit must be able to increase the amount of deposit must be able to increase the amount of deposit by encouraging people to save their income. On the other hand the lending rate of interest must be attractive to the borrowers. So that they will be able to enjoy benefits by utilizing borrowed fund. This is possible only when the fund seeking people will be able to earn more than what they pay as interest on borrowing funds. But whether our country is able to attain such situations or not it is a matter of concern for us.

Thus the process of study attempts at answering the following questions.

- i. What are the interest rates structures of Commercial Banks in Nepal?
- ii. Is the interest rate on deposit of Commercial Banks attract the depositors?
- iii. Has the lending rate of Commercial Banks seen able to attract the borrowers for investments?
- iv. What are the relationship between interest rate and inflation?
- v. What are the relationship between profitability and interest rate of the bank?

- vi. Is the spread interest rate of Commercial Banks attractive?

### **1.3 Objectives of the Study**

The main objective of the study is to identify the impact of interest rate on deposit and lending volume of Commercial. The specific objectives related to this study are as given below.

- i. To analyze the interest rate structure of various Commercial Banks at different time period.
- ii. To examine and analyze the influence (i.e. relationship) of interest rate on deposit amount and lending amount of Commercial Banks.
- iii. To identify the relationship of interest rate with inflation and profitability.

### **1.4 Significance of the Study**

Interest is simply the price on borrowed fund. Higher interest generally brings lending investment on to other hand Lower interest rates discourage the saving and encourage the investment. Higher the inflation, higher shall be the interest rate. But in real world the theory may or may not come true in context of a developing country like Nepal because most of the theories of financial markets and institutions are determined and developed by the study conducted by developed countries.

It is the responsibility crucial task of top level management to fixed interest rate. Even though people have more souring an even need more money for investments are not familiar with the interest rate structure of banks. In this study major functions of commercial banks would be analyzed by using various mechanisms. Since this study deal the part of the managerial function, hence it is hoped to some extent this study will help the policy makers to formulate strong policy regarding interest rate charged on deposits and lending in Nepalese context. This study will be also useful to various parties such as researcher, students, teachers, financial institutions, investors, business organization, and general individual to get some useful information about interest rate deposit and lending.

### **1.5 Limitation of the Study**

Though this study has been attempted to an accurate and deficiency free, the use of different econometric models for the analysis of impact of interest rate on deposit

mobilization may have rendered it quite reliable. This study is limited by the following factors.

- This study includes only four commercial banks.
- This study is based on the data of five years period and hence the conclusion drawn confines only to this period.
- The reliability of this study depends upon the information provided by concerned commercial banks and published data.
- Most of the data used in study are of secondary type and primary type.
- There are many factors that affect the deposit amount and lending amount of commercial banks. However this study is focused on the interest rate.

## **1.6 Organization of the Study**

This study is divided in to five chapters.

**Chapter I: Introduction:** The first chapter presents a brief introduction of the study. It includes background, interest rate of commercial banks, interest rate structure profile of sample banks, and statement of problem, objective, significance, research hypothesis and limitation of study.

**Chapter II: Review of literature:** The second chapter of deals with the review of literature including concept of interest rate, theories of interest rate, factors effecting interest rate from different books, journals and thesis.

**Chapter III: Research methodology:** Research design, population and sample sources of data and collection procedure, data processing and presentation and tools and method of analysis have been outlined in the third chapter.

**Chapter IV: Data presentation and analysis:** Chapter four presents analysis and interpretation of data of related topic based on annual reports of sample banks. In this chapter collected and processed data are presented, analyzed and interpreted with using analytical tools with presenting charts and figures.

**Chapter V: Summary, conclusion and recommendations:** Last chapter, summaries the whole study, conclusion and put forwards the recommendation.

## **CHAPTER - II**

### **REVIEW OF LITERATURE**

Review of literature is a way to discover what other research in the area of our problem has uncovered. A critical review of the literature helps the researcher to develop through understanding and insight into previous research works that relates to the present study. The purpose of reviewing the literature is to develop some expertise in one's area to see what new contribution can be made and to receive some ideas for developing a research design. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies. From above it is clear that the purpose of literature review is to be finding out. What research has been conducted is one's chosen field of study and what remains to be done. The review of literature provides basic foundations to this study. The various concepts employed in the study are, in fact, derived from the different literature surveyed in this part. 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 research works were reviewed.

#### **2.1 Conceptual Framework**

Different authors have defined interest and deposit in different ways. A review of these definitions is important in order to have a better insight into this subject matter. This part, therefore deals with the concept of interest and deposit, the evolution of these concepts and their different components.

##### **2.1.1 Meaning of Interest**

Interest rate is one of the important variables in economics and financial system of the country. In common parlance interest is pay for made by a borrower to the lender for the money borrowed and it is expressed a rate percent per year. But in economics widely different views have been put forth from the time of Aristotle recognized only annual husbandry and stock raising as two legitimate industries whose product could be lent and interest earned on them.

Interest is the amount paid to the creditor in return to a debt borrowed by a debtor for a fixed period of time. As the reward of other factors of production this interest is also a

reward paid to the capitalist for the use of capital. The system of borrowing loan and of paying the interest is very old. The economics of different times had hated the system of interest. Even then the poor people were compelled to take loans and pay interest due to various resources. Those days the loans were taken mostly by the businessman and the industrialists and these loans are used for the purpose of production.

The amount of loan is received from the fund of capital. Various economists have defined interest differently. The rate of interest influences the way in which any given level of aggregate disposable income is allocated between consumption and saving, it is not equally certain that a higher interest rate means that less disposable income will be allocated to consumption and more to saving, or vice versa. (Shapiro, 2001). Interest is the price of credit, or ratio of the fees charged to secure credit from a lender to the amount borrowed, usually expressed on an annual percent basis (Rose 1997). The rate of interest is really a payment for the use of scarce resources, money (Keynes, 1997 ). Interest rate is the payment for the use of loanable funds (Arnold, 1989:). The rate of return on an investment is the rate of interest at which the present value of the income stream yielded by the investment is equal to its cost (Reynolds, 1988). Even then the same, Conclusion may be drawn from all these definitions and the conclusion is that the interest is the amount of return paid for the use of capital.

### **2.1.2 Interest Rate Levels**

Funds are allocated among the borrowers by interest rate; firms with the most profitable investment opportunities are willing and able to pay the most for capital, so they try to attract the less efficient firms or those whose product are not in demand. of course, our country is not completely free in the sense at being influenced only by market forces, these the federal government has agencies that help designated individuals or group obtain credit favorable terms among those eligible for this kind of assistance are small businesses, certain minorities and firms willing to build plants in areas with high unemployment. Still most capital in the economy is allocated through the price system.

### **2.1.3 Functions of the Rate of Interest in the Economy**

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

- It helps guarantee that current saving will flow into investment to promote economic growth.

- It relates the available supply of credit, generally providing loanable funds to those investment projects with the highest expected returns.
- It brings balance the supply of money with the public's demand for money. It is also an important tool of government policy through its influence government meridians control over the volume of saving and investment.

If the economic growth is too slowly and unemployment is rising. The government can use this tool to lower interest rates in order to stimulate borrowing and investment and accelerate the production and development on the other hand, an economy experiencing rapid inflation has traditionally called for a government policy of higher interest rates to slow both borrowing and spending.

#### **2.1.4 Theories of Interest**

Various interest rate theories have been propounded by various economists, which describe how interest rate is determined in various situations. There are numerous interest rates in financial market such type of differences often carry a variety of interest rates. In this section, we focus upon those basic forces that influence the level of different interest rates.

To uncover these basic rate determination forces, however, 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 closed approximation to this pure rate in the real world in the market yield on the government bonds minus inflation. The rate at interest and Treasury bond is called risk free rate of interest, which consist of real rate of interest plus premium for inflation. It is a rate of return presenting no risk of financial loss to be investor and representing the opportunity cost of holding idle cost because the investor can always invest in no risk bonds and earn this minimum rate of return. Once pure rate in interest is determined, all other interest rates may be determined from it by examining the expected future inflation and special characteristics of the securities of the securities issued by individual borrowers. For example only the government can borrow at risk free interstate, other borrowers pay higher rates 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 some well known theories interest rates are as follows.

### 2.1.4.1 The Classical Theory of Interest Rates

One of the oldest theories concerning the determinants of the pure or risk free interest rate is the classical theory of interest rates, developed during 18th and 19th. Century by a number of British economists and elaborated by Irving fisher (1930) earlier in this century. The classical theory argues that the interest is determined by two forces first is supply of savings, derived mainly form households and second the demand for investment capital, coming mainly from the business sector.

According to the classical economist the interest rates in the financial markets were determined by the interplay of the supply 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 investment. Specifically, the equilibrium rate of interest is determined at the point where the quantity of saving supplied to the market is exactly to the quantity of funds demanded for investment.

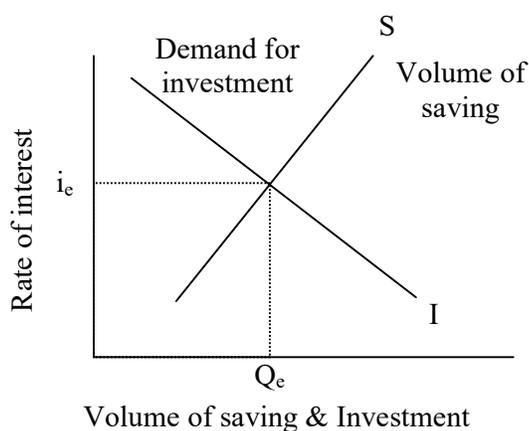


Figure 2.1

Equilibrium Rate of Interest in the Classical Theory of Interest

In the given figure, equilibrium rate for interest is  $i_e$  and the equilibrium quantity of capital funds traded in the financial markets is  $Q_e$ .

### 2.1.4.2 The Liquidity Preference Theory of Interest Rate

Liquidity preference theory of interest interplay of the total demand for and the supply of money determines the equilibrium rate of interest in the short-run.

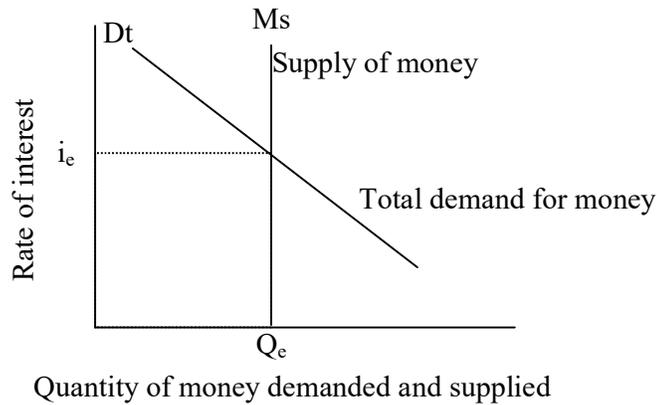


Figure 2.2

#### Equilibrium of Interest Rate in Liquidity Preference Theory of Interest Rate

In the given figure, equilibrium rate is found at point  $i_e$ , where the quantity of money demanded by the public equals the quantity of money supplied.

#### 2.1.4.3 The Loanable Fund Theory of Interest Rate

A view that overcomes many of the limitations of earlier theory is the loanable funds theory of interest rate. This view argues that the risk free rate is determined by the interplay of two forces the demand for and supply of credit (loanable funds). The demand for loanable funds consists of credit demands from domestic businesses, consumers and governments and also borrowing in the domestic market by foreigners. The supply of loanable funds stems from four sources viz. Domestic savings, hoarding demand for money, money creation by the banking system, and lending in the domestic market by foreign individuals and institutions.

The two forces of supply and demand for loanable funds determine not only the volume of lending and borrowing going on in the economy but also the rate of interest. The interest rate tends toward the equilibrium point at which the supply of loanable funds. The point of equilibrium is shown in the following figure where it is the equilibrium rate of interest and  $QE$  is volume of loanable funds (credit).

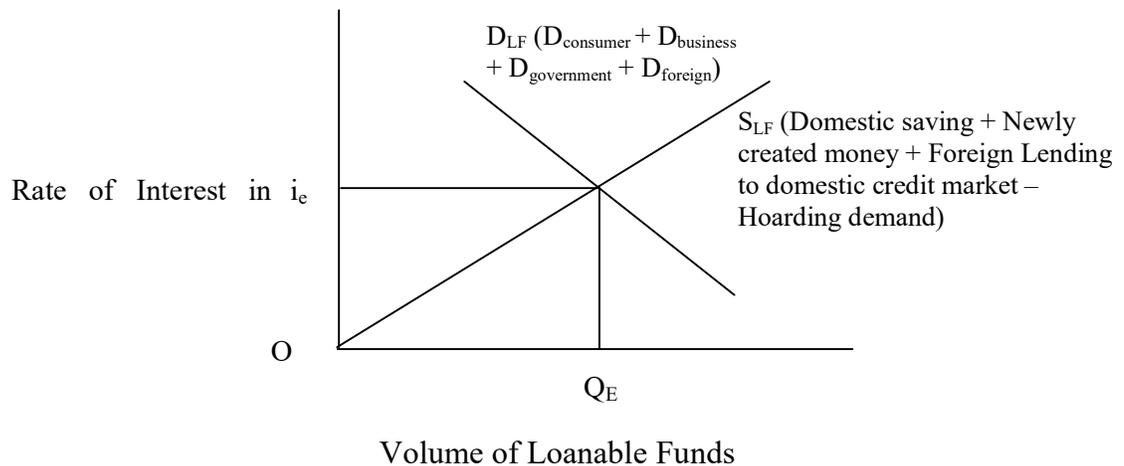


Figure 2.3

### The Equilibrium Rate of Interest in Loanable Funds Theory

In the given figure  $D_{LF}$  stand as a total demand of loanable fund and the  $S_{LF}$  refers supply at the loanable fund, if the interest rate s temporarily above equilibrium, the quantity of loanable funds supplied by domestic savers and foreign lenders, by the banking system and from the disordering of money exceeds the total demand for loanable funds, and the 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. Borrower will bid up the interest rate until it settles at equilibrium once again.

#### 2.1.4.4 Rational Expectancy Theory of Interest

The rational expectancy theory assumes that equilibrium interest rate depends upon the changes in investor's expectation regarding future security price 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 absence of new information, the next period's interest rate. In other words the knowledge of past interest rate will not be a reliable foresaid of future interest rate. In a perfectly efficient market, it is impossible to win excess returns continuously by trading on publicly available information.

### **2.1.5 Change in Interest and Its Influence Upon Volume of Assets**

The prices of a security and its yield or rate of return on interest rate are inversely related. A rise in interest rate implies a decline in price; conversely, a fall in yield is associated with a rise in the security's price.

The investing funds in financial assets can be viewed from two different perspectives, the borrowing and lending of money or the buying and sell of securities. The equilibrium rate of interest from the lending of funds can be determined by the interaction of the supply of loanable funds and the demand for loanable funds. Demanders of loanable funds (borrowers) supply securities to the financial market place, and suppliers of loanable funds (lenders) demand securities as an investment. Therefore the equilibrium rate of return or yield on security and the equilibrium price of that security are detraind at one and the same instant and are simply different aspects of the same phenomenon, the borrowing and lending of loanable funds.

The inverse relationship between interest rates and security prices can be seen quite clearly when we allow the supply and demand curves to change. For example suppose that in the fact of continuing inflation, consumers and business firms accelerate their borrowing, increasing the demand for loanable curves slides up word and to the right with the supply of loanable funds unchanged. This increasing demand for loanable funds also means that the supply curve. Both a new loanable equilibrium price for securities and higher equilibrium interest rate for loanable funds results.

Conversely suppose consumers decide to save more expanding the supply of loanable funds. Then the supply of loanable funds curve slide downward. But with more savings, the demand for securities curve must rise, sliding upward as those added savings are invested in securities. The result is a rise in the equilibrium price of securities and a decline in the equilibrium interest rate.

### **2.1.6 Factors Affecting Interest Rates**

In the preceding section, we examined the factors that cause the interest rate or yield on new security to be different from the interest rate yield on another.

There factors included the maturity period of term of a loan and expected inflation. In this section, our focus is upon to learn about factors affecting interest rates in fact, thousands of different interest rates exist in the economy.

### **a) Marketability**

Marketability is the capability of being sold quickly at low transaction cost. Marketability risk deals with the degree of difficulty in being able to convert a financial claim into cash at its most recent transaction price of very close to it. Savers who purchase poor marketability investments 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.

Marketability is positively related to the size and population of the institution issuing the securities to the number of similar securities outstanding. Not surprisingly, stock and bonds issued in large blocks by the largest corporations and government units tend to find acceptance more readily in the market with a large number of similar securities available, but sell transactions are more frequent and consistent market price can be established.

### **b) Default Risk**

Default risk involves that potential that a saver will receive less principal and interest on the financial claim that the contract specifies. It is related with the probability that some or all of the entailed investment will not be returned. The degree of default risk is closely related to the financial condition of the company. Default risk requires making estimates of the possibility of loss due to this reason. Investors in securities face many different kinds of risk, but one of the most important is default risk—the risk that a borrower will not make all promised payments at the agreed upon items. All securities except government securities are subject to varying degrees of default risk.

### **c) Prepayment Risk**

A new form of risk affecting the related interest rates confronting modern investors arises when they acquire so-called loan-backed securities. These loan-backed securities are usually created when a lending institution, such as a bank or mortgage company, removes a group of similar loans from its balance sheet and places them with a trustee (such as a security dealer) who, using the loan as collateral, sells securities to raise new capital for the lending institution. Each of these securities derives its value from the income earning potential of the pool of loans that backs the securities. As the loans in the pool generate interest and principal payments, these payments flow through to holders of

the loan backed securities. In loan backed securities investors demand higher yields to compensate them for prepayment risk associated with it.

#### **d) Servicing Cost**

Some financial claims are different 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**

Now-a-day's financial markets have become more global, there has been a significant growth in the borrowing and investing in foreign denominated financial claims. A US company establishing manufacturing facility in Nepal might be inclined to issue shares and or bonds denominated in Nepalese rupees rather than US dollars. Investor also have available to them many investments involve exchange rate risk. The risk relates to the potentiality that the rate of exchange between the domestic currency and foreign denominated currency will than go as a result of numbers of factors. The primary risk for this borrows is that the value of the currency borrowed rises in relation to the domestic currency. This result in a unexpected cost on the international loans, since the loan would have to be repaid in the foreign currency that has risen in value related to the domestic. This potential change in currency values must be reflected in computing the cost of borrowing.

#### **f) Call Privileges**

Many corporate bonds and mortgages most municipal revenue bonds and some government bonds issued in today's financial market carry a call privilege. This provision of the bond contract grant the borrower the option to restore all or a portion of a bond issue by buying back the securities in advance of maturity. Bond holders usually are informed of a call through a notice in a newspaper of general circulation while holders of record of registered bonds are mortified directly. Normally when the call privileges is exercised, the issuer will pay the investor the call price, which equals the securities face name plus a call the size of the call penalty is set for in the indentures and generally varies inversely with the number of years remaining to maturity and the length

of the call deferment period. In the case of a bond, one year's worth of coupon income is often the minimum call penalty required.

### **g) Taxability**

The final factor influencing the change in interest rate taxability. Financial claim income is typically subject to taxation. Taxes imposed by federal state, and local governments have a profound effect on the returns earned by investors on financial assets. Since the value of financial claim subject to taxation is based on its anticipated cash flow, taxation acts to reduce those cash flows. Not all incomes are taxable equally. Thus higher the tax lower will be the cash flow and higher the interest rate and vice versa.

## **2.1.7 Deposit**

### **2.1.7.1 Concept of Deposit**

Deposit is the sum of money lodged with bank or financial institutions. Deposit 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. To a bank these deposits are liabilities. Deposits are the amount deposited in a current, savings or fixed accounts of a bank or financial institution. The deposits are subject to withdrawals by mean of cheque on a short notice by customers there are several restrictions on these deposits. Regarding the amount of deposit, number of withdraw etc. these are considered more as investments and hence they earn some interest the rate of interest varies according to the nature of deposits. The bank attracts deposits from customers by offering difference rates of interest and different kind of facilities. Though the bank plays an important role in influencing the customer to part with his funds and open deposit accounts with it, it is ultimately the customer who decides whether she/he should deposit his surplus funds in current deposit a/c, saving deposit a/c, or fixed deposit all. Bank deposits arise in two ways when the banker receives cash, it credits the customer's account, it is known as primary or a simple deposit people deposit cash in the banking system and there by convert one form of money cash into another form, bank money. They refer to keep their money in deposit prim 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 grain a loan to a customer it doesn't usually pay cash but simply credits the customer's account with the amount of loan.

### **2.1.7.2 Types of Deposit**

There are mainly three types of deposits in banks in practice. They are:

#### **Current Deposit**

A current deposit is a running account with amounts continuously. Current deposits, more commonly known as checking accounts, are the principal means of making payments because they are safer than cash and are widely accepted. (Rose Peter, 1997). These accounts are called demand depositor demand liabilities since the banker is under the 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 organizations whose banking transactions are numerous and frequent. As these deposit are payable on demand, banker is obliged to keep larger cash reserves than are needed in the case of fixed and saving deposits. This type of account is just a facility offered by a bank to its customers. So such deposit doesn't yield and interest return.

#### **Saving Deposit**

An account of amounts deposited in a bank for saving purpose is called saving deposit. Saving deposits generally are in small dollar amounts, they bear a relatively low interest rate but may be withdrawn by the depositors with no notice (Rose Peter, 1997). The saving deposit bears the features of both the current and fixed period's deposits. Saving account is mainly meant for non-trading customers who have some potential for saving and who don't have numerous transactions entering their account. While opening the account the minimum compensating balance differ according to the banks rule. Similarly there is also divergence as to how much amount of money can be withdrawn. But it is the customers want to withdraw more money from the bank which is not allowed by its but if he/she gives pre-information to the bank, he/she can withdrawn more money. The bank fixes the minimum and maximum amount of withdraw able through a cheque from the deposit. If the bank goes into liquidation, priority is given to the saving deposit holders.

## **Fixed Deposit**

Fixed account means an account of amounts deposits in a bank for certain period of time. Fixed deposits carry a fixed maturity and usually offered the highest interest rates, a bank can pay (Peter, 1997). The customers opening such account deposit their money in the account for fixed period. Usually, only the person or institution who wants to gain more interest opens such type of account high interest rate is paid to this deposit as compare to saving deposit. The bank and the customer can take benefit from his 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 90percent of the deposit against the security of the deposit for this bank chare. Some higher interest than the interest allowed on the deposit.

### **2.1.7.3 Importance of Deposit**

Deposit arises from saving. An individual's income equals consumption plus saving she/he deposits the saved part of income in the bank and gets interest from it. Banks in turn lend this money and earn profit by charging high interest rates. The borrowers form banks, invests this fund in productive sectors yielding more return than the interest on borrowed fund. This investment leads to create new employment opportunity in the economy. Ultimately due to new employment the purchasing power of the economy increase and finally G.D.P and growth of the economy occurs. It means that the economy also lags behind due to lack of resource. The deposit of banks is the accumulate capital which can directly be invested. There is a great need of such deposit in the development countries. Deposit includes the idle money of the public, bank being the intermediary to accept this sort of money and help to channelize this in productive sectors. So the importance of banks and financial intermediaries is larger in present context.

### **2.1.8 Lending (Credit)**

#### **2.1.8.1 Concept of Lending (Credit)**

The word credit means trusting. In the credit transactions the lender (or banks) must have confidence in the borrower that she/he will be able to repay the money. In credit transactions, the creditor's turns over to the debtors to repay an equivalent amount usually money in future plus as added sum called interest. Loans arise from negotiation

between the bank and its customer and result in a written agreement designed to meet the specific credit needs of the customers and the requirements of the bank for adequate security and income (Rose Peter, 1997). Commercial bank earns profit by lending the amount in terms. Loan or credit and in return it gets interest. Banks loans are classified as; a) loans and advance b) overdrafts c) cash credit d) discounting of bills and so on. But beside this, the other forms of credit are Bills Exchange Cheques, Drafts, Promissory Note, Letter of Credit (LC), Travelers Cheque, Treasury Bills (T-Bills), Book Credit etc.

If credit is made to the government the credit is known as public credit and if credit is transacted by the private for his own purpose the credit becomes private. There are certain distinctions between public and private credit. Bank credit refers to the credit taken by the banks. Bank is the major sources of credit to both private and public debtors, sometimes bank also take credit. There is another type of credit known investment credit and commercial credit which can be divided according to the purpose of using credit. The former refers to the credit, which is purposes; similarly, another classification is consumer's credit and produces credit.

#### **2.1.8.2 Factors Affecting the Volume of Lending**

The volume of credit within a country depends upon different factors. Some of the factors the volumes of credit are as follows:

##### **1) 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 the volume of credit and interest rate has inverse relation. People invest very carefully in productive sector when the interest rate is high in the market economy.

##### **2) Rate of Return**

If the rate of return is high 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.

##### **3) Investment Opportunity**

If the investment opportunity within the country is high, the volume of credit becomes higher. The basic thing for investment stimulation is easy and cheap credit etc.

#### **4) Pacesetters of Financial Development**

If there are enough banking facilities to provide loans in easy terms, the volume of credits may be high? It is due to the lack of cheap money lenders that rural people are deprived of loan. If the banking facility within the nation is expanded, the volume of credit rises.

#### **5) Basic Infrastructure**

Like transportation marketability, availability of raw materials plays an important role in raising the volume of credit in the country.

#### **6) Political Situation**

Political situation, especially political instability is also one of the major causes of low volume of credit. In such a case, none would like to risk his capital in new ventures. The present condition of the country is the glaring example of this.

In addition to aforementioned point, other factors like trade condition currently conditions are also the factors affecting the volume of credit.

### **2.1.9 Inflation**

#### **2.1.9.1 Concept of Inflation**

Inflation is common sense in increment in general or average price level in the whole economy. It means that it is the increment in general price level, not the increment in individual prices. Inflation is not a temporary fluctuation in price but it is a sustained and appreciable increase in price. Due to the increase in general level in price, the value of purchasing power of money declines as there is an inverse relationship between the general level of price and value of money according to economic couter Inflation means a state in which the value of money is falling i.e. prices are increasing. (Rose Peter, 1997) Inflation is a general a rise in the price of a particular good or service. Individual prices rise and fall all the time in a particular good or service. Individual prices rise and fall the time in a market economy. Reflecting consumer choices and preferences and changing costs. If the price of one item say particular model of car-increases because demand for it is high, we do not think of this as inflation occurs when most prices are raising increase smoothly in the range of some degree across the whole economy.

During inflation, the cost of living increases rapidly, so inflation severely hurts the people who depend on the income from fixed income securities like bonds and preferred stock. Similarly as purchasing power of money falls as well as the debtors gain and the creditors loses.

#### **2.1.9.2 Inflation and Interest Rates**

Inflation occurs when the average price level in the economy rises. Interest rates present the "Price" of credit. Are they also affected by inflation? Answer is yes. There is positive correlation between interest rates and inflation. In other words, increase in inflation increase the interest rates. But the exact effect inflation an interest rate is not identified yet on the regards. There are many theories. Here in this case mainly two theories are going to be discussed.

#### **2.1.9.3 The National Real Interest Rates**

Before expanding the relationship between inflation and interest rates, several key terms must be understood. In this connection one should be familiar with nominal rate and real rate of interest. The nominal rate is published or gesture interest rate and a security or loan. These rates are actual rates that are used to transact with the customers. For example an announcement in the financial press the major commercial banks have raised their prime lending rate to percent per annum indicates what nominal interest rate is now being quoted by banks to their best customers. Similarly the real interest rate is the return to the lender or investor measured in terms of its actual purchasing power. In a period of inflation, of course, the real rate will be lower than the nominal rate. An investment's real rate of interest during some period is calculated by removing the rate of inflation from the nominal return.

#### **2.1.9.4 The Fisher Effect**

Economic theory tells us those interest rates, in countries where inflation is expected to be high; interest rate also will be high, because investors want compensation for the decline in the value of money. This relationship was first formalized by economist Irvin Fisher and is referred to as the Fisher effect. According to Fisher effect, nominal interest rate is related to the real rate by the following equation.

$$\text{Nominal interest rate} = \text{Expected real rate} + \text{Inflation premium} + (\text{expected real rate} \times \text{inflation premium})$$

According to Fisher, the cross, product term in the above equation (i.e. expected real rate X inflation premium) is often eliminated because it is usually quite small. Expected inflation in countries with experience can be written as:

$$\text{Nominal interest rate} = \text{expected real rate} + \text{inflation premium rate}$$

Clearly if the expected real interest rate is held fixed, changes in nominal rate will reflect shifting inflation premium. It means that if inflation premium increases then nominal rate also increases.

#### **2.1.10 Interest Spread Rate**

Interest spread is the difference between weighted average rate of interest on interest earning assets and weighted average rate of interest on interest paying liabilities. According to Nepal Rastra Bank the interest spread should not exceed 8 percent currently. It can be calculated as follows:

$$\text{Interest spread rate} = \frac{\text{interest income} / \text{earning assets} - \text{interest expenses} / \text{interest paying liabilities}}$$

### **2.2 Review of Journals / Articles**

Pant (2008) stated that the interest rate determines the level of investment which can be invested by the investors. In case of a perfect financial market, interest rate is determined by the supply of money (which can be invested) and its demand (from private sector, government sector). But in developing countries interest rate must be higher because of governments' high demand for capital.

Shrestha (2015) stated that top banks have comparatively lower dependency than smaller banks; smaller banks are prone to face higher impact of interest rate on mobilization of funds. This is the reason why smaller banks need to increase deposit interest rate and decrease lending rate to minimize the expected negative impact of interest rate. He came to the following findings:

- The wider spread of interest rate helps the commercial banks to manage the higher liquidity position and good profitability.

- A high interest in deposit and low in lending is important to attract customer to the bank but facilities offered by banks also plays an important role for the success of banks.
- An appropriate and realistic interest rate on lending can help in the optimum utilization of available resources.

Bhandari (2018) stated that the deposit rate and lending rate increased slightly immediately after liberalization of interest rate on Aug. 31, 1999 but started to decline thereafter. To point out his findings:

- i. Interest rate structure of commercial banks greatly influenced their profitability which depends upon their interest spread.
- ii. Deposit rate is still the most important determinant of the deposit collection of the commercial banks.
- iii. Lower rate of interest helped increase the credit flow.
- iv. Commercial banks investment in government and other securities dramatically increased in the following year of the interest rate liberalization.
- v. Many commercial banks invest a small part of their resource in non-fund based area.
- vi. The study showed decreasing trend of increasing ratio of loan and advance of commercial banks to their resources.
- vii. The study also shows the increasing demand for credit can be met only increasing deposit collection.

Khatai (2019) stated the overall performance of commercial banks is satisfactory and NRB has to pay more active role to enhance the operation. He further writes:

- Liquidity position of commercial banks is satisfactory.
- The coefficient of correlation of deposit and lending and investment of commercial banks have better position.
- The coefficient of interest rates and deposits of commercial banks do not have better position.
- The trend of deposit, loan and advances and investment and investment to deposits is in decreasing trend.

He concluded his thesis mentioning that the interest rate has played important role in deposit mobilization of the bank. So, the structure of interest rate should be changed according to the need of nation.

KC (2018) mentioned interest rate is one of the main weapons of monetary policy.

He mentioned the following facts regarding interest rate. The level of interest rate depends upon the internal liquidity, situation of external interest rates, change in exchanging rate etc. Interest rate also depends upon the change in real national income, return on alternative income, number of financial institutions and the capacity of financial institutions.

The desire to save money of the general people is closely related with the rate of interest on deposit but the rate of interest on deposit of financial institution itself depends up on the liquidity position of the bank and the amount of loan demanded low rate of interest adversely affects the saving mobilization, flexibility of capital and effective utilization of capital resources while higher interest rate affects investment negatively.

Less spread shows the ability of financial institutions. But it is necessary to keep appropriate spread level for financial institutions to maintain them qualified in this sector.

### **2.3 Review of Thesis**

For the depth understanding of interest rate and its impact some relevant books, research paper, articles and genuine thesis are also reviewed to share knowledge left by past researcher and books. The review of the old but valuable literatures is done in following order:

Paudel (2015) conducted a study with the following objectives:

- To explore the relation of interest rate with deposit amount.
- To identify the sensitivity of interest rate to the investment.
- To identify the maturity of bonds as it reflect the effect of the loan structure of the nominal interest rate.
- To find out the relationship of interest rate with inflation in Nepalese market.

The major findings of the study are:

- Lending interest rate and lending amount have negative relationship. So except NBL all the sample banks have negative correlation between these two variables. So, by the help of the correlation tools it can be defined except NBL all the sample banks have inverse relationship.
- There is a negative relationship between saving deposit amount and the saving interest rate. So, the t-statistic of negative correlation between saving interest rate and saving deposit amount conclude that for saving deposit there is no substitution affect.
- Depositors are not satisfied due to negative real rate of return even lower that inflation rate, which indicate instead of gaining profit the depositors use their money in real sense.

The saving deposit amount and the saving interest rate are ranging from positive to negative, inversely proportional to each other. If one variable increase uniformly other variable decrease and vice-versa. This is result of the large funds of public on saving account with low interest rate, which indicate the situation of null investment opportunity.

Upadhyay (2016) conducted a study with the following objectives:

To analyze the trend of interest on deposit and lending of NBL and RBB.

- To analyze the trend and causes of fluctuations deposit and lending amount of NBL and RBB.
- To analyze the impact of rate of interest on deposit and lending of NBL and RBB.

The findings of the study are:

- Changing interest rate structure can create a competitive environment among commercial banks.
- The wider spread interest rate helps the commercial bank to manage the higher liquidity position and good profitability.
- A high interest on deposit and low in lending is important to attract customers to the bank but the other facilities offered by the banks also play an important role for the success of the banks.

- An appropriate and realistic interest rate on lending can help in optimum utilization of available resources.

Gupta (2016) conducted a study with the following objectives:

- To present and analyze the interest rate structure of various commercial joint venture banks at different time period.
- To examine and analyze the influence of interest rate on deposit amount and lending amount of commercial joint venture banks.
- To examine and analyze the position of interest rate and loan and advance ratio of commercial joint venture banks.
- To recommend appropriate suggestions base on the analysis of the data to concerned authority.

Major findings of the study:

- The interest rate on both deposit and lending of all sample banks are found to be in decreasing trend but on the contrary to this deposit amount and lending amount is increasing every year except NBBL.
- To clarify the above conclusion the t-statistic of negative correlation between saving deposit amount and saving interest rate is significant except NABIL it means that they have strong negative relationship.
- During the study period, it is found that there except the high spread between deposit interest rate and lending interest rate.
- It is also found that lending interest rate of the productive sector loan such as commercial loan, industrial loan, trade credit, working capital loan were decreased lesser in magnitude in comparison to the non-productive sector loan. In the case of lending people use more money when interest rate on lending is low almost all banks have lend more money lowering interest rate on lending. But borrowing has increased on non-productive sector.
- One of variables that affect the demand of fund is lending interest rate. Theoretically there is negative relationship between lending interest rate and lending amount.

Kshetry (2017) conducted a study with the following objectives:

- To present a concrete picture of the interest rate structure in Nepal
- To predict the relationship between interest rate and other economic variable like deposit, inflation, and credit flow in Nepal
- To analyze the impact and the implication of the policy of interest rate of NRB

With the above mentioned objectives, he was of the view that deposit depends upon numerous factors besides income, inflation and interest rates. Findings of the study are:

- If other variable are kept constant, institutional interest rate is important explanatory variable to influence the volume of deposit in Nepal.
- Interest rates play an important role in under developed country like Nepal where the demand for capital is increasing at each level of income. An appropriate interest rate can divert investment in proper field. This means that the upward movement in the deposit rates increases the volume of deposits.
- According to him, the fixation of attractive interest rates on deposit has been responsible for the substantial growth in the volume of deposits in recent years.
- He also opines that most of the commercial banks in Nepal are concentrated only in the urban areas. Regarding deposit mobilization in the present context, the urban areas have occupied major parts of the credit and the credit is concentrated in urban areas. The volume of deposit has overcome the volume of credit.
- Finally, the relationship between credit flow and loan rates is found out to be negative. If the loan rate of interest is in concession, there is the possibility of raising investment and thus the volume of credit.

Bhatta (2018) conducted a study 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 findings drawn by Bhatta 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 simple correlation coefficient between deposit rate and deposit amount of sample banks were highly negative. But out of them, correlation coefficient analysis of one sample bank is found to be negative. It means that in that case the theory doesn't match the analysis. So, writer concludes that case the result appears in that study was different than the theory.
- 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. So, he 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 (2019) conducted a research with the following objectives:

- To highlight the relationship of interest rate with deposit and lending amount.
- To analyze the relationship between interest rate on deposit and inflation rate.

Findings of the study are:

In this study, the disseminator tries to portrait the relation of interest rate with deposit and lending amount (i.e. existence of substitution effect). The findings drawn the study 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. He also concluded that the spread between deposit interest rate and lending interest rate is in decreasing trend.

Khanal (2013) had conducted a research with the objective of the study was to understand and analyze the impact of interest rate on deposit mobilization and its long term effects on the profitability of the selected banks. Beside the main objectives following are the specific objectives:

- To study the interest rate spread and its impact on the profitability of the bank.
- To study the dominance of the interest income to the total earning of the bank.
- To find out the perception of bankers regarding impact of interest rate on deposit collection and mobilization.

To achieve the objective of this study, analytical as well as comparative research design was used. Some statistical accounting tools have been applied to examine facts and analytical techniques were adopted to evaluate the impact of interest rate on deposit mobilization and profitability of the banks. From the study following major findings are obtained:

- The figures of interest earned to total assets showed banks are behaving in similar patterns. This ratio is in increasing pattern. Over the years the ratio lies between 5 to 7 percent.
- Interest coverage ratio reveals that these banks are maintaining comparatively higher interest coverage ratio than others. Here the Nabil Banks is comparatively in strong position.
- The total loan to total deposit ratio of Everest Bank Limited and Nabil Bank Limited shows that EBL has comparatively invested high portion of its deposit

funds into lending than NABIL. So EBL has been much aggressive in lending larger portion of its deposit funds.

- Total investment to total deposit shows fluctuating investment pattern. NABIL has invested higher than EBL. Bigger banks do not depend on lending of its deposit, they foresee the future prospects in investments and take risk to uncertain venture that's why they invested as high as in investment.
- Net interest income of these banks shows NABIL has maintained comparatively higher net interest income than EBL. Both banks have positive growth rates.

Ghimire (2014) stated that the primary objective of this study was to identify the structure of the interest rate of commercial banks and its impact on deposit and lending. In order to achieve primary objective, the sub objectives are highlighted as below:-

- i. To study and analyze the relationship of interest rate on the volume of deposits of commercial banks
- ii. To study and analyze the relationship of interest rate structure on the volume of lending of commercial banks

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.

On the basis of above entire presentation and analysis of relevant data of sample banks using various analytical tools, the major findings are as follows:

- The interest rate on both deposit and lending of all sample banks are found to be in fluctuating (generally decreasing) trend. But, on the contrary to this, deposit amount and lending amount is increasing every year.
- The saving deposit amount and saving interest rate have inverse relationship of all sample banks (except NABIL). The value of correlation coefficient between saving deposit rate and saving deposit amount of sample banks under study is found as 0.431192, -0.745084, -0.810354 for NABIL, EBL and BOK respectively. These values show that there is high degree of inverse relationship except NABIL.
- Analysis of fixed deposit amount and fixed interest rate shows positive relationship for NABIL, EBL and BOK. The correlation coefficient is found as

0.99026, 0.628976, 0.660947, for NABIL, EBL and BOK. This shows that the people depositing more money in fixed deposit are affected by yield rate on fixed deposit.

### **Research Gap**

Previous researchers covered all the commercial banks and some were either on case study between two commercial banks or some were on the particular bank branch. But this study focused on some particular sample banks. This study covers the recent and an updated data of all the sample banks. Moreover this study has not been done by previous researcher as separately. Thus, to fill the gap, this study had been conducted. However, no one has done study on "Impact of Interest on Deposit and Lending" with reference to EBL, NABIL, HBL and SCBL. Therefore, the researcher attempts to study in this area.

## CHAPTER - III

### RESEARCH METHODOLOGY

Research methodology describes methods and process applied in the entire aspect of the study. In other words, research methodology describes methods and process applied in the entire aspect of the study. In this chapter, efforts have been made to present and explain the specific research design for the sake of attaining the research objective.

#### 3.1 Research Design

A research design is the arrangement of continuous collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. It is simply the frame work for study and helps the analysis of data related to study topic. It constitutes the blue print for the collection, measurement and analysis of data. It is descriptive and prescriptive in nature. The relevant and necessary data were collected from annual reports of various commercial banks and publications of Nepal Rastra Bank for analytical purpose.

#### 3.2 Population and Sample

Presently 27 commercial banks (including government owned, public and joint venture) are under operations in Nepal. Due to the time and resource constraints, it is not possible to study all of them. The population for the study comprises 27 commercial banks out of them all four commercial banks which are chosen through the random sampling method viz. NABIL, HBL, EBL and SCBNL are taken as sample to draw the conclusion about population since population of commercial banks are not large. It is well-known fact that the renowned and highly profitable banks in Nepal are NABIL, HBL, EBL and SCBNL. To know the fact that how they are getting optimum profit was my curious. So NABIL, HBL, EBL and SCBNL have been taken as sample for study.

Hence they have been able to perform satisfactory through service excellence and customer satisfaction, there by earning a stable and consistent return to their shareholders.

### 3.3 Sources of Data and collection Procedure

The research is based secondary as well as primary data. Secondary data are collected mainly from sources like annual report, published bulletins, newspaper, journals internet and other sources. Besides this in some cases primary data are also used. They are collected through questionnaire.

### 3.4 Data Processing and Presentation

The information obtained from different sources will be in has been process and convert it into required form. For presentation different figures and tables are used. Similarly graphical presentation is also made. For the reference the photo copies of raw data are attached in the last portion of thesis. So far as the computation is concerned, it has been done with the help of scientific calculator and computer software program.

### 3.5 Tools for Data Analysis and Presentation

The analysis of data is done according to pattern of data available and felt necessity has used. Statistical tools and some financial tools are used to meet the objectives of the study.

#### 3.5.1 Statistical Tools

##### Arithmetic Mean ( $\bar{X}$ )

Arithmetic mean is a given set of observation in their sum divided by the number of observation. In such case all items are equally important. It depicts the characteristic of the whole group. It is an envoy of the entire mass homogeneous data. Generally the average value lies somewhere in between the extremes i.e. the largest and the smallest items. It is calculated as follows.

$$\text{Arithmetic Mean } (\bar{X}) = \frac{x_1 + x_2 + x_3 + \dots + x_n}{N}$$

Or

$$\bar{X} = \frac{\sum X}{N}$$

$\sum X$  = Sum of the sizes of items

N = Number of items

### Standard Deviation ( $\sigma$ )

Karl Pearson first introduced the concept of standard deviation in 1983. Standard deviation is the positive square root of the arithmetic average of the square of all deviation measured from the arithmetic average of the series. The standard deviation measures the absolute dispersion of a distribution. The greater the amount of dispersion the greater will be the magnitude of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series. Standard deviation is denoted by a Greek letter ' $\sigma$ ' (sigma) and is calculated as follows.

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\sum(x - \bar{x})^2}{n}}$$

Where

n= Number of items in the series

$\bar{X}$  = Mean

X= Variable

### Coefficient of Correlation (r)

The correlation analysis is the technique used to measure the closeness of the relationship between the variables. It helps in determining the degree of relationship between two or more variables. It describes not only the magnitude of correlation but also its direction. The coefficient of correlation is a number which indicates to what extent two variables are related with each other and to what extent variations in one leads to the variation in the other. Correlation may be positive or negative which lies between  $\pm 1$ . Simple correlation between interest rate on deposit and deposit amount interest rate on lending and credit or lending amount and is computed in this thesis. The correlation between interest rate on deposit and deposit amount is positive. Interest rate on lending and leading amount is negative when inflation increases, interest rate also increases in same direction and vice versa. For our study following reference is used.

The correlation coefficient can be calculated as:

$$\begin{aligned} \text{Correlation of coefficient 'r'} &= \frac{n \sum x_1 x_2 - (\sum x_1)(\sum x_2)}{\sqrt{n \sum x_1^2 - (\sum x_1)^2} \sqrt{n \sum x_2^2 - (\sum x_2)^2}} \\ \text{Alternatively } r &= \frac{\text{cov}(x_1, x_2)}{\text{var } x_1 \text{ var } x_2} \end{aligned}$$

Where,

$$\text{Covariance } (x_1, x_2) = \frac{1}{n} \sum (x_1 - \bar{x}_1)(x_2 - \bar{x}_2)$$

$x_1$  and  $x_2$  = two variables, correlation between them are calculated.

$n$  = total number of observations

### **Coefficient of Determination ( $R^2$ )**

The coefficient of determination is the primary way to measure the extent of the association that exist between two variables,  $x$  and  $y$ . it refers to a measure at the total variance in the dependent variable that is explained by its liner relationship to and independent variable the coefficient of determination is denoted by  $R^2$  and the value lies between zero and infinity. The  $R^2$  is always a positive number. It can't tell whether the relationship between the two variables is positive or negative. The square of the simple correlation coefficient is called coefficient of determination and it is very useful in interpreting the value of simple correlation coefficient the main significant of the coefficient of determination is to represent the portion of total variations due to independent variable.

$$\text{Coefficient of determination } (r^2_{12}) = (r_{12})^2$$

### **T-test for significance of Correlation Coefficient**

If ' $r$ ' is the observed sample correlation coefficient of ' $n$ ' pairs of observations from bivariate normal population the test statistics for significance of correlation under null hypothesis is given.

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

Where,

$(n-2)$  = degree of freedom

$n$  = sample

$t$  = t-distribution

The  $(1-\alpha)$  percent confidence limits for estimating population correlation coefficient ( $\rho$ ) are given by

$$r \pm t_{\alpha}(n-2) \times \text{S.E.} \textcircled{R}$$

$$= r \pm t_{\alpha}(n-2) \times \frac{1-r^2}{\sqrt{n}}$$

## **Hypothesis Test**

It is an assumption that is made about the population parameter and then its validity is tested.

### **First Hypothesis**

Null hypothesis,  $H_0: \rho=0$  i.e. population correlation coefficient is zero. In other words the variables (deposit interest rate and deposit amounts) are uncorrelated in Nepalese financial market.

Alternative hypothesis:  $H_1: \rho \neq 0$  i.e. population correlation coefficient is not equal to zero. In other words, the variables (deposit interest rate and deposit amount) are correlated.

### **Second Hypothesis**

Null hypothesis  $H_0: \rho=0$  i.e. population correlation coefficient is zero. In other words the variable (credit interest rate and credit or loan amounts) is not correlated in Nepalese Commercial Banks.

Alternative hypothesis  $H_1: \rho \neq 0$  i.e. population correlation coefficient is not equal to zero. In the words, credit interest rate and credit or loan amounts are correlated.

### **Third Hypothesis**

Null hypothesis  $H_0: \rho=0$  i.e. population correlation coefficient is zero. In other words the variable (there does not exist any correlation between interest rate on deposit and interest rate on lending).

Alternative hypothesis  $H_1: \rho \neq 0$  i.e. population correlation coefficient is not equal to zero. In the words, there exist correlation between interest rate on deposit and interest rate on lending.

## **3.5.2 Financial Tools**

Financial tools are used to examine the strength and weakness of the study. Financial tools like interest rate spread and ratios have been used. Ratio is the mathematical relationship between two accounting figures. Ratio analysis has been used to compare a firm's financial performance and status to that of other firm's or to it overtime. The qualitative judgment regarding financial performance of firm can be done with the help

of ratio analysis. Therefore only those ratios have been covered in this study as required by the study.

### **Loan and Advance of Total Deposit Ratio:**

The ratio is calculated to find out how successfully the banks are utilizing their deposits on loan and advances for profit generating purpose. A ratio helps us showing the relationship between loans and advances which are granted and the total deposit collected by the bank. A high ratio indicates better mobilization of collected deposit and vice versa it should be noted that too high ratio may be not be better from liquidity point of view. This ratio is calculated by dividing loan and advances by total deposits this can be stated as below:

$$\text{Loan and advance to total deposit ratio} = \text{Total Loan and advance} / \text{Total deposits}$$

### **Interest Rate Spreads**

Interest rate spread is a difference between interest rate on lending and interest rate on deposit. Generally banks charge more interest rate on lending than they provide interest rate on deposits. Interest rate spread is calculated as follows.

$$\text{Interest rate spread} = \text{interest rate on lending} - \text{interest rate on deposit}$$

Higher spread shows the bank charge high rate for the borrowers than they provide for depositors.

### **Liquidity Ratio:**

Liquidity is measure by the speed with which a bank's assets can be converted into a cash to meet deposit withdrawals and other current obligation. These ratios provide insight into the present cash solvency in the event of adverse financial condition. This ratio is used to measure the company's short-term obligation with short term resources available at a given point of time.

The following ratios are evaluated liquidity ratios:

### **Current Ratio**

It is computed dividing current assets by current liability

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

### **Cash and Bank Balance to Current Saving Deposits Ratio**

The ratio is computed by dividing the cash and bank balance by current saving and deposit

Cash and bank balance to current

$$\text{and saving deposit ratio} = \frac{\text{Cash and bank balance}}{\text{Current saving deposit}}$$

### **Cash and Bank Balance to Total Deposit Ratio**

The ratio is computed by dividing cash and bank balance by total deposits

$$\text{Cash and bank balance to total deposit ratio} = \frac{\text{Cash and bank balance}}{\text{Total deposit}}$$

### **Fixed Deposit to Total Deposit Ratio**

The ratio is computed by dividing fixed deposit by total deposit

$$\text{Fixed deposit to total deposit ratio} = \frac{\text{Fixed deposit}}{\text{Total deposit}}$$

### **Leverage Ratio:**

The long term position of the firm is judge by the leverage of capital structure ratios. The leverage ratio is calculated to measure the financial risk and the firm ability or using debt or benefit of share holder. These ratio measures the proportion of outsider's fund and owner's capital used in the bank. The following ratio is used in this group.

### **Total Debt to Shareholder's Equity Ratio**

It is computed by dividing total debt by shareholder equity

$$\text{Total debt to shareholder's equity ratio} = \frac{\text{Total debt}}{\text{Shareholder equity}}$$

### **Total Debt to Assets Ratio**

It is computed by dividing total by assets

$$\text{Total debt to assets ratio} = \frac{\text{Total debt}}{\text{Assets}}$$

### **Debt to Total Capital Ratio**

It is computed by dividing debt by total capital

$$\text{Debt to total capital ratio} = \frac{\text{Debt}}{\text{Total capital}}$$

### **Interest Coverage Ratio**

The ratio is also known as times interest earned ratio is used to test the debt servicing capacity of the bank.

$$\text{Interest coverage ratio} = \frac{\text{EBIT}}{\text{Interest charge}}$$

### **Turnover Ratio:**

Turnover ratio measure the performance efficiency of an organization that whether it is using it resources properly or not. To carry out operation a firm needs to invest in bank short term and long term activity ratio describe the relationship between the firm level of operation and the assets to sustain the activity turnover ratio can be used to forecast a firm capital requirement . The turnover ratio analyzed in the study.

### **Loan and Advance to Total Deposit Ratio**

It is calculated by dividing loan and advance by total deposit

$$\text{Loan and advance to total deposit ratio} = \frac{\text{Loan and advance}}{\text{Total deposit}}$$

### **Loan and Advance to Fixed Deposit Ratio**

It is calculated by dividing loan and advance by fixed deposit

$$\text{Loan and advance to fixed deposit ratio} = \frac{\text{Loan and advance}}{\text{Fixed deposit}}$$

### **Profitability Ratio:**

Profitability ratio measures the efficiency of a business enterprise. The profit measure the management ability regarding how well they have utilized their funds to generate surplus for this following ratio has been analyzed.

### **Return on total assets ratio**

It is computed by dividing net profit after tax by total assets

$$\text{Return on total assets ratio} = \frac{\text{Net profit after tax}}{\text{Total assets}}$$

### **Return on Net Worth Ratio**

It is computed by dividing net profit by net worth.

$$\text{Return on net worth ratio} = \frac{\text{Net profit}}{\text{Net worth}}$$

### **Return in Total Deposit Ratio**

It is computed by dividing net profit after tax by total deposit

$$\text{Return in total deposit ratio} = \frac{NPAT}{\text{Total deposit}}$$

### **Interest Earned to Total Assets Ratio**

It is calculated by dividing interest income by total assets of the bank

$$\text{Interest earned to total assets ratio} = \frac{\text{Interest earned}}{\text{Total assets}}$$

### **Total Interest Expenses on Total Income**

It is computed by dividing total interest by total interest income

$$\text{Total interest expenses on total income ratio} = \frac{\text{Total interest}}{\text{Total interest income}}$$

## CHAPTER - IV

### PRESENTATION AND ANALYSIS OF DATA

In this chapter, all the collected data are presented in the filtered form and are analyzed thoroughly. This is the one of the major chapter of this study because it includes detail analysis and interpretation of data from which concrete result of Nepalese market can be obtained. In this chapter the relevant data and information necessary for the study are presented and analyzed keeping the objectives set in mind. This chapter consists of various calculations made for the analysis of interest rate and its effects on deposit and lending amount of sample banks. This chapter consists of detail analysis and interpretation of data relating to interest rate on deposit and lending, deposit collection and loan and advance of each selected organization from Nepalese financial system. To make our study effective and precise as well as easily and understandable, this chapter is categorized in three parts, presentation, analysis and interpretation. The analysis is based on secondary and primary data available. In presentation section, data are presented in terms of table, graph chart of figures, according to need. The presented data are then analyzed using different statistical tools which are mentioned in chapter three. At last the results of analysis are interpreted. Though there is no distinct line of demarcation for each section (like presentation section, analysis section and interpretation section) but the arrangement of writing is made by aforementioned way. The data has been used are both secondary and primary type.

For our simplicity, in this thesis, presentation, analysis and interpretation of data are made according to the nature. After then, the relationship between interest rate and lending amount is made.

#### **4.1 Interest Rate Structure in Nepal**

Nepal Rastra Bank as a guardian, fixes the terms had conditions regarding the interest and other activities of financial institutions in Nepal. But in recent years banks are permitted to fix the interest rate they charge and offer on loan deposits. The interest rate structure of Nepal is presented in following table 4.1:

Table 4.1  
Structure of Interest Rates

Details	(Annual Percent)				
	2015	2016	Mid July 2017	2018	2019
<b>A. Policy rate</b>					
CRR	5	5.5	5.5	5.5	5
Bank rate	6.25	6.5	6.5	7	7
<b>Refinance rate against loans to:</b>					
Sick industries	1.5	1.5	1.5	1.5	1.5
Rural development banks	3.5	2	2	1.5	1.5
<b>B. Government securities:</b>					
T-bills (28 days)	5.16	4.94	8.7	8.08	0.19
T-bills (91 days)	5.13	6.80	8.13	8.52	1.09
T-bills (182 days)	5.16	5.91	8.28	8.59	1.77
T-bills (364 days)	6.47	6.55	7.28	8.61	2.65
Development bonds	5-8	5-9	5-9	5-9.6	5-9.5
National/citizens SCs	6-7.75	6-8	6-10	6-10	6-10
C. Inter-bank rate	3.65	3.66	6.57	8.22	0.69
<b>D. Commercial banks</b>					
<b>1. Deposit rates</b>					
Saving deposit	2-6.5	2-7.5	2-12	2-12	-
<b>Time deposit:</b>					
1 month	1.5-3.75	1.5-5.25	1.75-8	1.75-8	-
3 months	1.5-6.75	1.5-6	1.75-9.5	1.75-9.5	-
6 months	1.75-6.75	1.75-7	2.75-10	2.75-10.5	-
1 year	2.5-6	2.5-9	4.75-11.5	4.75-11.5	-
2 year and above	2.75-6.75	2.75-9.5	5-13	5-12.5	-
<b>2. Lending rate</b>					
Industry	7-13	8-13.5	8-13.5	8-13.5	-
Agriculture	9.5-12	9.5-12	9.5-13	9.5-13	-
Export bills	5-11.5	6.5-11	4-18	4-15.5	-
Commercial loans	8-13.5	8-14	8-14	8-14	-
Overdraft	6.5-13.5	6.5-13.5	7-18	7-18	-

Noted from: NRB Quarterly economic bulletin, Mid July 2019.

According to the structure of interest rate in table 4.1, cash reserve ratio (CRR) in 2015 was 5, it is increased in 2016 to 5.5, it is constant since 2018 than it is decreased in 2019 to 5. Bank rate was 6.25, 6.5, 6.5, 7 and 7 in 2015 to 2019 respectively. Sick industries refinancing rate is 1.5 in each year but rural development banks refinanced rate was 3.5, 2, 2, 1.5 and 1.5 in 2015 to 2019 respectively. According to the table interest rate of all T-bills rate has been decreased in 2019 as per principle, interest rate T-bills are the bases of all interest rate may leads to decline in interest of others and vice-versa, the interest rate of national saving certificate has been increased from 6-7.75 percent to 6-8 percent in 2015-2016 then it is increased to 6-10 in 2017, then it is constant in 2019. Similarly,

the interest rate of development bank is increasing trend during study period. Inter-bank interest rate was 3.61 on 2015 Mid-July but it is increased to 3.66 when it came during the Mid-July of 2016. Again some increased up to 6.57 percent in 2017 and 8.22 percent in 2018 but at the end of Mid-July it is decreased to 0.69 percent. It seems that Nepalese commercial banks have excise fluctuation and liquidity. The most of commercial banks classified their deposit into two sectors saving deposit and time deposit. Saving deposit the interest rate ranges from 2-6.5 percent in the year 2015 but this rate increased to ranges 2-12 when it came to the year of 2018.

In the same way, the interest rate on time deposit also shows the changing trend. In Nepalese economy, time deposit are classified in five categories: 1 month, 3 months, 6 months, 1 year, 2 year and above in 1 month and time deposit interest rate the table shows the increasing in interest, the maximum interest was 1.75 to 8 in 2017 and 2018 for 3 months time deposit rates, the maximum interest rate was 1.75 – 9.5 in 2017 and 2018. Whereas, this rate is 1.5-6 in 2016. Similarly, the 6 months time deposit ranges also increased up to 2.75-10.5 in year 2018. In case of 1 year, it is constant in 2017, 2018 by 4.75-11.5 after increasing. At last 2 years and above interest rate have been increasing up to 2017 then it is decreased in 2018 to 5-12.5 form 5.13 percent.

For the lending the table shows that average interest rate has increasing during the 1 year period. But in case of lending there was close range in maximum and minimum range. The lending rate is categorized in 5 parts: industry, agriculture, export bill, commercial loan and overdraft. Among the entire highest rate was for overdraft. It shows the industrial sector lending rate was 7-13, 8-13.5, 8-13.5 and 8.13.5 respectively on four years. Similarly, for agriculture sector the interest rate was 9.5-12, 9.5-12, 9.5-13, and 9.5-13 respectively on 4 years. This shows that agriculture lending rate was cheaper in 2015/09 than 2017/11. For export bill that rate was 5-11.5, 6.5-11, 4-18, 4-15.5 respectively for commercial loans the lending rate was 8-13.5, 8-14, 8-14, 8-14 and finally for overdraft it was 6.5-13.5, 6.5-13.5, 7-18 and 7-18 respectively in past 4 years.

#### **4.2 Analysis of Deposit and Interest Rate**

In this section detail study is made about deposit amount and interest rate of sample banks. For this study fixed deposits are considered because current deposit doesn't earn any interest.

#### 4.2.1 Interest Rate Structure on Deposit of NABIL

Prior to entering into the topics, it is preferable to take glance on the interest rate structure on different types of deposits. This is essential because the interest rates are generally different in magnitude for every sample banks. Their differences are due to the numerous factors like maturity period, policy of bank, goodwill of organization and so on. In real world government owned bank, and banks with high reputation and goodwill have lower deposit rates. Similarly, finance companies, co-operative and development bank quote higher interest rate on deposits than commercial banks do.

Table 4.2

Interest Rate Structure on Deposit of NABIL

<b>Deposit</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Saving</b>	3.75	3	3	2.5	3
Up to 14 days	-	-	-	-	-
1 month	2.75	2.25	2.25	2	2
3 months	3.25	3.75	3.25	3.25	3
6 months	3.75	3	3.5	3.5	3.5
1 to 2 yrs	5.5	5	6	5	5
2 yrs / above	6.5	6	6	5.5	5.5
Whole mean	4.25	3.83	4.00	3.63	3.67
Fixed deposit mean	4.35	4	4.2	3.85	3.8
Std. Deviation from whole mean			0.54		

Noted from : Annual reports of Nabil Bank

Table 4.2 shows the deposit interest rate of NABIL on different time period. For this study 2013 is taken as initial year and 2019 as a final year. Data shows the decreasing tendency of interest rate. The interest rate on savings deposit in the beginning year was 4.75percent and decreased to 3percent in 2019. The bank quotes the interest rate of fixed deposit in different short term period like 1 months, 3 months, 6 months, 1 year and above 2 years. Whole mean of interest rate was 5.75percent, 4.38percent, 4.25percent, 3.38percent, 4.00percent, 3.635 percent, and 3.67 percent respectively for to year 2013, 2014, 2015, 2016, 2017, 2018 and 2019. For other period also the fixed deposit rate was in decreasing trend. Similarly if average of fixed deposit of different period is taken, then the result in almost similar with "Whole average". It means the average interest rate for fixed deposit only was 5.25 percent, 4.45 percent, 4.35 percent, 4.00 percent, 4.20 percent, 3.85 percent and 3.80 percent respectively for the year 2013, 2014, 2015, 2016, 2017, 2018 and 2019. The average figures also show the decreasing tendency in interest rate. At that period the interest rate is lower than in the previous year, but finally felled

to the 3.80percent in the year 2019. The deviation is measured by standard deviation which is 0.54 of each interest rate.

#### 4.2.2 Relationship between Interest Rate and Deposit Amount of NABIL

##### Coefficient of Correlation

The Coefficient of correlation is an important measure to describe how well one variable is explained by another. It measures the degree of relationship between the two casually related variables. Karl person's coefficient of correlation between two variables X and Y is usually devoted by 'r' which is the numerical measure of linear association between the variables.

##### The Coefficient of Variation

For comparing the variability of two distributions, we compute the coefficient of variation. A distribution with smaller C.V. is said to be more homogenous or uniform or less variable than other and the series with greater C.V. is said to be more heterogeneous or more variable than others. The coefficient of variation is a relative measure which is useful in comparing the amount of variation in data group with different means.

##### Coefficient of Determination

The coefficient of determination is the primary way we can measure the extent, or strength of the association the exists between two variables X and Y, It is worked out by squaring the coefficient of correlation.

Table 4.3

Relationship between Interest Rate and Deposit Amount of NABIL

Year(1)	Saving Deposit Interest Rate (2)	Saving Deposit Amount (M) (3)	Fixed Deposit Interest Rate (4)	Fixed Deposit Amount (M) (5)		
2015	3.75	14658.33	4.35	7995.28		
2016	3	14620.41	4	8310.71		
2017	3	13783.59	4.2	14711.16		
2018	2.5	14288.52	3.85	16840.83		
2019	3	17994.75	3.8	14044.89		
<b>Correlation</b>	$r_{23} = -0.32$		$r_{45} = -0.70$			
<b>Coeff. of Det.</b>	$r^2_{23} = 0.10$		$r^2_{45} = 0.48$			
<b>t-statistic</b>	t- cal = 5.67	t-tab = 2.571	Significant	t- cal = 2.66	t-tab = 2.571	Significant

Noted from: Researchers calculation

The table 4.3 shows the total amount of fixed deposit and saving deposit and the interest rates offered on such deposits by NABIL on seven years starting from FY 2013 to FY 2019. The table portrays that both the interest rate has decreased by greater magnitude. Saving deposit amount has been in increasing order. It means that they move in opposite direction i.e. decrease in interest rate increases the amount of deposit and vice versa. This relationship can also be shown in figure 4.1 and 4.2.

According to table no 4.3, the interest rate on saving deposit has been decreased from 4.75percent to 3percent in 2019. The declining tendency is small. In the same period the saving deposit amount was Rs 13798.51 million but this amount increases to Rs.17994.75 million.

Similarly for fixed deposit the table 4.3 shows that the total amount of fixed and interest rate on fixed deposit offered by Nabil on seven consequent FYs standard from 2013 to FY 2019. The table reveals that average fixed interest rate has been decreased from FY 2013 to 2016 and increased in FY 2017 and again decreased in FY 2018 and 2019.. The table shows that in the FY 2013, there is no effect on fixed deposit amount by the declination of interest rate but after the FY 2013 decrease in interest rate also decrease of fixed deposit amount and vice versa. In this regards, the substitution effect holds true in the case of fixed deposit. To verify the above trend, it is necessary to calculate the correlation and t-statistics. If correlation coefficient is calculated for saving deposit and amount, then it is  $r_{23} = -0.32$ . The high negative correlation coefficient indicates that they have inverse relationship among each other. Decrease in interest rate is followed by increase in saving deposit amount and vice versa. The coefficient is determination between these two variables  $r_{23}^2 = 0.10$  which means that total variation in dependent variable (saving deposit amount) has been explained by independent variable interest rate to the enters 10percent and remaining is the effect of other factors. The t-value for testing the significant of the correlation coefficient between variables is 5.67 (t-tab = 2.571). Since the tabulated t-value at 5 level of significant. As a result alternative hypothesis is accepted i.e. t-tab = 2.571 is less than calculated value of correlation coefficient is significant. As a result alternative hypothesis is accepted i.e. there is significant relation between two variables or the variables are not correlated.

In the same manner, the correlation coefficient between interest rate on fixed deposit and variables are uncorrelated. When interest rate on fixed deposit decreases (increases) the deposit amount also decreases (increases). This is exactly the matter what the theory (substitution effects) says. The coefficient of determination between these two variables is which means total variables in dependent variables (deposit units) is explained by the

independent variable (deposit rate) and remaining is due to the effect at other factors. Similarly test of significance of correlation coefficient between deposit rate and deposit amount gives the value of  $t = 2.66$ . Since the tabulated  $t$ -value at 5 level of significance for 5 degree of freedom i.e.  $t_{\text{tab}} = 2.571$  is lower than calculated value the correlation coefficient is significant. Here so alternative hypothesis is accepted i.e. there is significant relation between two variables or the variables are not correlated.

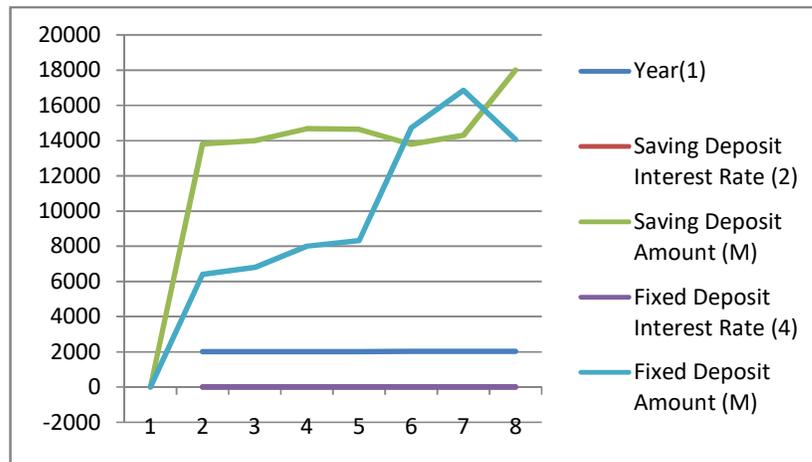


Figure 4.1  
Interest Rate of NABIL on Saving and Fixed Deposit

#### 4.2.3 Interest Rate Structure on Deposit of Himalayan Bank Limited

The general interest rate structure for HBL for saving deposit and fixed deposit during past seven fiscal year is as follows.

**Table 4.4**  
**Interest Rate Structure on Deposits of HBL**

Deposit	2015	2016	2017	2018	2019
<b>Saving</b>	3.75	3.75	3.25	3	3
Up to 14 days	2.3	2.3	1.75	1.75	1
1 month	3.3	3.3	2	2	2
3 months	3.75	3.75	2.5	2.5	2.5
6 months	4	4	3	3	3
1 year to 2 yrs	5.25	5.25	4.75	4	4.5
2 yrs / above	5.75	5.75	5.25	5	5
Whole mean	3.69	3.69	2.96	2.79	2.86
Fixed deposit mean	3.68	3.68	2.92	2.75	2.83
Std. Deviation				0.53	

Noted from: Annual reports of HBL.

From table 4.4 it is clear that the interest rate on deposit of HBL is also in decreasing trend. During the first period out the seven FYs, the declining rate of average interest rate is fast, around one percent point every year. The whole average interest rate is 4.07 in 2013 but it was 3.86percent,3.69percent,3.69percent,2.96percent,2.79percent, and 2.86percent in 2014,2015, 2016, 2017, 2018 and 2019 respectively. It means that decline speed of deposit interest rate of HBL slowed down after FY 2015 because by only decimal each year up to 2017 but it remain same in FY 2018/12, i.e. 3percent. The deviation is measured by standard deviation which is 0.53 of each year interest rate.

#### 4.2.4 Relationship between Interest Rate and Deposit Amount of HBL

Table 4.5

Relationship between Interest Rate and Deposit Amount of HBL

Year(1)	Saving Deposit Interest Rate (2)	Saving Deposit Amount (3)	Fixed Deposit Interest Rate (4)	Fixed Deposit Amount (5)		
2015	3.75	17543.99	3.68	7612.36		
2016	3.75	20131.05	3.68	6377.13		
2017	3.25	16294.68	2.92	11328.66		
2018	3	15994.56	2.75	13507.37		
2019	3	16250.41	2.83	12203.52		
<b>Correlation</b>	$r_{23} = -0.056$		$r_{45} = -0.95$			
<b>Coeff. of Det.</b>	$r^2_{23} = 0.0031$		$r^2_{45} = 0.91$			
<b>t-statistic</b>	t- cal = 8.83	t-tab = 2.571	Significant	t- cal = 2.12	t-tab = 2.571	Insignificant

Noted from: Researchers Calculation

The table 4.5 shows the amount of saving deposit and its interest rate as well as amount of deposit and its interest rate for seven FYs. The table indicates that, in one hand deposit rates are declining where as in other hand deposit amount is increasing in every fiscal year covered by the study. This situation can be revealed in figure 4.3.

To quantify the exact relationship between interest rate and deposit amount, it is necessary to calculate the correlation coefficient. The correlation coefficient of saving deposit amount and its interest rate  $r_{23}$  is -0.056, It means that those two variables have very high negative relationship. Though the two variables don't have direct relationship but correlation coefficient tells that increase in one variable result the decrease in one variable result the decrease in other variables. The case is similar to fixed deposit also. The correlation coefficient for fixed deposit rate and amount  $r_{45}$  is -0.95 which is also

very high negative correlation. Therefore for both saving and fixed deposit, the case against the substitution effect. The coefficient of determination of correlation of saving deposit  $r^2_{23}$  is 0.0031 which indicates that the relation between deposit and interest rate. In same manner for fixed deposit the value of coefficient of determination  $r^2_{45}$  is 0.91.

The value of t-statistics for saving deposit and saving interest is found to be 8.83 (t-tab = 2.571). The tabulated value for this condition 5percent level of significance with 5 degree of freedom is 2.571. It means that in this case t- calculation is greater than t-tabulated. So alternative hypothesis is accepted, which means that there is highly significant correlation between saving deposit and interest rate. Similarly for fixed deposit, the calculated value for t is 2.12 (t-tab= 2.571). This value is also smaller than t-tabulated. So in this case also the magnitude of correlation coefficient is insignificant.

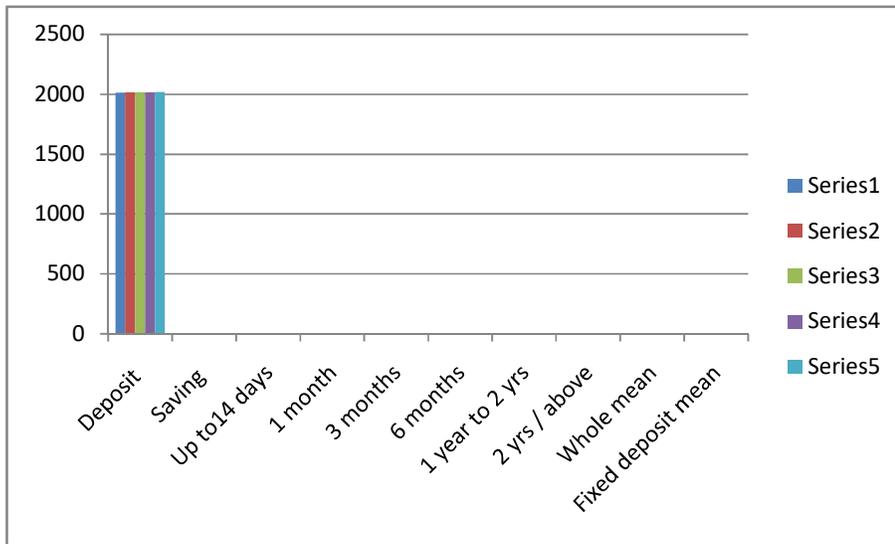


Figure 4.

#### Deposit Amount of HBL During Different FYs

The figure 4.3 shows saving deposit amount is continuously rising each year but fixed amount is seems to grow each year with some fluctuation. It means that there is rise and fall for fixed deposit amount. Similarly the interest's rate of fixed deposit and saving deposit can also is shown on figure 4.4.

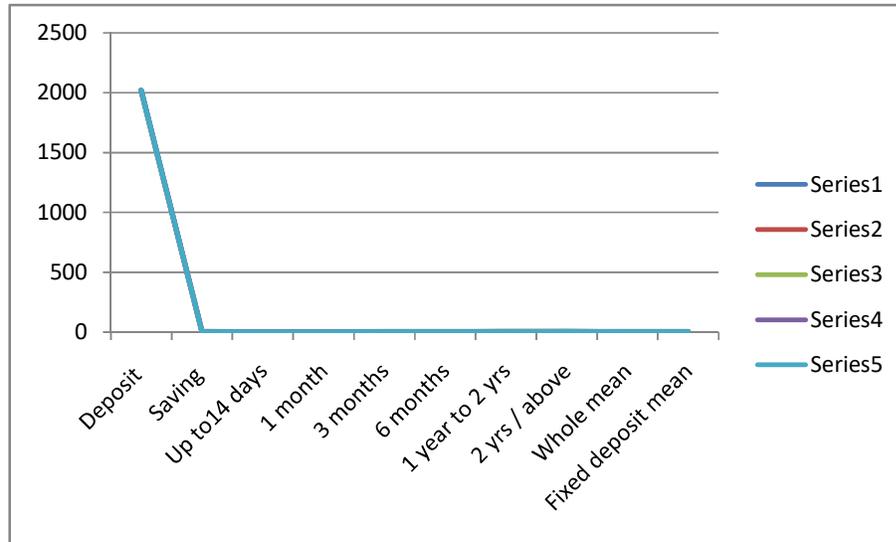


Figure 4.3  
Interest Rates of HBL on Saving and Fixed Deposit

#### 4.2.5 Interest Rate Structure on Deposit of Everest Bank Limited

The general structure of deposit interest rate of Everest Bank Limited (EBL) is shown below on the table.

Table 4.6  
Interest Rate Structure on Deposits of EBL

Deposit	2015	2016	2017	2018	2019
<b>Saving</b>	4.25	4.50	3.25	3.25	3.25
<b>Fixed</b>					
Up to 14 days	1.50	1.25	1.25	1.25	1
1 month	2.50	2.50	2.25	2.25	2.25
3 months	3.50	3.50	3.25	3	3
6 months	4	4	4	3.5	3.5
1 year to 2 yrs	5.5	5.5	4.5	4.5	4.5
2 yrs / above	5.50	5.50	5	5	5.5
Whole mean	3.61	3.64	3.18	3.07	3.14
Fixed deposit	3.50	3.50	3.17	3.04	3.13
mean					
Std. Deviation				0.38	

Noted from: Annual reports of EBL

The table 4.6 shows the interest rate of EBL and with calculated average interest rate on all deposit and standard deviation. The whole interest rate in 2013 and 2014 i.e. 3.96percent and 3.935 then, it decrease to 3.61percent in 2015. In FY 2018 it decreases up to 3.07percent the interest rate is decreased in year 2019 to 3.14percent. The standard deviation of 0.38 shows the dispersion among the interest within seven FYs time is 0.38percent. It further signifies that rate is much dispersed from of all deposit.

#### 4.2.6 Relationship between Interest Rate and Deposit Amount of EBL

Table 4.7

Relationship between Interest Rate and Deposit Amount of EBL

Year (1)	Saving Deposit Interest Rate (2)	Saving Deposit Amount (3)	Fixed Deposit Interest Rate (4)	Fixed Deposit Amount (5)		
2015	4.25	11883.86	3.50	6446.18		
2016	4.50	13360.04	3.50	7049.98		
2017	3.25	14782.33	3.17	10440.28		
2018	3.25	13039.11	3.04	15061.94		
2019	3.25	17269.29	3.13	13007.48		
Correlation	$r_{23}=-0.81$		$r_{45}= -0.95$			
Coeff. of Det.	$r^2_{23}= 0.66$		$r^2_{45}= 0.90$			
t-statistic	t-cal = 6.98	t-tab =2.571	Significant	t-cal = 9.02	t-tab =2.571	Significant

Noted from: Researchers calculation

The table 4.7 shows that interest rate and deposit amount are moving in opposite direction. To get the exact relation it is necessary to calculate the correlation coefficient and t-test. Here the data shows that both saving and fixed deposits are out of substitution effect to verify it the value of correlation and t-statistics is necessary. But prior to this it is effective if tabular value can be shown on figure as figure 4.5.

The correlation coefficient for saving deposit and its interest rate is found to be  $r_{23}=-0.81$ , which means that deposit amount and its interest rate have higher degree of negative correlation. It means increase in one variable result the decrease in other variables. Similarly the coefficient of dependent  $r^2_{23}= 0.66$ , which means that the value of dependent variables is dependent on independent variables to the extent of 66percent. Similarly the t-test for same show that the calculated value of t is 6.98( $t\text{-tab}=2.571$ ). This value is greater than the t-tabulated value ( $t\text{-tab}=2.571$ ) at 5 degree of freedom and 5percent level of signification. Therefore, when  $t\text{-cal} > t\text{-tab}$  then  $H_1$  or alternative

hypothesis is accepted i.e. the variables are significantly correlated and their relationship is significant.

Similarly for fixed deposit the correlating  $r_{45}$  is -0.95 which is negative with high degree of inverse relationship. The t-statistics for fixed deposit shows that its calculated value of t is 9.02, which is greater than the tabulated value of t i.e.  $t_{cal} > t_{tab}$ , in such case alternative hypothesis is accepted. This indicates that the two variables are correlated. The analysis of EBL also shows that substitution effect is applicable for bank.

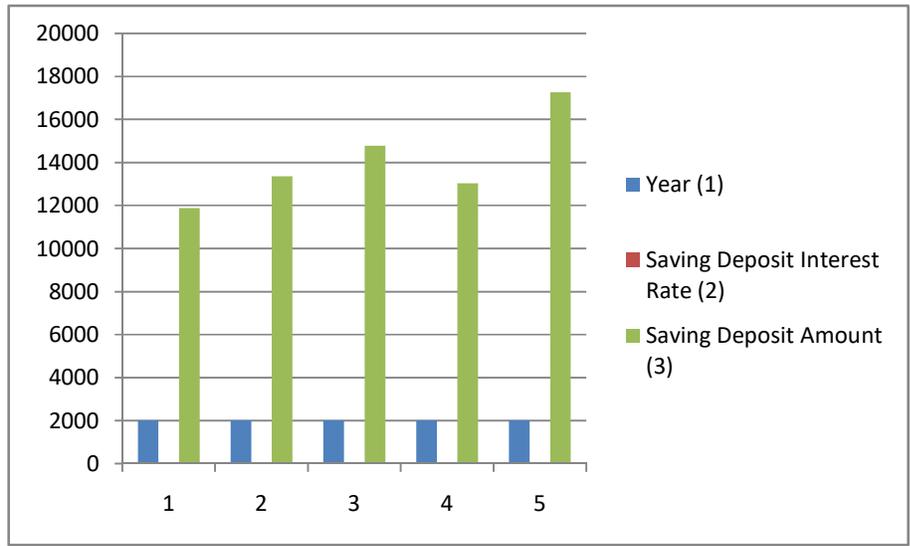


Figure 4.4

Deposit Amount of EBL on Saving and Fixed Deposit

Similarly the relationship between interest rate of saving and fixed deposit can be shown in figure 4.5.

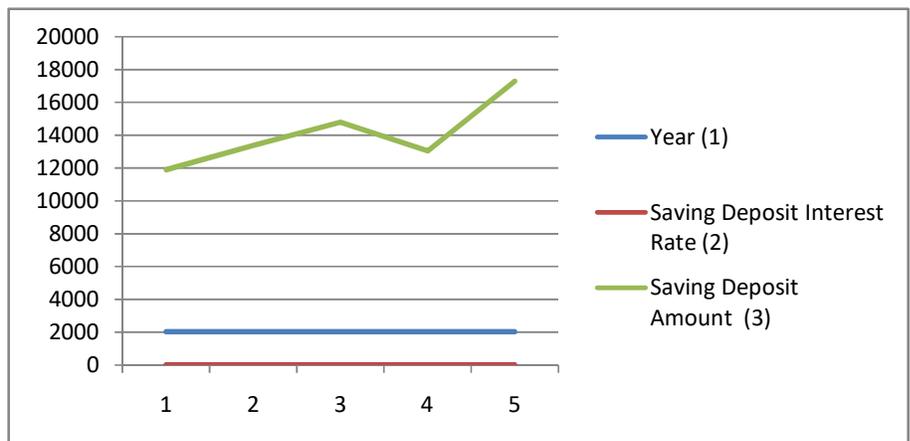


Figure 4.5

Interest Rates of EBL on Saving Fixed Deposit

The figure 4.6 shows that the deposit amount of EBL is in increasing trend. The increasing tendency is high for saving deposit but low for fixed deposit, the trend is increasing slowly. Similarly figure 4-6 shows that both the interest rate of fixed and saving deposits is in decreasing tendency except in year 2014 and 2019.

#### 4.2.7 Interest Rate Structure on Deposit of Standard Chartered Bank Limited (SCBL)

As similar to previous part, it is better to present the general interest rate structure before entering to the main analysis. The interest rate structure fro SVBL on saving and fixed deposits for part seven FYs are as presented on table 4.8.

Table 4.8

Interest Rate Structure on Deposit of SCBL

<b>Deposits</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Saving</b>	2.5	2.5	2.5	3	3
<b>Fixed</b>					
Up to14 days	2	1	1	1	1
1 month	2.5	2	1.5	1.5	1.25
3 month	2.5	1.5	1.5	1.5	2
6 month	3	2.5	1.75	1.75	2.5
1 year	3.5	2.25	2.25	2.25	2.75
2 yrs/above	4.25	3.254	3.50	3.50	3.50
Whole mean	2.61	2.00	1.86	1.93	2.14
Fixed deposit	2.63	1.92	1.75	1.75	2.00
mean					
S.D.				0.63	

Noted from: Annual reports of SCBL

The above table shows that the average interest rate on all deposits of SCBL within seven years time period is in decreasing trend. The rate was 3.54 in the FY 2013 and 2.14 in 2019. The average interest rate is slowly decreasing from FY 2013 to 2018 but, increase in 2019. To fixed deposit mean was 3.63 percent,3.04 percent,2.63 percent,1.92 percent,1.75 percent, 1.75 percent, and 2 percent in the FYs 2013, 2014, 2015, 2016 2017,2018 and 2019respectively. The standard deviation of 0.63 shows that the scattered nesses among the average interest rate on all deposits from the mean of all average rates is 0.63percent within these seven years time period.

#### 4.1.8 Relationship between Interest Rate and Deposit Amount of SCBL

Table 4.9

Relationship between Interest Rates and Deposit Amount of SCBL

Year (1)	Saving Deposit Interest Rate (2)	Saving Deposit Amount (3)	Fixed Deposit Interest Rate (4)	Fixed Deposit Amount (5)
2015	2.5	17856.13	2.63	3301.01
2016	2.5	19187.64	1.92	7101.70
2017	2.5	12430.00	1.75	9175.07
2018	3	11619.81	1.75	1013.62
2019	3	15502.31	2.00	4661.26
Correlation	$r_{23} = -0.45$		$r_{45} = -0.49$	
Coeff. of Det.	$r^2_{23} = 0.20$		$r^2_{45} = 0.24$	
t-statistic	t-cal= 4.29	t- Significant tab=2.571	t-cal= 1.68	t- Insignificant tab=2.571

Noted from: Researchers calculations

The table 4.9 also shows saving deposit amount is in increasing trend though the interest rate is constant trend in FY 2014 to FY 2017 and it is increase to 3percent in 2018/12. But fix deposit amount seems in decreasing trend till FY 2018 because of fall in interest rate and slightly increased in FY 2019 On deposit. The declining speed of interest rate is lower than that increasing speed of deposit amount. It means that they move in opposite direction. These suggest that there is negative relationship but to determine the magnitude of relation, correlation coefficient should be calculated and to identify the strength or weakness of relationship it is necessary to calculate the t-test.

The correlation coefficient for saving deposit and its interest rate is found to be  $r_{23} = -0.45$ , which means that deposit amount and its interest rate, have higher degree of negative correlation. It means increase in one variable result the decrease in other variables. Similarly the coefficient of determination,  $r^2_{23} = 0.20$  which means that the value of dependent variables is dependent on independent variables to the extent of 20percent. Similarly the t-test for same shoes that the calculated value of t is 4.29 (t-tab=2.571). This value is greater than the tabulated value (t-tab=2.571) at 5 degree of freedom and 5level of significance. Therefore when  $t\text{-cal} > t\text{-tab}$ , then  $H_1$  or alternative hypothesis is accepted i.e. variables are significantly correlated and their relationship is significant.

Similarly the correlating for fixed deposit interest rate and fixed deposit amount,  $r_{45}$  found to be -0.49. This shows that they have negative correlation. It means that the

increase in deposit interest rate stimulates saving on fixed deposit. This relation can clearly explained by the coefficient of determination which is 0.24, means that total variation in interest rate on fixed deposit has been explained by supply of deposits to the extent of 24percent and remaining 76percent is the effect of other variables. The t-value for testing the significance of the correlation coefficient between variables is 1.68 ( $t_{\text{tab}}=2.571$ ). Which is significantly smaller than tabulated t value ( $t_{\text{tab}}=2.571$ ) at 5percent level of significance with 5 degree of freedom. Since the calculated value is significantly smaller than tabulated value, the conclusion can be drawn that correlation coefficient between variables is insignificant. This means correlation between interest rate on fixed deposit amount of SCBL shows the negative correlation, the t-test indicates that there is insignificant correlation between them.

But prior to all it is clear if we show these relations on figure 4.7 and 4.8.

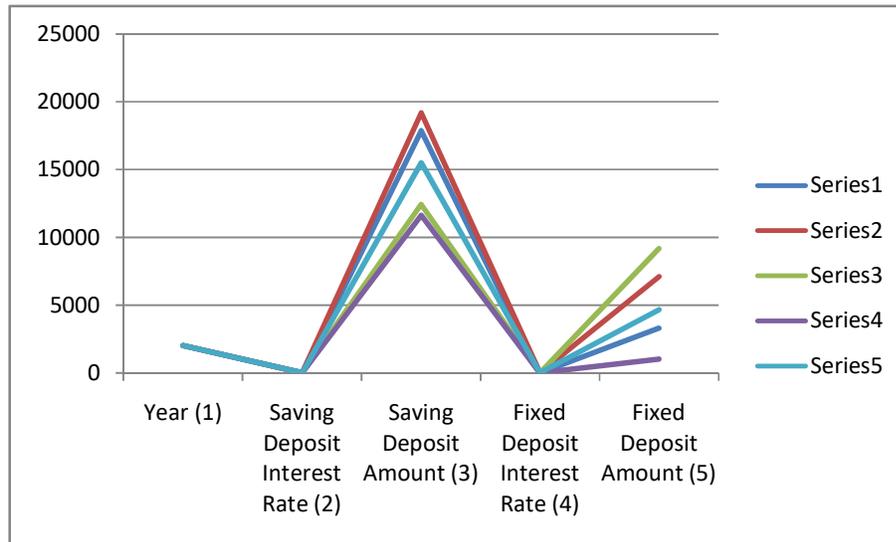


Figure 4.6

#### Deposit Amount of SCBL During Different FYs

The figure shows that SCBL collected more funds on saving deposit in last seven FYs rather than fixed deposit. It is clear that SCBL collects few funds form fixed deposit in comparison of saving deposit. Satisfactory collection is done on saving deposit but bank cannot able to collects satisfactory amount of fixed deposit which is helpful to invest as a long term debt. The relationship between interest rate of saving and fix deposit can be shown on figure 4.9.

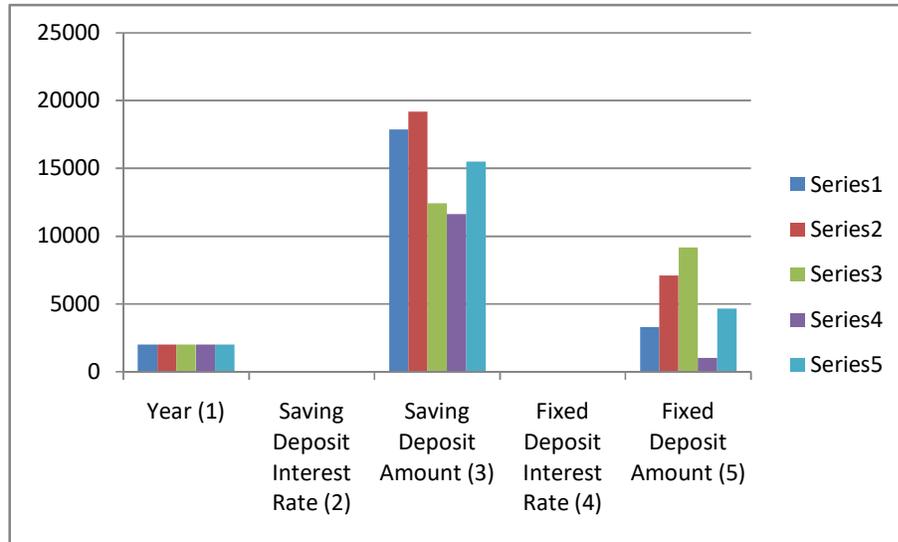


Figure 4.7

Inertest Rates on SCBL on Saving and Fixed Deposit

## 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 attempted to study. Generally, when there is higher interest rate (especially lending or credit rates) in the economy people normally borrow lesser amount than the period when lending rate is low. According to theory, when there is low lending rate, then there should be higher amount of borrowing by the user of fund. Higher amount of borrowing indicates higher investment in the country or higher transaction in trade. This is necessary for the growth of the economy. So this study tries to explore the relationship between rate and lending amount in Nepalese economy.

### 4.2.1 Lending Rate of NABIL on Different Sectors

The sector where NABIL supplied credit during last seven FYs and their corresponding interest rate, average interest rate and lending amount are presented in the table 4.9

**Table 4.10****Lending Rate of NABIL on Different Sectors During Seven FYs**

<b>Sector</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Deprived sector</b>	<b>10</b>	<b>9.5</b>	<b>8.25</b>	<b>8</b>	<b>8</b>
<b>Export Finance</b>	12.25	11.75	11	11	11
<b>Term Loan</b>	13.25	12.75	12.50	12.75	12.50
<b>Working Capital</b>	13.50	13.25	12.50	12.5	12.50
<b>Import Loan</b>	11.75	11.25	11.50	11.25	11.50
<b>Mortgage Loan</b>	13.75	13	13	13	13
<b>Personal Loan</b>					
<b>Up to 5yrs</b>	12.75	12.75	12.25	12	12
<b>Up to 8yrs</b>	13.5	12	12	12.5	12.5
<b>Up to 15yrs</b>	13.75	13.50	13	13.25	13
<b>Auto Loan</b>	13.75	13.50	13.25	13	13
<b>Education Loan</b>	13.75	13	13	13	13
<b>Overdraft</b>	14.5	13.75	13.50	13.50	13.5
<b>Bank Guarantee</b>	11	10	10	10	10
<b>Govt. Securities</b>	9	8.50	8	8.25	8
<b>Other Loan</b>	14	14	14	14	14
<b>Average Int. Rate (1)</b>	12.7	12.2	11.9	11.9	11.8
<b>Lending Amount (2)</b>	24232.76	27589.93	32268.87	38034.10	41605.68
<b>Correlation (<math>r_{12}</math>)</b>				-0.93	
<b>Coeff. Of Det. (<math>r^2_{12}</math>)</b>				0.8649	
<b>t-statistics</b>	t-cal = 8.82		t-tab = 2.571	Significant	
<b>Standard deviation</b>				0.55	

Noted from: Annual reports of Nabil Bank

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

According to table 4.10 it shows that interest rate on lending on different area are in declining trend. The table shows that the maximum interest rate is 14.50percent in FY 2013 and minimum rate is 8percent on 2019. This shows that to interest rate declined drastically during to seven FYs period. According to theory in order to induce the

investment in the country or expansion of trade, the productive sector loan should be available at cheaper rate. The table also shows that these sectors loan were cheaper than other non-productive loan.

If the average of each fiscal year is taken, then it shows that average lending interest rate was 13.10percent (2013), 13.00percent (2014), 12.7percent (2015), 12.2percent (2016), 11.9 percent (2017), 11.9 percent (2018) and 11.8percent (2019). The standard deviation for average interest rate was 0.55, which shows the deviation from mean return. The average rate is also in decreasing trend. The decreasing tendency was not smooth. It means that the rate declined each year with different rate except 2017, 2018, and 2019. In preceding year the declination was quite fast where as the declining tendency was little small in later year. This concludes that interest rate on lending is also in decreasing tendency for past few years. With harmony to interest rate, the lending amount of NABIL is seen to be in decreasing trend.

From table 4.10 the correlation coefficient (simple correlation) between lending rate and lending amount  $r_{12}$  is -0.93. It is negative correlation. It indicates that increment in one variable result the decrement in other variables or vice-versa. Decrement in lending interest rate increases the lending amount because people preferred more credit form the bank when bank reduced the lending interest rate. This condition matches with the theory. Similarly the coefficient of determination between two variables  $(r_{12})^2$  is 0.8649. It means that the relationship between dependent variable and independent variable is defined up to the extent of 86.49percent. The remaining percent is due to other factors.

Similarly the calculate value for NABIL is 8.82 (t-tab= 2.571). This value is greater than tabulated value, (t-tab = 2.571) with level of significance 5 and d. f. 5. In this condition alternative hypothesis is accepted it means that there is significant correlation between the two variables. In other words their relation is significant. Though the correlation coefficient shows that these two variables have positive correlation and t-statistic verify that their relation is significant. In conclusion the positive relationship between lending rate and leading amount is not exactly applicable for NABIL. Now it is clear that the increase in lending amount is not significantly due to decrease in lending interest rate.

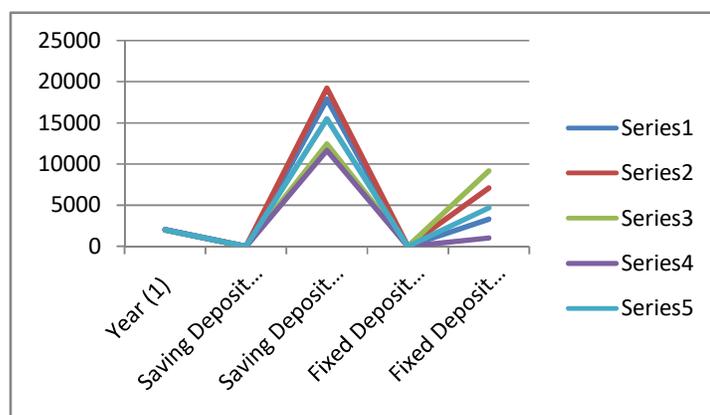


Figure 4.8  
Lending Amount of NABIL During Different FYs

#### 4.2.2 Lending Rate of HBL on Different Sectors

The sector where HBL granted its credit during last seven FYs and their corresponding interest rate and lending amount are presented in the table 4.11

Table 4.11

Lending Rate of HBL of Different Sector During Seven FYs

Sector	2015	2016	2017	2018	2019
Deprived sector	10	9.50	9.50	9	8.50
Export Finance	11	11	10.25	10.75	10.75
Term Loan	12.50	12.75	12.75	12.75	12.75
Working Capital	13.25	12.50	12.50	12.75	12.75
Import Loan	12	12	11.75	11.50	11.50
Mortgage Loan	14	13.50	13	13	13
Personal Loan					
Up to 5yrs	12.5	12.5	12.5	12.5	12.5
Up to 8yrs	13.25	12.25	12.75	12.75	12.75
Up to 15yrs	14	13.75	13.25	13	13
Auto Loan	14.25	13.50	13.25	13	13
Education Loan	13.75	14	13.50	13.50	13.5
Overdraft	14.25	14	14	14	14
Bank Guarantee	10	10	10.25	10.25	10.25
Govt. Securities	9	8.25	8.25	8.25	8.25
Other Loan	15.5	14.75	14.50	14.25	14.25
Average Int. Rate (1)	12.6	12.3	12.1	12.1	12.1
Lending Amount (2)	19497.52	24793.16	27980.63	31566.98	35372.88
Correlation (r12)				-0.94	
Coeff. Of Det. (r212)				0.8836	
t-statistics	t-cal = 2.42		t-tab = 2.571		Insignificant
Standard deviation				0.43	

Noted from: Annual reports of HBL.

The table 4.11 shows the interest rate of HBL on lending on seven fiscal years granted in different sectors. HBL lending rate was somewhat more than NABIL. The maximum interest rate quoted by the HBL during seven FYs was 15percent on "other" categories. The interest rate of HBL is also in decreasing trend but the decreasing magnitude is very little. The average interest rate if HBL an FY 2013 was 13.1percent and which becomes 12.1percent in FY 2019, it means that average interest rate in as declining slowly. During seven years period the interest rate falls to 1.1percent on average. The average interest rate was 13.1percent, 13percent, 12.6percent, 12.3percent, 12.1percent, 12.1percent and 12.1percent in FYs 2013, 2014, 2015, 2016, 2017, 2018 and 2019, respectively. Conversely the lending amount of HBL is seen to be in increasing trend. In comparison to FY 2013, lending of 2019 is near about two times more. So it can be said that lending of HBL was expanded rapidly within that seven fiscal periods these phenomenon shows that lending interest rate and lending amount have inverse relationship.

The correlation coefficient of HBL between lending amount and lending rate is -0.94. It is high degree negative correlation. It indicates that increments in are variable result the decrement in other variables or vice-versa. In this case decrease in lending interest rate increases the lending amount. People preferred more credit form HBL when bank reduced the lending interest rate. Similarly the coefficient of determination between two variables ( $r^2_{12}$ ) = 0.8836. It means that the relationship between dependent variable and independent variable is defined up to the extent of 88.36percent. In other words the increase in lending amount by decrease in interest rate is defined up to the extent of 88.36percent where as remaining percent is due to other factors.

Similarly the t-statistics for HBL is 2.42 (t-tab =2.571) the tabulated value at 5 level of significance with 5 d. f. is 2.571. Comparing the t-tab and t-cal it is clear that t-cal < t-tab, so null hypothesis is accepted and alternative hypothesis is rejected. It means that the relation shown by correlation coefficient is highly insignificant. That is the inverse relation shown by two variables lending amount and lending rate is strong. The increase in demand of lending amount is due to the decrease in lending rate. Therefore, according to t-statistics the lending rate is also another strong as well as important factor that shape the lending amount. In conclusion the inverse relation of HBL on two variables is in accordance with theory.

To quantify this relationship it is necessary to calculate correlation and t-statistics. But prior to this it is fruitful if the trend of lending interest rate and lending amount is shown in the figure 4.11.

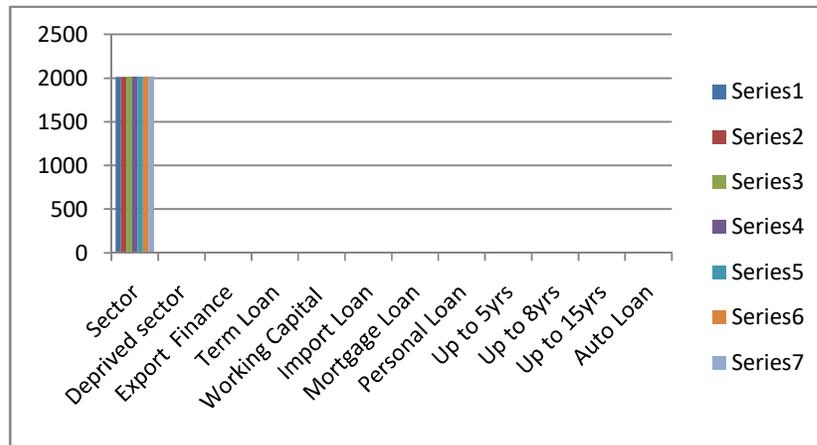


Figure 4.9  
Lending Amount of HBL During Different FYs

The figure 4.11 shows that interest rate of lending falls rapidly up to FY 2014. But after FY 2014, the falling speed was very slow. It means the interest rate falls only by decimal percent point.

#### 4.2.3 Lending Rate Everest Bank Limited on Different Sectors

EBL also grant credit on different area like commercial loan industrial loan, Overdraft, working capital and so on. These rates on the different fiscal years are as follows.

Table 4.12

Lending Rate of EBL on Different Sector During Seven FYs

Sector	2015	2016	2017	2018	2019
<b>Deprived sector</b>	<b>10</b>	<b>9.50</b>	<b>8.25</b>	<b>8.25</b>	<b>8</b>
<b>Export Finance</b>	12.25	11.75	11.25	11.25	11.25
<b>Term Loan</b>	13.25	12.75	12.50	12.75	12.75
<b>Working Capital</b>	13.50	13.50	12.50	12.50	12.50
<b>Import Loan</b>	12.25	12.25	12	12	12
<b>Mortgage Loan</b>	13.75	13	13	13.25	13.25
<b>Personal Loan</b>					
<b>Up to 5yrs</b>	12.75	12.75	12.25	12	11.5
<b>Up to 8yrs</b>	13.5	12	12	12.5	12.5
<b>Up to 15yrs</b>	13.75	13.50	13	13.25	13.5
<b>Auto Loan</b>	13.75	13.25	13.25	13.25	13.50
<b>Education Loan</b>	13.75	13	13	13	13

<b>Overdraft</b>	14.5	13.75	13.50	14.5	14.5
<b>Bank Guarantee</b>	11	10.75	10.50	10.50	10
<b>Govt. Securities</b>	9.5	8.50	8	8.25	8
<b>Other Loan</b>	14	14	14	14	14
<b>Average Int. Rate (1)</b>	12.8	11.4	11.9	12.1	11.2
<b>Lending Amount (2)</b>	18339.09	23884.68	27556.36	31057.70	35910.98
<b>Correlation (<math>r_{12}</math>)</b>				-0.87	
<b>Coeff. Of Det. (<math>r^2_{12}</math>)</b>				0.7569	
<b>t-statistics</b>	t-cal = 3.39		t-tab = 2.571		Significant
<b>Standard deviation</b>				0.79	

Noted from: Annual reports of EBL

The table 4.12 shows the interest rate of EBL on lending on seven fiscal years granted in different sectors. With comparison to above aforementioned bank EBL lending rate was some what lower than NABIL and HBL. This may be due to competition because those banks are commercial banks. The average interest rate of EBL was in decreasing trend. But the decreasing magnitude is very little. The average declining in same manner that means declining ratio is almost same. It means that, there was equal fall in interest rate on each sector loan. In past seven FYs the highest interest rate was 14.5percent. In other sector loan the lending rate is not decreasing by huge magnitude. To see the position it is better to give glance on average lending rate during last seven FYs. The average interest rate was 13.1percent, 13.1percent, 12.8percent, 11.4percent, 11.9percent, 12.1percent and 11.2percent in FY 2013, 2014, 2015, 2016, 2017, 2018 and 2019 respectively.

By using excel spreadsheet, correlation coefficient, average, standard deviation and other necessary statistics can be calculated. The correlation coefficient between lending rate and lending amount for EBL is -0.87. This is very high degree of correlation the negative sign indicates that the two variables have opposite or inverse relationship, meaning decrease in one variables leads to increase in other variables. For this case decreases in interest in interest rate stimulates the lending amount or vice-versa. The coefficient of determination for correlation coefficient is 0.7569. In other word words the relationship between one variable is defined by another is up to the level of 75.69 percent

To verify the correlation coefficient statistically, it is better if t-statistics is used. The calculated value for t is 3.39 (t-tab=2.571). Similarly the tabulated value for t at 5 degree of freedom with 5 level of significance is 2.571 i.e. (t-tab=2.571). Comparing t-cal and t-tab it is found that t-cal>t-tab so in such case alternative hypothesis is accepted meaning to relations shows by the correlation coefficient is highly significant. In other words two variables are significantly correlated or the increase in lending amount is due to the decrease in lending rate. Lending rate is significant factor for the lending amount.

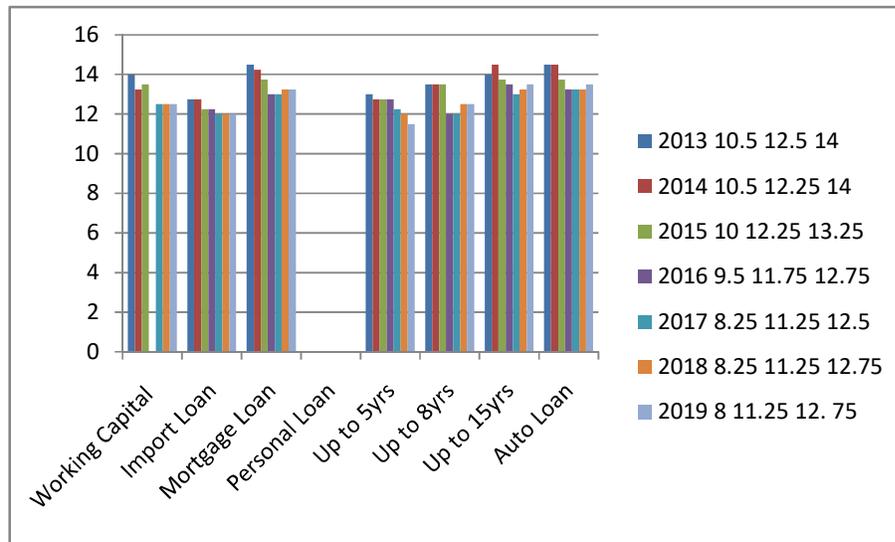


Figure 4.10

Lending Amount of EBL During Different FYs

#### 4.2.4 Lending Rate of Standard Chartered Bank Limited on Different Sectors

At last another bank for analysis is standard chartered bank limited. This bank also grants the credit to its customers in different sectors. But according the NRB bulletin "Banking and Financial statistics" the bank provides the loan to its customers on the following sectors.

Table 4.13

Lending Rate of SCBL on Different Sectors During Seven FYs

Sector	2015	2016	2017	2018	2019
<b>Deprived sector</b>	<b>9.50</b>	<b>9</b>	<b>8.25</b>	<b>8.25</b>	<b>8.25</b>
<b>Export Finance</b>	13.50	13.25	13.25	12.75	12.75
<b>Term Loan</b>	13.25	12.75	12.50	12.75	12.75
<b>Working Capital</b>	13.50	13.50	12.50	12	12
<b>Import Loan</b>	12.25	12.25	12	12.25	12.25
<b>Mortgage Loan</b>	13.75	13.50	13.25	13.50	13.50
<b>Personal Loan</b>					
<b>Up to 5yrs</b>	12.75	12.75	12.50	11	11
<b>Up to 8yrs</b>	13.5	12	12	12.5	12.5
<b>Up to 15yrs</b>	13.75	13.50	13	13	13
<b>Auto Loan</b>	13.75	13.25	13.25	13.25	13.50
<b>Education Loan</b>	13.75	13.75	13.75	13.50	13.50
<b>Overdraft</b>	14.5	13.75	13.50	14.5	14.5
<b>Bank Guarantee</b>	11	10.75	10.50	10.50	10
<b>Govt. Securities</b>	9.5	8.50	8.25	8.25	8.25
<b>Other Loan</b>	14	14	14	13.75	13.75
<b>Average Int. Rate</b>					
(1)	12.8	11.5	11.3	10.4	9.5
<b>Lending Amount</b>	<b>13718.60</b>	<b>13679.76</b>	<b>15956.96</b>	<b>18427.27</b>	<b>19575.97</b>
(2)					

<b>Correlation (<math>r_{12}</math>)</b>		-0.94	
<b>Coeff. Of Det. (<math>r^2_{12}</math>)</b>		0.8836	
<b>t-statistics</b>	t-cal = 4.71	t-tab = 2.571	Significant
<b>Standard deviation</b>		1.42	

Noted from: Annual reports of SCBL

The table 4.13 shows the lending interest rate of SCBL on different sectors in different FYs. SCBL granted credit in most of the sector. The overall lending rate of SCBL is in declining trend. In past seven FYs the highest interest rate was in "others" categories. The average interest rate is also in decreasing trend but the decreasing magnitude is nit more. To see the position, it is better to give glance on average lending rate during last seven FYs. The average interest rate was 13.2percent, 13.1percent, 12.8percent, 11.5percent, 11.30percent, 10.4percent and 9.5percent in FYs 2013, 2014, 2015, 2016, 2017, 2018 and 2019 respectively.

In effect of decline in interest rate the lending amount of SCBL is also found to be increasing during the seven fiscal years. During the period of seven years the lending amount was doubled. But to know the exact relationship it necessary to compute the correlation coefficient.

To find the exact relationship between the lending interest rate and lending amount, it is necessary to use some of the statistical tools like correlation coefficient student t-statistics is applied. For this case the correlation coefficient between SCBL'S for average interest rate and lending amount is -0.94 ( $r_{12}=-0.94$ ) this is very high degree negative correlation. The negative sign indicates that the two variables have opposite or inverse relationship meaning decrease in one variables leads to increase in other variables. For this case decrease in interest rate stimulates the lending amount of vice-versa. The coefficient of determination for correlation coefficient is 0.8836. In other words the relationship between one variable is defined by another is up to the level of 88.36percent.

To verify the correlation coefficient statistically, it is better if t-statistics is used for t is 4.71 (t-tab=2.571). Similarly the tabulated value for t at 5 degree of freedom with 5 level of significance is 2.571 i.e. t-tab=2.571. Comparing t-cal and t-tab it is found that t-cal > t-tab. So in such case alternative hypothesis is accepted meaning the relation shown by the correlation coefficient is highly significant. In other words two variables are

significantly correlated or the increase in lending amount is due to the decrease in lending rate.

The figure for changing trend of interest rate and lending amount is given figure 4.11

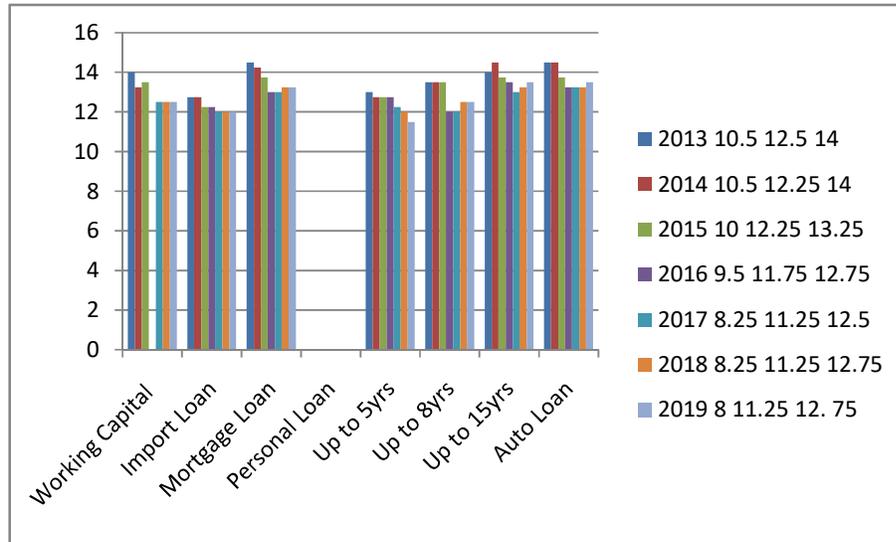


Figure 4.11

Lending Amount of SCBL During Different FYs

### 4.3 Relationship Between Inflation and Interest Rates

One of the most serious problems confronting economies around the globe in recent years is inflation. Inflation is defined as a rise in the average level of prices for all goods and services. Some prices of individual goods and services are always rising while others are declining. However, inflation occurs when the average level of all prices in the economy rises. Interest rates represent the "price" of credit. Are they also affected by inflation? The answer is yes, though there is considerable debate as to exactly how and by how much inflation affects interest rates.

#### 4.3.1 Relationship between Inflation and Lending Interest Rate of the Banks

Principally, the relationship between inflation rate and interest rate of the banks should be negatively correlated. Higher the interest rates lower the demand of money and lower the interest rate higher the demand of money. Higher demand of money creates inflation because it creates higher consumption so that the price of the commodities will be increased. Following table 4.14 shows the relationship between interest rate of selected banks and inflation rate of Nepal.

Table 4.14

Relationship between Inflation and Lending Interest Rate of the Banks

Fiscal year	Inflation rate of Nepal (percent)	NABIL (percent)	HBL (percent)	EBL (percent)	SCBL (percent)
2015	6.687	12.7	12.6	12.8	12.8
2016	12.626	12.2	12.3	11.4	11.5
2017	9.556	11.9	12.1	11.9	11.3
2018	9.9	11.9	12.1	12.1	10.4
2019	9.34	11.8	12.1	11.2	9.5
Correlation coefficient (r)	-	-0.66	-0.65	-0.81	-0.58

Noted from: Researcher calculations

When interest rate rise money flow will be towards secured debt market and liquidity is contained. Funds availability in the market will be rationalized. It does not guarantee lower inflation. In fact it will have higher inflation because of cash flow management. Bank lending rate will be higher and it will have cascading effect of higher production cost -higher inflation. Short term capital inflow will further confuse the strong economy.

Inflation rate in Nepal seems volatile. It is 7.963 percent in the year 2013 which is 9.34 percent in the year 2019. It is highest in the year 2016 i.e. 12.626 percent (two digit point) then it comes in control in the following years. In the above table 4.14 the relationship between interest rate of all the sampled banks and inflation rate is negatively correlated.

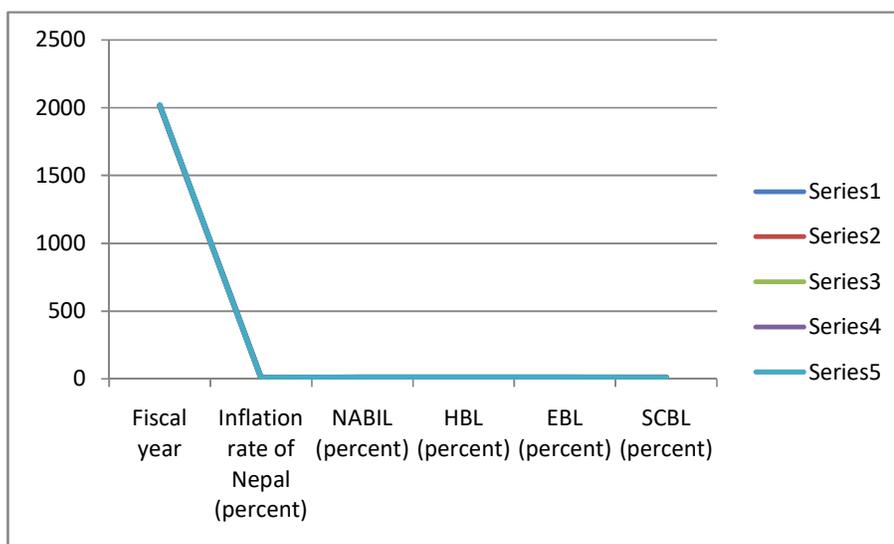


Figure 4.12

Inflation Rate of Nepal During Different FYs

### 4.3.2 Relationship between Net Profit and Interest Rate

Principally, the correlations between net profit and interest have positive correlation. Higher the interest rate causes higher net profit and lower the interest rate causes lower profit. The sensitivity of net interest margins to interest-rate volatility for different groups of banks varies across sub sample periods; this varying sensitivity could reflect interest-rate regime shifts as well as the degree of hedging activities and market competition. The relationship between net profit and interest of selected banks has been presented in table 4.15.

Table 4.15

Relationship between Net Profit and Lending Interest Rate of the Banks

Rs. in million

Year	HBL		NABIL		SCBNL		EBL	
	Net profit	Int. rate						
2015	635.87	12.6	746.47	12.7	818.92	12.8	451.22	12.8
2016	752.83	12.3	1031.05	12.2	1025.11	11.5	638.73	11.4
2017	508.80	12.1	1141.05	11.9	1085.87	11.3	831.77	11.9
2018	893.12	12.1	1344.18	11.9	1119.17	10.4	931.30	12.1
2019	958.64	12.1	1700.38	11.8	1168.97	9.5	1090.60	11.2
r	-0.72		-0.92		-0.95		-0.86	

Noted from: Researcher Calculations

Table 4.15 reveals that the correlation between net profit and interest rate structure of the banks. All the banks' correlation is seemed negative. Out of selected banks, SCBL's correlation is highly negatively correlated i.e. -0.95 than other banks. The least correlation coefficient is -0.72 of HBL. All the banks have net profit margin in increasing trend but interest rate structure is continuously in decreasing trend. It can be 6sustain in the market, all the banks decreased their interest rate on lending and mobilized higher amount of loan and advance, so that profit is increased but correlation goes in negative way.

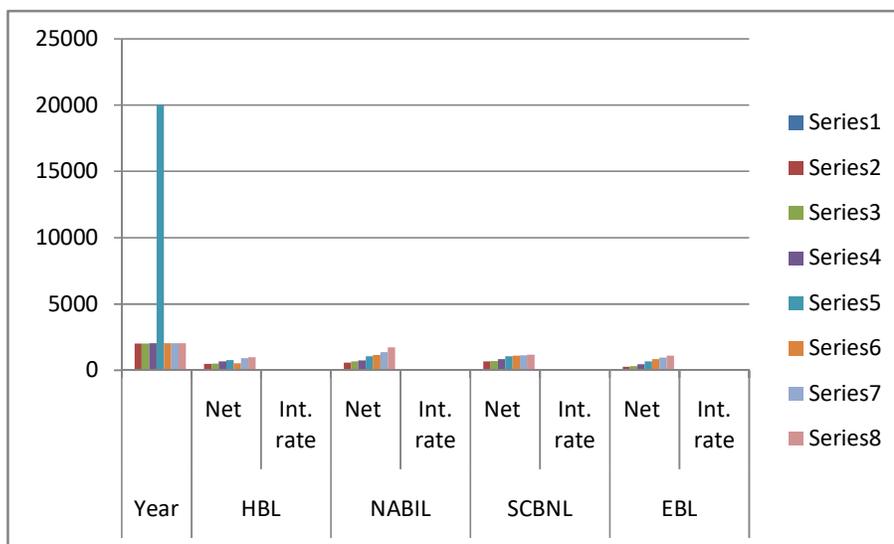


Figure 4.13

Net Profit of Selected Banks During Different FYs

#### 4.4 Presentation and Analysis of Primary Data

In the section primary data is analyzed. The primary data collected through the questionnaire distributed to the executives and others personnel officers of sample banks. These people are familiar with the interest and the factors affecting it. Questionnaire has been appended at the end.

##### 4.4.1 How is The Present Condition of Commercial Banks in Financial Market

Respondents were asked about the performance of commercial banks in Nepalese financial market. Their responses are presented below.

**Table 4.16**

##### **Present Condition of Commercial Banks in Financial Market**

S.N.	Option	No. of respondents	Percent
1	Good	22	55
2	Satisfactory	18	45
3	Poor	-	-
	Total	40	100

Noted from: Opinion survey, 2019.

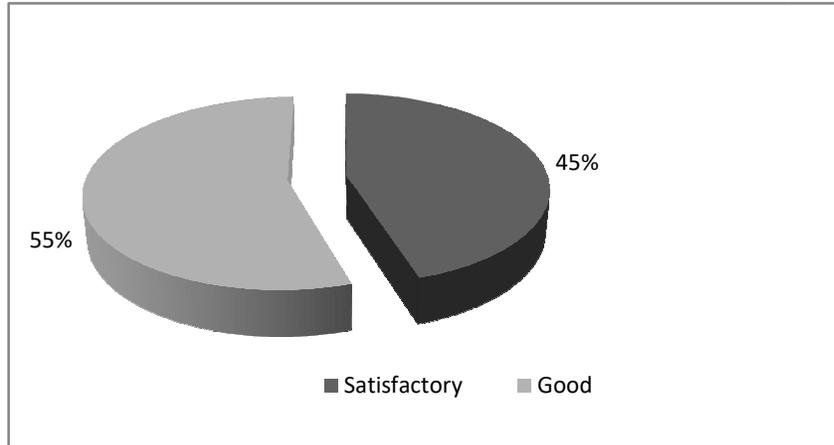


Figure 4.14

Present condition of Commercial Banks in Financial Market

The figure 4.19 shows about the present condition of Commercial Banks in Nepalese Financial Market. 55 percent of the respondents agree that the commercial banks are in good condition. 45 percent of the respondents believe that the condition of banks is satisfactory. Satisfactory condition indicates that the condition either may go up or go down and the economy of the country is worsening day by day so the attention must be given.

#### 4.4.2 Is the Interest Rate Structure of the Banks is Appropriate to Attract the Investor and Depositors

In order to judge the appropriateness of the interest rate structure of the various banks saved for the investor and depositors view points of different respondents are presented below.

Table 4.17

Interest Rate Structure of the Banks is Appropriate to Attract the Investor and Depositors

S.N.	Option	No. of respondents	Percent
1	Yes	25	62.5
2	No	3	7.5
3	May be	12	30
	Total	40	100

Noted from: Opinion survey, 2019.

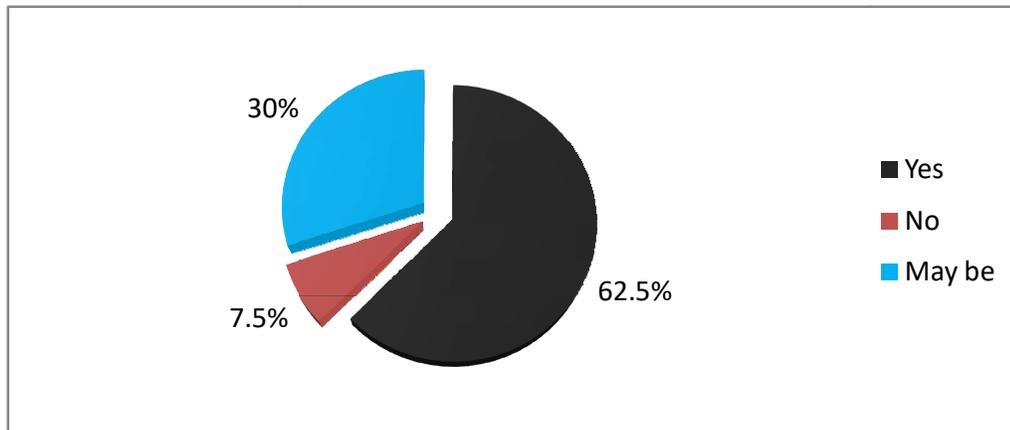


Figure: 4.15

#### Interest Rate Structure of the Banks is Appropriate to Attract the Investor and Depositors

The figure 4.20 shows the 62.5percent of respondents agree that the interest rate structure is appropriate to attract the investors and depositors. But 7.5percent do not agree and remaining 30percent aren't confirmed and hope that it may be appropriate. From the figure it is clear that most of the respondents think that interest rate structure is not appropriate so banks should think about it.

#### 4.4.3 Depositors are Feeling Comfortable and Safe to Deposit their Saving on the Banks

This question tries to find out the feeling of people to deposit their saving on the banks. The viewpoints of the different respondent are presented below.

Table 4.18

#### Depositors are Feeling Comfortable and Safe to Deposit their Saving on the Banks

S.N.	Option	No. of respondents	Percent
1	Confidentially safe	31	77.5
2	Safe	9	22.5
3	Unsafe	-	-
	Total	40	100

Noted from : Opinion survey, 2019.

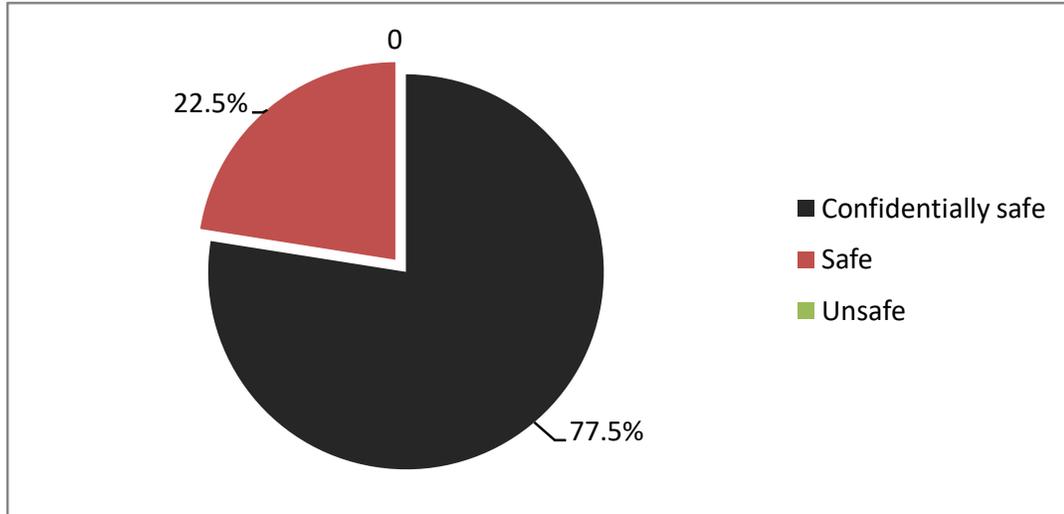


Figure 4.16

Depositors are Feeling Comfortable and Safe to Deposit their Saving on the Banks

The figure 4.21 shows the 77.5percent of respondents are feeling confidentially safe and no depositors are feeling their saving on the banks unsafe. But remaining 22.5percent are safe feeling and comfortable to deposit their saving on the banks.

#### 4.4.4 High Lending Rate in Non-productive Sector Rather than Productive Sector

The question wants to be clear about the high interest rate that is being charged on non-production sector rather than productive sector. The view points of the different respondents are presented below.

Table 4.19

High Lending Rate in Non-productive Sector Rather than Productive Sector

S.N.	Option	No. of respondents	Percent
1	Yes	30	75
2	No	8	20
3	Don't know	2	5
	Total	40	100

Noted from: Opinion survey, 2019.

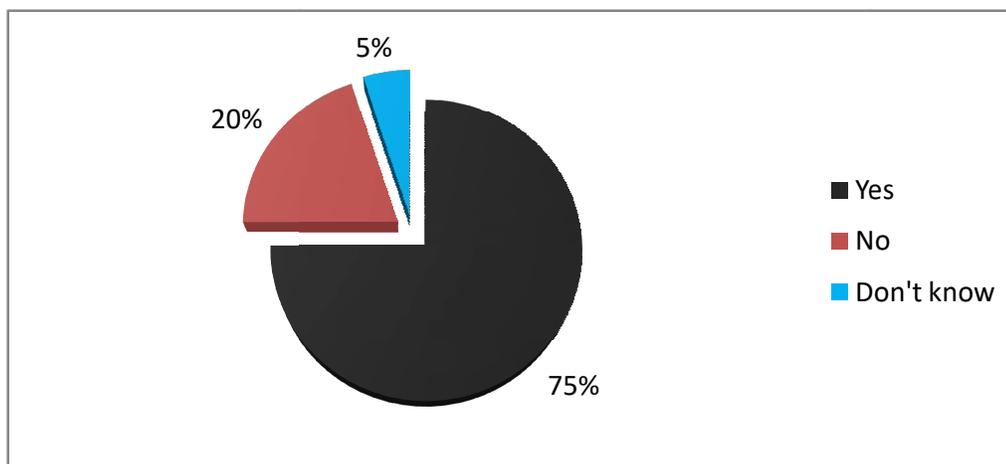


Figure 4.17

#### High Lending Rate in Non-productive Sector Rather than Productive Sector

The figure 4.22 shows the 75percent of the respondents agree that the lending rate is high on non-productive sectors. But 20percent do not agree and remaining 5percent are unknown about the high lending rate charged on non-productive sectors. There should be low interest rate on productive sector so that people can use more funds from banks on productive sector which ultimately leads nation towards success.

#### 4.4.5 Does the Interest Rate on Deposit and Lending of the Banks is Appropriate in Nepalese Financial Market

This question tries to know effectiveness of interest rate on deposit and lending of the banks in Nepalese Financial Market. The result obtained from different respondents is presented below.

Table 4.20

Interest Rate on Deposit and Lending of the Banks is Appropriate in Nepalese Financial Market

S.N.	Option	No. of respondents	Percent
1	Appropriate	25	62.5
2	Satisfactory	15	37.5
3	Not appropriate	-	-
	Total	40	100

Noted from: Opinion survey, 2019.

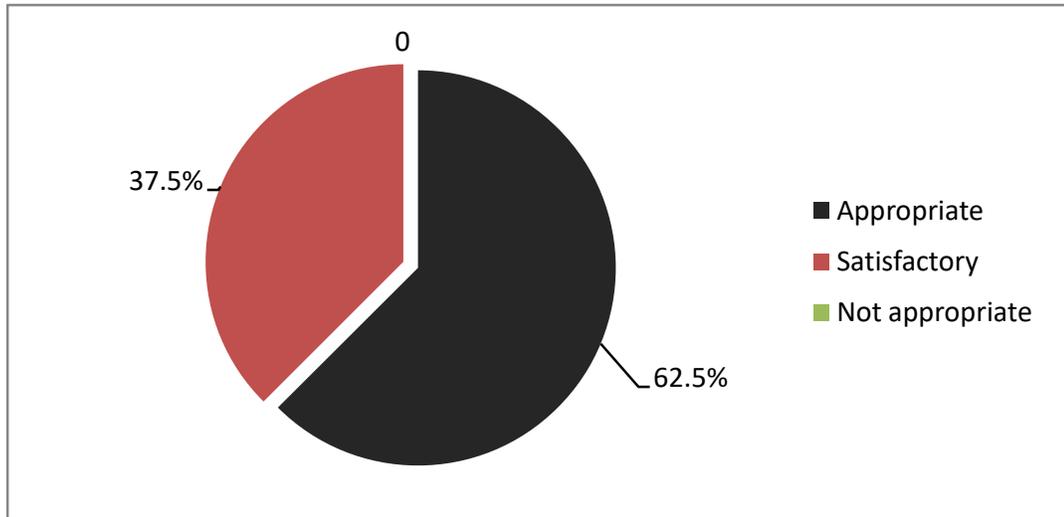


Figure 4.18

Interest Rate on Deposit and Lending of the Banks is Appropriate in Nepalese Financial Market

The figure 4.23 shows that only 62.5percent of the respondents agree that interest rate on deposit and lending of the banks is appropriate in Nepalese financial market. Even 37.5percent think that it is satisfactory in present contest.

#### 4.4.6 Deposit on Saving Deposit Scheme is Effective than Fixed Deposit Scheme

This question wants to find out that do people like to deposit on saving deposit than fixed deposit? Here is what our respondents have replied.

Table 4.21

#### Deposit on Saving Deposit Scheme is Effective than Fixed Deposit Scheme

S.N.	Option	No. of respondents	Percent
1	Yes	9	22.5
2	No	4	10
3	Don't know	27	67.5
	Total	40	100

Noted from: Opinion survey, 2019.

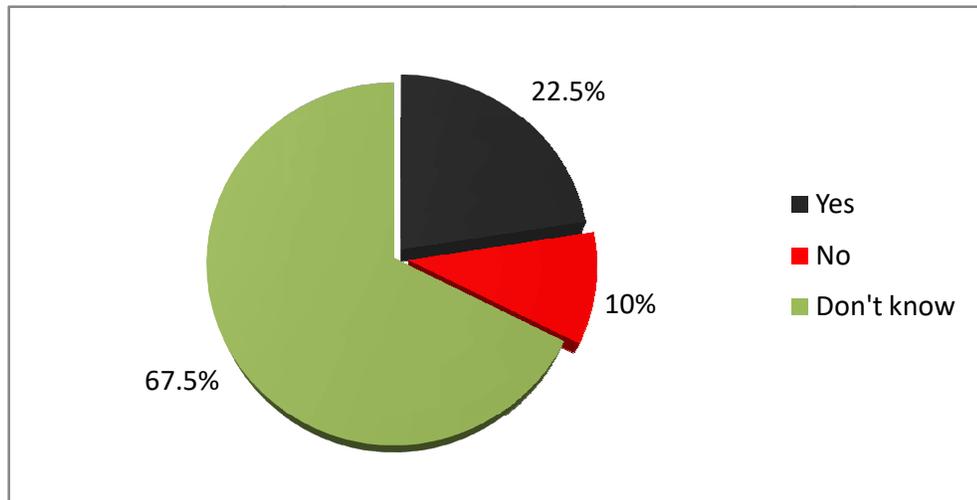


Figure 4.19

Deposit on Saving Deposit Scheme is Effective than Fixed Deposit Scheme

The figure 4.24 shows that about 22.5percent of the respondents agree that people like to deposit in saving scheme. 10percent respondents don't agree the statement and 67.5percent is unknown about this. This may be because the interest provided by banks on fixed deposit is decreasing day by day.

**4.4.7 In what Degree Open Borders with India Affect the Interest Rate in Borrowing and Lending**

This question wants to find out that to what extent open boarder with India affect the interest rate on borrowing and lending? The figure shows what the respondents have said.

**Table 4.21**

**Open Borders with India Affect the Interest Rate in Borrowing and Lending**

S.N.	Option	No. of respondents	Percent
1	Highly	14	35
2	Normally effective	26	65
3	Not effective at all	-	-
	Total	40	100

Noted from: Opinion survey, 2019.

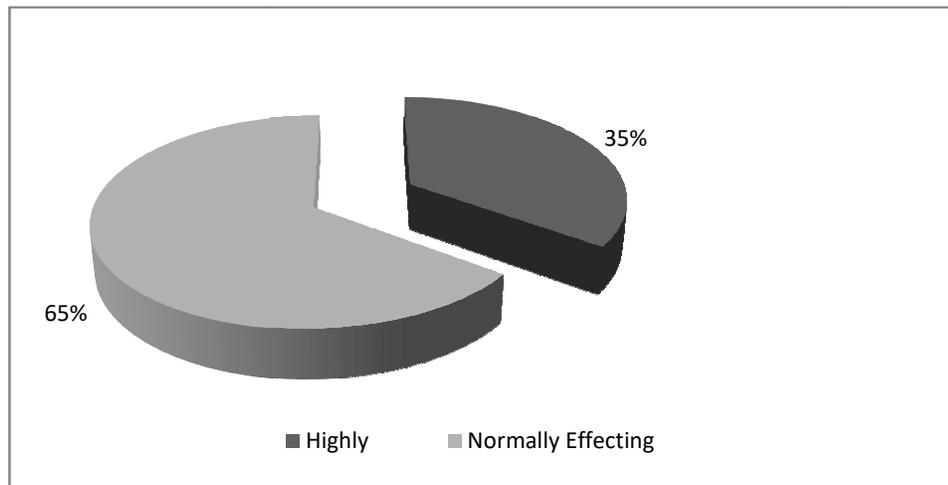


Figure 4.20

#### Open Borders with India Affect the Interest Rate in Borrowing and Lending

The figure 4.25 shows that about 35percent of the respondents highly agree that open boarder with India affect the interest rate on borrowing and lending. 65percent of respondents think that it may affect. It may suggest that open boarder with India somewhat affect the interest rate on borrowing and lending.

#### 4.4.8 In your Experiences People Deposit More or Withdraw in the Situation of Violence and Insecurity

This question wants to clear that what the people do about their cash in the situation of violence and insecurity. The result is presented below.

**Table 4.22**

#### **People Deposit More or Withdraw in the Situation of Violence and Insecurity**

S.N.	Option	No. of respondents	Percent
1	Deposit more	-	-
2	Withdraw more	38	95
3	No effect	2	5
	Total	40	100

Noted from: Opinion survey, 2019.

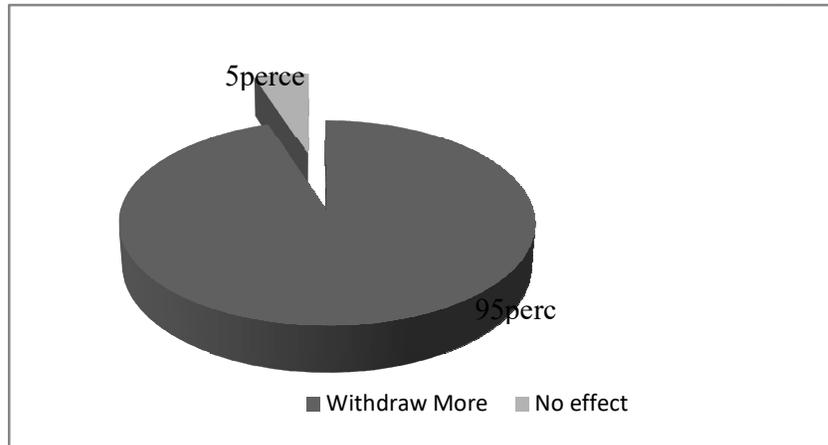


Figure 4.21

#### People Deposit More or Withdraw in the Situation of Violence and Insecurity

The figure 4.26 shows that none of respondents agree that people deposit more in the situation of violence and insecurity. But 95percent of respondent don't agree this statement they have replied that people with dram more in the situation of violence and insecurity and remaining 5percent have replied that there will be no effect at all. From above it is clear that people feels unsafe to deposit their saving on the bank in the situation of violence and insecurity.

#### 4.4.9 What do you Think About Rules and Regulation of Nepal Rastra Bank

This question tries to know Nepal Rastra Bank is functioning to regulated Nepalese Commercial Bank. The result obtained from different Reasons is presented below.

**Table 4.23**

#### **Rules and Regulation of Nepal Rastra Bank**

S.N.	Option	No. of respondents	Percent
1	Good	9	22.5
2	Satisfactory	23	57.5
3	Inadequate	8	20
	Total	40	100

Noted from : Opinion survey, 2019.

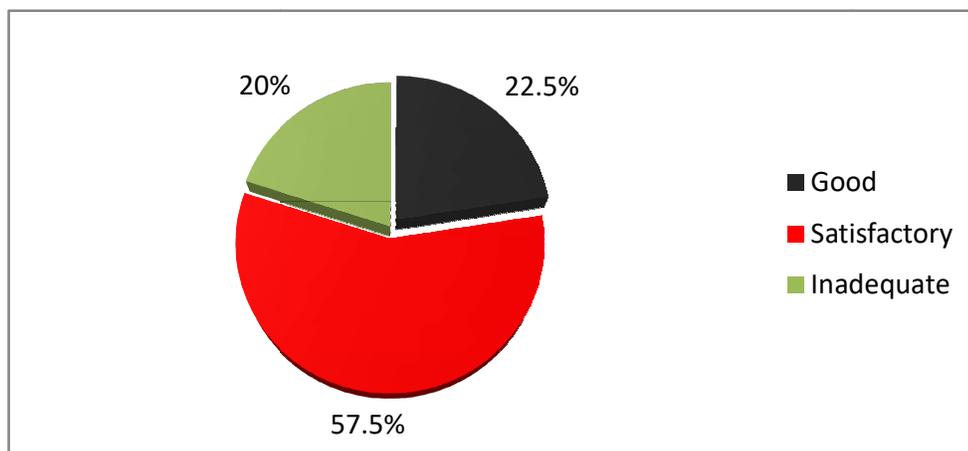


Figure 4.22

#### Rules and regulation of Nepal Rastra Bank

The figure 4.27 shows that only 22.5percent of the respondents they agree that Nepal Rastra Bank is functioning well. About 57.5percent finds the role to be satisfactory. But NRB should think about 20percent hoping banks function to be inadequate.

#### 4.4.10 What are the Reasons that Banks Aren't Properly Utilizing the Deposits in Terms of Loans to Generate Profit

This question wants to clear that why banks are not properly utilizing their deposit in terms of loans to generated profit. There may be several reasons but according to priority only three options are mentioned. The result obtained form different people are presented below.

**Table 4.24**

#### Reasons that Banks Aren't Properly Utilizing the Deposits in Terms of Loans to Generate Profit

S.N.	Option	No. of respondents	Percent
1	Due to interest rate structure	4	10
2	Due to political situation	34	85
3	Due to other factors	2	5
	Total	40	100

Noted from: Opinion survey, 2019.

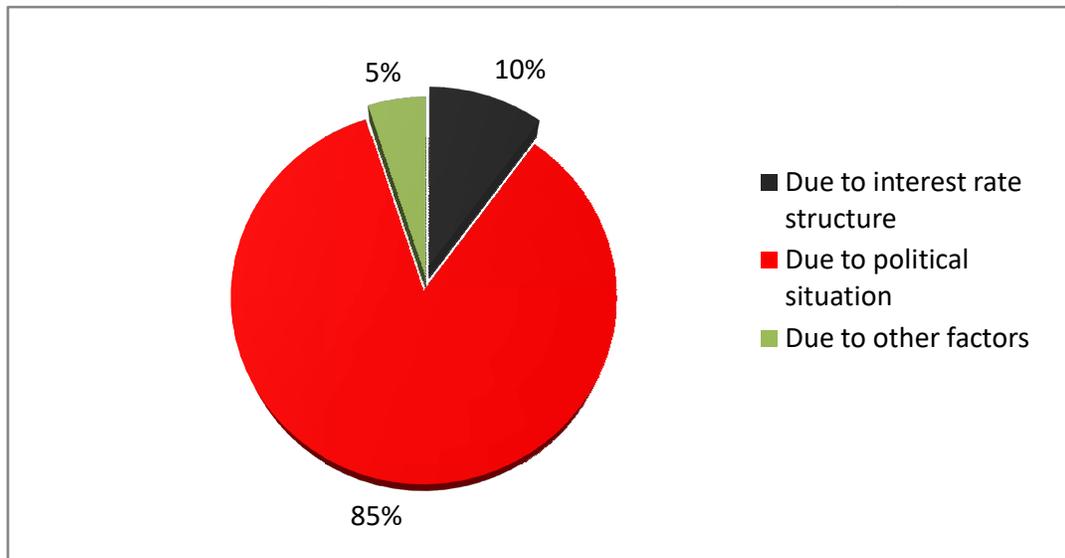


Figure 4.23

#### Reasons that Banks Aren't Properly Utilizing the Deposits in Terms of Loans to Generate Profit

This figure 4.28 shows that only 10 percent of the respondents think that interest rate is main cause that is limiting banks to utilize the deposits in terms at loans to generate profit and remaining 5 percent think due to other several factors. Remaining 85 percent think due to political situation.

#### 4.4.11 Do you Agree Lending Amount Decreased with the Increment in Lending Rate

This question is related about the lending amount and lending rate. The viewpoints of different respondents are presented in figure below.

Table 4.25

#### Lending Amount Decreased with the Increment in Lending Rate

S.N.	Option	No. of respondents	Percent
1	Agree	30	75
2	Disagree	3	7.5
3	May be	7	17.5
	Total	40	100

Noted from: Opinion survey, 2019.

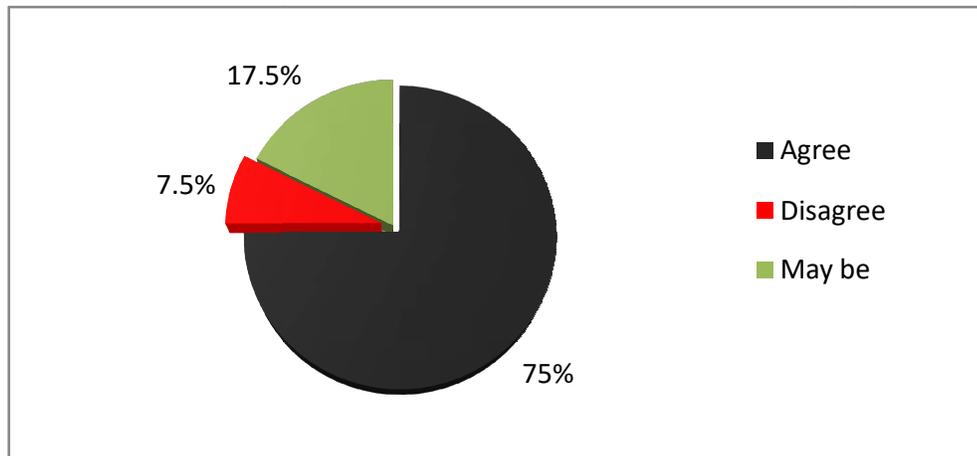


Figure 4.24

#### Lending Amount Decreased with the Increment in Lending Rate

The figure 4.29 shows that 75percent of the respondents agree that lending amount decrease with the increment in lending rate whereas 7.5percent of the respondents disagree and 17.5percent of the respondents said may be about it.

#### 4.4.12 Are Commercial Banks Playing Important Role in Economic Development of the Country

The question tries to know whether the commercial banks role is important in economic development. The table and figure show the respondents' view.

Table 4.26

#### Commercial Banks are Playing Important Role in Economic Development of the Country

S.N.	Option	No. of respondents	Percent
1	Agree	37	92.5
2	Disagree	-	-
3	May be	3	7.5
	Total	40	100

Noted from: Opinion survey, 2019.

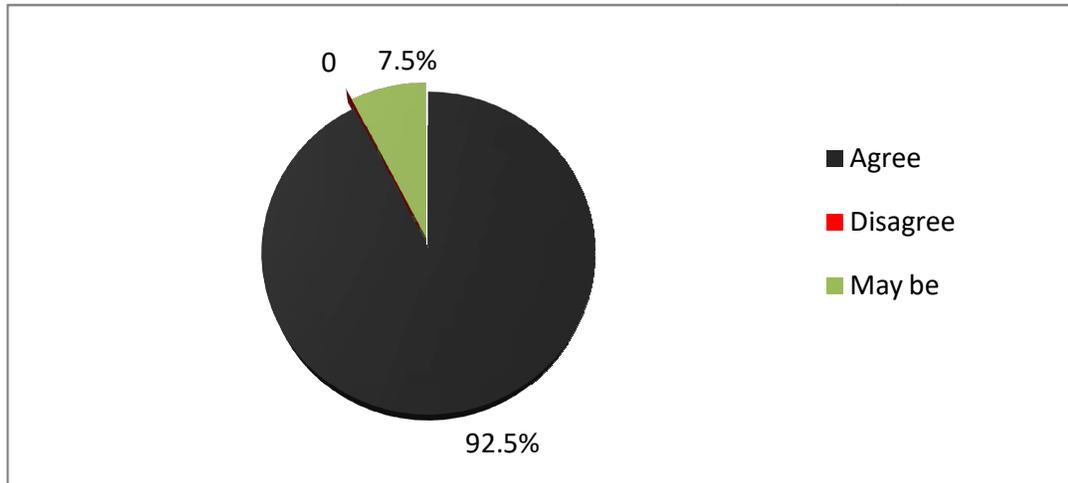


Figure 4.25

Commercial Banks are Playing Important Role in Economic Development of the Country

The figure 4.30 shows that 92.5percent of the respondents said commercial banks play an important role in economic development whereas 7.5percent respondents said may be about it.

#### 4.4.13 Does Inflation Influences the Interest Rate

This question tires to clear about the relationship between interest rate and inflation. The viewpoints of different respondents are given below.

Table 4.27

Inflation Influences the Interest Rate

S.N.	Option	No. of respondents	Percent
1	Yes	36	90
2	No	-	-
3	May be	4	10
Total		40	100

Noted from: Opinion survey, 2019.

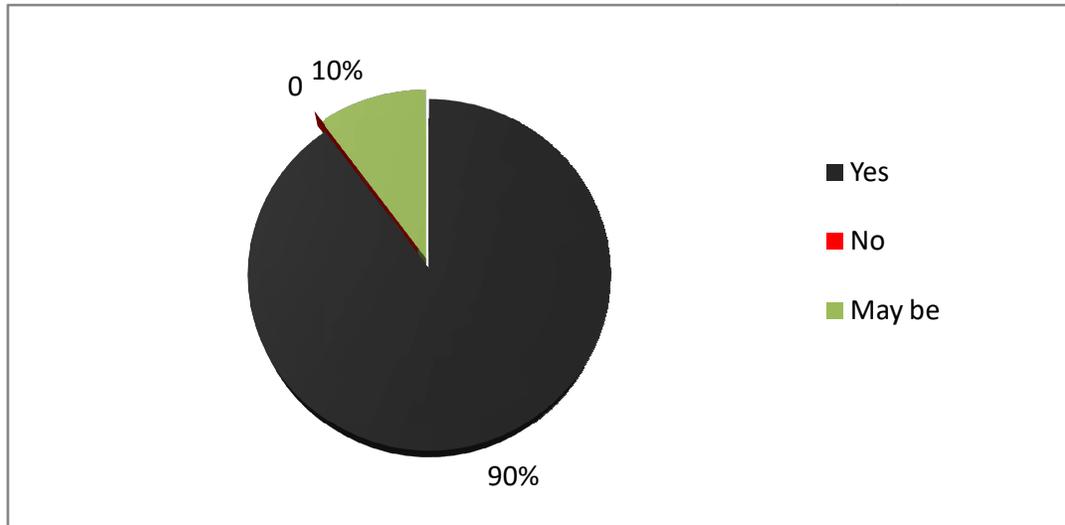


Figure 4.26

#### Inflation Influences the Interest Rate

The figure 4.31 shows that about 90percent of the respondents agree that inflation affect the interest rate. Even 10percent hope that inflation may influence interest rate.

#### 4.4.14 Lending Rate Should be Reduced to Attract the Investors

This question tries to know whether lending rate should be reduced to attract investors. The table and figure show what the respondents have said.

Table 4.28

#### Lending Rate Should be Reduced to Attract the Investors

S.N.	Option	No. of respondents	Percent
1	Yes	23	57.5
2	No	11	27.5
3	Don't know	6	15
Total		40	100

Noted from: Opinion survey, 2019.

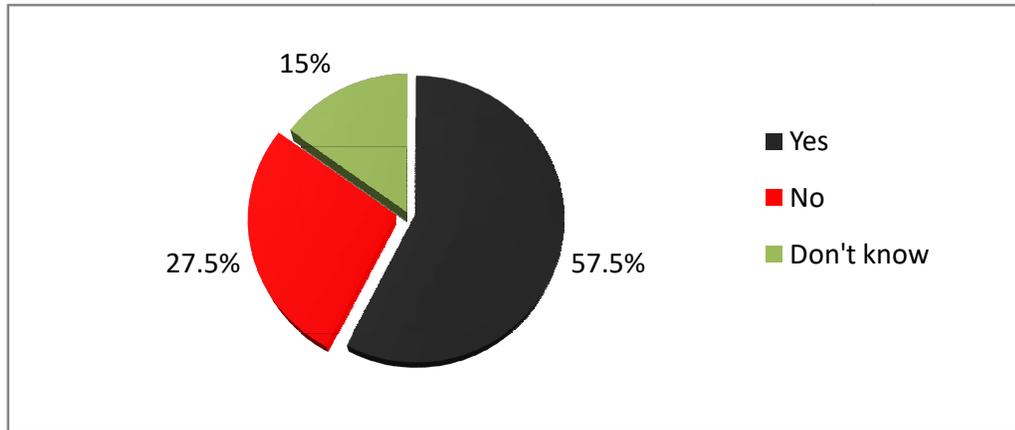


Figure 4.27

#### Lending Rate Should be Reduced to Attract the Investors

The Figure 4.32 shows that about 57.5percent people agree that lending rate should be reduced to attract the investors. But 27.5percent of respondents do not agree with the statement and remaining 15percent are unknown about it.

#### 4.5 Major Findings of the Study

After presentation and analysis of relevant data of sample banks under study: using various analytical tools some findings can be drawn. The major findings of the study are as fallows.

- **NABIL:** Amount of saving deposit and interest rate on deposit is negatively correlated. Amount of fixed deposit and interest rate on deposit is also negatively correlated. Amount of lending and interest rate is negatively correlated. Relation between interest amount with both saving and fixed deposit and lending amount is significant it is found deposit rate and lending rate moved into same direction.
- **Himalayan Bank Limited (HBL):** Amount of saving deposit and interest rate on deposit is highly negatively correlated. And fixed deposit amount and interest rate on deposit is also negatively correlated. Amount of lending and interest rate is also highly negatively correlated. Relation between interest amounts with saving is significant and with fixed deposit is insignificant, and then relation between interest rate and lending rate is insignificant. The deposit rate and lending rate of it is moving in same direction.

- **Everest Bank Limited (EBL):** Amount of deposit (saving and fixed) and interest rate on deposit is highly negatively correlated. Similarly amount of lending and interest rate is highly negatively correlated. Relation between interest amounts with deposit (saving and fixed) and lending amount is significant. The deposit rate and lending rate of it is moving in same direction.
- **Standard Chartered Bank Limited (SCBL):** Amount of saving deposit interest rate on deposit is highly negatively correlated. But amount of fixed deposit and interest rate on deposit is negatively correlated. Relation between interest amounts with saving deposit is significant, with fixed deposit is insignificant and lending amount is significant. Both deposit rate and lending rate moved into same direction.
- Inflation rate in Nepal seems volatile. It is 7.963 percent in the year 2013 which is 9.34 percent in the year 2019. It is highest in the year 2016 i.e. 12.626 percent (two digit point) then it comes in control in the following years. All the banks' correlation is seemed negative. Out of selected banks, EBL's correlation is highly negatively correlated i.e. -0.81 than other banks. The least correlation coefficient is -0.58 of SCBL.

Table 4.29

Summary of the Finding

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**Summary table of the calculations**

Banks		Correlation coefficient		t-calculated		Result
		Saving deposit	Fixed deposit			
<b>NABIL</b>	Deposit	-0.32	-0.70	5.67	2.66	Significant
	Lending	-0.93		8.82		Significant
<b>HBL</b>	Deposit	-0.056	-0.95	8.83	2.12	Sig/Insig.
	Lending	-0.94		2.42		Insignificant
<b>EBL</b>	Deposit	-0.81	-0.95	6.98	9.02	Significant.
	Lending	-0.87		3.39		Significant
<b>SCBL</b>	Deposit	-0.45	-0.49	4.29	1.68	Sig/Insig.
	Lending	-0.94		4.71		Significant

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Noted from : Research Calculations

## CHAPTER-V

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is a last part of the research study which includes all the whole study and extracts of all the preciously discussed chapters. This chapter mainly consists of three parts summary, conclusion and recommendations. In summary portion revision of all four chapters are made viz. Introduction, Literature Review, Research Methodology and Analysis of Data. Then conclusion is drawn following analysis part and comparing the theoretical aspect and analysis. Conclusion part answers whether practically related to theory. Based on conclusion necessary suggestions are presented in recommendation part i.e. various measures are recommended to concerned organization for the improvement of the current condition of interest rate structure.

#### 5.1 Summary

After the liberalization policy various banks and financial institutions came into existence with a hope to play important role in the development of financial system of the country. Accepting deposit form savers (household, businesses or government) and transferring the collected deposit to the investment sector (i.e. lending collected amount from depositors to borrowers) is one of the major functions of banking business. Banks are the real intermediaries who transfer saving (i.e. collected deposit) to the needy investors does that money can be used in the productive sector for economic development. To collect deposit bank provide certain percent of interest and when amount is loaned outside (which has been collected form savers) certain percent of interest is charged to them. Even though there are various factors in the economic that effects deposit amount of the banks. With the curiosity to be clear about interest rate structure of commercial banks and to be clear about whether interest rate influence deposit and lending amount this study is made. With the major objective of showing relationship between deposit rate and deposit amount lending rate and lending amount this study is undertaken.

The review of literature shows that there are so many economic and non-economic factors that are on deposit and lending. But it is real fact that there is relationship of interest rate with deposit amount and lending amount. The volume of deposit amount and lending amount of banks are highly affected by their interest rate. Generally, there is

positive relationship in between interest rate on deposit and deposit amount. That means, when rate on deposit increases that attract to the deposit and deposit amount of banks are increases or vice versa. Similarly there is negative relationship in between interest rate on lending and lending amount of banks. That means increase in interest rate on lending, decreases the lending (loan or investment) amount of banks and vice versa. Various commercial banks and financial companies in Nepal are free to set their interest rate on deposit and lending so all banks are determined their interest rate as per their own policy purpose or objectives However interest rate fluctuates time with impact of economic and non-economic factors which in turn affect deposit amount and lending amount of banks.

The effect of interest on deposit and lending amount and interest rate structure on deposit and lending are analyzed form four commercial banks of Nepal for seven years period by using statistical and financial tools mentioned in chapter three. Secondary data are collected from NRB's economic reports, annual reports of related banks and websites and primary data are collected form the questionnaire distributed to various personnel of sample banks. The analysis of all banks shows average interest rate on deposit is in decreasing and deposit amount is in increasing trend. Similarly interest rate on lending is also decreasing and loan and advances (lending) amount is in increasing trend. This trend show, there is reveres relationship in between deposit rate and deposit amount lending rate and lending amount of commercial banks. The statistical analysis also shows that there is significant relationship between deposit rate and deposit amount and lending rate and lending amount of most commercial banks except few.

## **5.2 Conclusion**

Form the analysis of relevant data of sample banks under the study; using various statistical tools mentioned in chapter three and from their findings following conclusion have drawn.

1. The interest rate on both deposit and lending of all sample banks are found to be in decreasing trend. But on the contrary to this deposit amount and lending amount is increasing every year.
2. The saving deposit amount and saving interest rate have negative relationship (i.e. correlation ranging form (-0.32 to -0.94).it means that they have highly inverse relationship if one variable increases other variable decreases and vice-versa. This case is against the theory of substitution effect. This may be due to the fact that in

last FYs. People accumulated most of their funds on saving accounts though they don't get appropriate interest on it. It is just because of unavailability of other acceptable, in with a separate study can be made. Similarly, the convenience of using saving accounts provokes the investor deposit on saving account. Similarly the excess supply of saving deposit reduces interest rate of saving account.

3. That is clarify the above conclusion the t-statistic of negative correlation between saving deposit amount and saving interest rate is significant
4. Analysis of fixed deposit amount and fixed interest rate shows negatives relationship. According to correlation coefficient, The banks have correlation coefficient is negative meaning people deposit more money even if the bank offer lower yield rate on fixed deposit.
5. The t-statistic between fixed deposit interest rate and fixed deposit amount is insignificant of HBL and SCBL but NABIL and EBL have significant relationship.
6. One of variables that affect the demand of fund (lending activity) is lending interest rate and lending amount. In this study for four sample banks, it is found that all sample banks. Have negative correlation between these two variables. By using correlation tools, it can be inferred that all the sample banks have inverse relationship as suggested by theory.
7. The t-test for correlation coefficient of each sample bank for positive relationship between lending interest rate and lending amount shows that the t-value for HBL is insignificant. So increase in lending amount is not due to the decrease in lending interest meaning that the one of the factor to increase the lending amount is decline in interest rates. So it can be concluded that lending interest rate is also one important factor for expansion or contraction of lending amount.
8. It is also found that lending interest rate of the productive sector loan such as commercial loan. Industrial loan, trade credit, working capital loan were decreased lesser in magnitude in comparison to the non-productive sector loan. In case of lending people use more money when interest rate on lending is low. Almost all banks have lend more money by lower interest rate on lending. But borrowing has increased on non productive sectors.
9. During the study period it is found that there exist the high spread between deposit interest rate and lending interest rate. In the beginning of the seven FYs this

spreads was large but on later years, the interest rate spread declined to some extent. That may be due to competitive financial environmental and less availability of investment opportunity.

10. Based on analysis of sample banks it can be concluded that interest rate on deposit has attract the depositors; as every year deposit rate of sample banks are seen decreasing. So it may also be concluded that commercial banks are conceived deposit as interest rate on deposit.
11. Form the analysis of lending rate of sample banks it can be condition that interest rate on lending attract borrowers investors as lending rate of sample banks have decreased every year to provide better opportunities for the borrowers investors.
12. All the banks have net profit margin in increasing trend but interest rate structure is continuously in decreasing trend. It can be concluded that this is the result of tough competition in the field of banking sector. The relationship between interest rate of all the sampled banks and inflation rate is negatively correlated.

### **5.3 Recommendations**

To full fill the objectives of this study, related data and ideas are collected form different sources. There data are presented; analyzed and interpreted then conclusions are made. Based on the analysis, interpretation and conclusions of this study certain recommendation can be made here. So that the concerned authorities, further researcher, academicians and bankers can get insights on the present conditions of above topics. It is considered that this research will fruitful for them to improve the present condition as well as for further research. The major recommendations after this study are as follows

1. Interest rates on deposit is too less in Nepal. Commercial banks are suggested to increase the interest rate on deposit so that depositor are benefited by their saving.
2. The high spread between interest rate on deposit and lending is another factor to be considered. Higher spread merely increases the profit margin of the banks but at the same time it reduces the deposit collection and investment in the country. So financial institutions are suggested to reduces the spread as minimum as possible.
3. The central banks of Nepal, NRB should pay special attention towards decreasing trend of interest rate on deposit. It may cause different bad effect in the country such as disintermediation, lack of saving and further saving may go outside of the country.

4. As the central bank of the country, NRB has power to specify the range or spread between lending rate and deposit rate. So NRB is suggested to specify the spread whenever there is high gap between lending rate and deposit rate in the country. In order to create fair economic situation, NRB being the regulator it should watch the functions of banks very closely.
5. As the key to success for any organization and for good financial is essential, this is possible only by proper decision making of interest. So all the commercial banks are supposed to set proper and practical interest rate policy.
6. While reduction the lending rate, it is suggested to reduce more on productive sectors than non-productive. If not possible then bankers can reduce the rate of all sectors proportionately.
7. In order to promote more lending and to promote more borrowing lending institutions should introduce new customer oriented schemes of lending and borrowing. So that more lending can be promoted and over liquidity may be solved.
8. Banks are not able to mobilize to its deposits in terms of loan due to lack of sufficient safe investment opportunities. Thus it is suggested to the government to improve the political situation of the country.
9. As NRB'S publications are the major sources of data and information regarding this topic, untimely and late publications makes the researcher wait long and even individual banks do not put available information regarding interest rate structure on their published report. So NRB and even individual commercial banks are suggested to publish all necessary publication in time and in their publications respectively for the convenience of researcher and other interested people.

#### **5.4 Present Scenario**

In the fiscal year 2018/19, liquidity crisis was felt in the Nepalese economy. To main causes of the liquidity crunch, there was dramatic increase in imports, especially of gold. Contrary to popular belief, the rise in gold imports wasn't caused by a price differential with India. Actually, the import of gold coincided with the increase in the price of gold in the international market. It became a lucrative investment because gold is an extremely liquid instrument.

Second private sector credit growth is higher than deposit growth, which automatically results in tight liquidity.

Thus, as a precautionary measure, NRB had to inject massive amount of liquidity into the banking system through repos. Further, it also directed banks and financial institutions to increase their interest rate on deposit in order to attract the idle cash. As a result presently banks are offering up to 12percent interest on saving accounts.

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## ABBREVIATIONS

AD	=	Anno Domini
BS	=	Bikram Sambat
Cal	=	Calculator
Coeff	=	Coefficient
d.f.	=	Degree of freedom
Det	=	Determination
EBL	=	Everest Bank Limited
Fig	=	Figure
FY	=	Fiscal Year
GDP	=	Gross Domestic Product
HBL	=	Himalayan Bank Limited
i.e.	=	that is
JVB	=	Joint Venture Bank
Ltd.	=	Limited
NABIL	=	Nabil Bank Limited
NRB	=	Nepal Rastra Bank
SCBNL	=	Standard Chartered Bank Nepal Limited

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