CHAPTER-I
INTRODUCTION

1.1 Background of the Study

Nepal is a small and landlocked country. It lies on southeast of Asia. It is one of the developing countries of the world. Economic status of the business and industries are also of middle class. The economic growth of the country is based on the financial market; it is in fact the backbone of the economy. The development of the financial sector thus reflects the development level of the country and hence the economy of the whole country is represented by the financial sector. The different financial institutions such as banks, insurance companies, co-operatives, financial companies, mutual funds, foreign exchange market etc are small sub divisions of huge financial division.

The United National Committee for Development Planning includes Nepal among the "least developed countries" or poorest of the world's poor countries. These countries are characterized by a number of economic and social features. In Nepal, as well as in the other least developed countries, an extremely low economic growth rate combined with the high rate of population growth has brought stagnation in the already low level of per capita income. Majority of the population dependent on agriculture (Primarily subsistence agriculture) and access to modern money economy activities is limited.

Nepal is situated between the two most emerging global economy power of the world, India in the east, west and south with an open border and China in the North. Nepal is al landlocked country and home place of natural beauty with trace of artifacts. Extra ordinary diversities and similarities can be seen here. However economic growth 4.63% of the country has not improved substantially over time so as to overtake population growth. As the current population growth is 1.35% among them 25.16% lived in deep poverty by unequal national income distribution .Human development index of Nepal is 0.463 and poverty gap index is 5.6%in 2013 is widening day by day.

Nepal is one of the Developing countries in the world, and south Asia according to world development report 2014; it has $ 1133 GNP per capita. Most indicators reflect dismal performance on gender aspect of human development. Nepalese women are extensively involved on agriculture activities. They are involved in triple work responsibilities i.e. reproduction, household chores and employment. However household chores and family care not considered productive jobs. Due to limited educational skill and lack of opportunism, majority of women are self-employed in manual agricultural activities in rural areas. Basically, Nepal is male dominate society however; Women play vital roles in family institutions in recent years in our society. Women's legal status has changed with new laws moving towards participation in political and economic sector, social, technological Legal (PESTL) sector. A large number of women are working as doctors, engineers, layers, pilots and scientists. But the other reality is that most of the Nepalese women with limited educational skills and few formal opportunities are primarily involved in self-employed activities as a means of supporting their families. Most of these activities do not provide them sufficient income to reduce their poverty. Women lack of technical knowledge and managerial skills are out of access to credit market resources. In this way they are less able to make significant improvement in their economic condition.

Different economist has their own view point for expressing the effectiveness of the financial institutions for the promotion and facilitation of economic development. A study conducted by J. Schumer, about the relation between the growth of the financial institution and economic development, defined the financial institution as one of the two key factors and the other being the entrepreneurship. In another study by John G. Gurley, he did not take these factors as essentials for the growth or development of economy. The opinion that serve as a bridge between the two author was the view of other researcher Rondo Camron who emphasize that the importance of the financial institutions lies somewhere between the two extremes. These opinions do differ in the order of merit to the role of financial institution in the process of economic development but they never ignored its significance.

Financial institution occupies an important place in a nation's economy. A financial institution is indispensable in a modern society. It plays a pivotal role in the economy development of a country and forms the core of the money market in an advance country. It has played an immensely valuable role in the economic life of every country big or small. The special interest of economist in the activities of financial institution is due to the monitory nature of the deposit liabilities of the institution *(Principle and Practices of Banking and Insurance).*

Bank is a formal financial institution, which receives money, which is paid back by honoring cheque. The main objective of financial institution is to collect scattered saving and to supply to the needy person or organization.

The modern financial system of the world falls in five categories as recommended by R. S. Sayers:

- Central Bank
- Commercial Banks
- Finance Companies
- Insurance Companies
- Other Financial Institutions.

The funds are collected mainly in the form of deposits time and saving deposits) by the financial institution which are used as a part of interest investment. The inadequacy of interest formation is to some extent wiped out via collecting deposits from several branches such as households, business and governments. Disposal income is the personal saving which is not consumed. Savings is the amount left when expenditure is subtracted from the income. People with more income save more than people earning less. Household saves more than that of the business and government in general. For household, saving equals to current income minus current expenditure. For business sector savings include current earnings retained inside business firms after payment of taxes, stockholder's dividend and other expenses. Government saving arise where there is a surplus of current revenue over expenditure. To induce more saving, financial

institution can play a vital role by providing attractive interest rate and offer a different scheme. The large parts of the income in the developing and poor countries are consumed to fulfill the daily needs of the people and they saved less. Even if some people are able to save their money, they show their interest to invest such surplus funds on non-productive sectors like gold, land, vehicles and so on. Banks and financial companies, as intermediaries, can attract savers to save more by providing them attractive interest rate and accept the deposit. Banks provides loan to borrowers who are in need of money from the money accumulated in the form of deposit and interest of bank while granting loan. Bank charges a certain percentage of interest to the borrower and borrower has to pay that interest for using banks' money. Interest on loan also varies according to the nature of loan, whether loan is of short term or long term. An appropriate interest rate structure greatly affects the collection of deposits, mobilization of saving (only in productive sector) and profit position of any financial institution, which in turn, affects the economic betterment of the whole country.

1.1.1 Profile of the Banks under Study

There are 30 commercial banks operating in Nepal taking 'ka' in rank. Among them only 3 banks are taken as sample for study. The general introduction of the banks under study is as:

Himalayan Bank Limited (HBL)

All customers are treated with utmost courtesy as valued clients. The bank, wherever possible, offers tailor made facilities to its clients, based on the unique needs and requirements of different clients. To further extend the reliable and efficient services to its valued customers, Himalayan Bank Limited has adopted the latest banking technology. This has not only helped the bank to constantly improve its service level but has also prepared the bank for future adaptation to new technology. The bank already offers unique services such as SMS banking and Internet Banking to customers and will be introducing more services like these in the near future.

Himalayan Bank Limited (HBL) was incorporated in 1992 by few distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank Limited, one of the largest commercial bank of Pakistan. Banking operation commenced from January 1993. It is the first commercial bank of Nepal whose maximum shares 80% are held by the Nepalese private sector and remaining by foreign. Besides, commercial banking services, the bank also offers industrial and merchant banking services. The bank has 23 branches in and outside of Kathmandu valley including a Himalayan exchange center. Himalayan Bank Limited has always been committed to providing a quality service to its valued customers, with a personal touch.

Everest Bank Limited

Everest Bank Limited (EBL) started its operation in 1994 with a view and objectives of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer friendly services through a network of 26 branches across the nation. Punjab National Bank (PNB), joint venture partner of the bank (holding 20% equity in the bank) is the largest nationalized bank in India having 113 years of banking history. PNB is a technology driven bank serving over 35 million customers through a network of over 4,500 branches spread all over the country with a total business of around INR 2178.74 billion. Management of the EBL is being handled by PNB under the Management Service Contract. The bank has been conferred with "Bank of the Year 2009, Nepal" by the banker, a publication of financial times, London. The bank was bestowed with the "NICCI Excellence award" by Nepal India chamber of commerce for its spectacular performance under finance sector.

The shareholding pattern of the bank is 50% promoters, 30% public and 20% Punjab National Bank.

Nabil Bank Limited (NABIL)

It operates exchange counter at Tribhuban international airport. Now this counter is restricted in departure lounge and domestic terminal only. Nabil is the pioneer in introducing credit cards in Nepal. The bank is a principal member of Visa and Master Card International since early 1990. It has widest range of services in credit cards which

include acquiring of all kinds of cards under Visa and Master Card brands. It also acquires Diners Cards being a sole agent for the country and has arrangement of POS sharing with American Express Cards. The bank issues widest range of credit and debit cards under the brands of visa and master card to accountholders as well as non-accountholders. The bank is largest institution in the country with a wide spread merchants and ATM network throughout the country. By now the number of its outlets and branches has reached 28 and 31 respectively. The first commercial joint venture bank of Nepal, Nepal Arab Bank Limited, was established on July 12th 1984 under a technical service agreement with Dubai Bank Limited and was renamed as Nabil Bank Limited (NABIL) on 1st January 2002. In the beginning the authorized interest of this bank was Rs.100million and paid up interest was Rs.28 million 400 thousand. The 50% share of NABIL owned by Dubai Bank Limited was transferred to Emirates Bank International Limited, Dubai by virtue of its annexation with the later. Later on, Emirates Bank International Limited sold its entire 50% share to National Bank Ltd, Bangladesh. Now National Bank Limited is managing the bank in accordance with the Technical Services Agreement signed between it and the bank on June 1995. The bank introduced an Automatic teller machine (ATM) first time in Nepal, in three places in the valley at Kantipath, New road and Lalitpur. The bank has its corporate head office at Kamladi, Kathmandu. Its branches are located at Kantipath, Tripureshwor, Newroad, Jorpati, Lalitpur, Maharajgunj, Birgunj, Alau, Biratnagar, Itahari, Butwal, Pokhara, Bhairahawa, Nepalgunj, Lakeside Pokhara, Dharan, Bhalwadi, Birtamode, Damak, Hetauda, Narayangadh, Baglung, Tulsipur, Ghorahi, Dhangadi and Mahendranagar.

1.2 Statement of the Problem

The higher the investment, higher will be the production, employment, income will also increase and ultimately the economy will grow too. So the purpose of this study is to explore how the investment is related to the economic growth. Would increase the employment, standard of living and status of country economy. Does decline in interest rate increases the lending activities? Or what is the actual condition on this regard in Nepalese financial market place? If the condition is not as per theory then -what are the possible causes for such effects? Focusing on the Nepalese context, the investment is low

in productive sectors due to unavailability of sufficient finance, security and other factors. Nepal's main export is basically raw materials. It means that Nepal is exporting raw materials instead of producing goods and services from these. If cheap financing is available, many factories could be established to reap benefits from utilization of resources, which the economic growth and development has direct relation with interest. The low interest rate is the factor that drives the investment in positive momentum. According to the economic theory (other thing remains constant). In the same manner, market interest rate is the sum of real rate plus inflation premium. But this may or may not occur in real practice. So this study is going to identify: Is there any positive relation of interest rate and inflation as per theory? Similarly, high interest rate is stimulus for high savings (deposits) but this may not the case in real world as people deposit more even in less interest rate due to security, convenience and other reasons. Thus through this study, it is going to discover: what is the relation of deposit and interest rate? Or Does substitution effect is truly applicable in Nepalese context?

More specifically, this study seeks to solve the answer for following questions. (Add some more)What is the future scope of financial institutions? How the public savings are being mobilized. Or, what portion of total saving being mobilized in productive sectors.

- To what extent competition exists among financial institution in terms of interest rate?
- Does substitution effect is practical in the context of Nepal or not? In other words what is the effect of high interest rate on savings (deposits)?
- What is the actual condition of interest rate in Nepalese financial market place?
- Are borrowers of Nepalese market sensitive to the interest rate of credit? Alternately, what is the relationship between interest rate and borrowing amount?
- What is the position of interest rate spread and loan and advance ratio in Nepalese context?
- What is managerial perceptive in regards to financial performance of financial institutions?

1.3 Objective of the Study

The general objective of the study is to identify the Interest Rate Structure of Commercial Banks of Nepal Special Reference to NABIL Himalayan and Everest Bank Limited

- To examine the sensitivity of interest rate to the investment.
- To understand the perception of management terms of their financial performance
- To explore the relation of interest rate with deposit (existence of substitution effect) in Nepalese market

1.4 Significance of the Study

At present, commercial banks are gaining wide popularity through the efficient management and professional service and playing eminent role in the economy. Regarding the economic structure of the country, banks do not have sufficient investment opportunities. Rapidly increasing financial institutions are creating threats to the commercial banks. The main objective of commercial banks is to earn more profit by the proper mobilization of funds. They provide different banking facilities to the banking customers. Commercial banks have pivotal role in collection of dispersed small saving and transforming them into meaningful capital investment. Success and prosperity of the bank relies heavily upon the successful investment of collected resources to the productive sector of economy. Hence, successful formulation and effective implementation of investment policy is the primerequisite for the successful performance of banks and other financial institutions. Therefore, the study is aimed to analyze the existing investment portfolio of commercial banks of Nepal and point out the various weaknesses or defect inherent in it and provide package of suggestions for its improvement. The result of the research will be helpful for CBs, especially for sample banks to formulate strategies to face the increasing competitions. There is no doubt that the study will also have multi-dimensional importance for various areas which are mentioned below in brief.

1.5 Limitation of the Study

This study is not a comprehensive study. This study is conducted for the partial fulfillment of degree of MBS. So, there are many deficiencies in this study due to various limitations. Some of the limitations are as follows.

- The sample are taken only from commercial banks, other financial intermediaries are not included in the study.
- Only few statistical tools like arithmetic mean, coefficient of correlation, and financial tools like loan advance ratio and interest rate spread has been used for data analysis. Survey has been conducted with limited people involved.
- Only one factor -interest rate- is taken for the study. Impact of other aspects besides interest has not been studied. fiscal year 2008/09 to 2012/013.

1.6 Organization of the Study

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

Chapter I. Introduction

The first chapter includes background, statement of problems, objectives and organization of study. Limitation statement and Significance of the Study.

Chapter II Review of Literature

The second chapter includes the conceptual framework, and reviews the issues related to the study, Review of Journals and Article and Previous Research Work.

Chapter III Research Methodology

The third chapter is concerned with the research methodology consisting of research design, population & sample, financial & statistical variables etc.different statically tools used for study

Chapter IV. Data Presentation, Analysis and Findings of the study

The fourth chapter presents the Data, presentation and analysis of result of financial performance of selected finance companies.

Chapter V. Summary, Conclusion and Recommendation

The fifth and final chapter consists of summary, conclusion, and recommendation and suggestions for the improve of future performance of the company.

CHAPTER-II

REVIEW OF LITERATURE

The literature review is designed to familiarize the investigator with any relevant information pertaining to the topic being studied (Black & Champion, 1976:107). It is also a way to avoid investigation problems that have already been definitely answered. Thus a literature review is the process of locating, obtaining, reading and evaluating the research literature in the area of the student's interest (Wolf & Pant: 2009). The purpose of literature review is to find out what research studies have been conducted in one's chosen field of study and what remains to do. The primary purpose of literature review is to learn not to accumulate. It is a way to discover what other researchers have covered and left in the area. A critical review of the literature helps the researcher to develop a thorough understanding and insight into previous research works that relates to the present study (source: Investment *Analysis and Management)*

2.1 Interest

To examine how money affects economic activity, we focus on the interest rate, which is often called “The price of money”. Interest is the payment made for the use of money. The interest rate is the amount of the interest paid per unit of time expressed as a percentage of the amount borrowed. In other words, people must pay opportunity to borrow money. The cost of borrowed money, measured in rupee per year per rupee borrowed, is the interest rate. Financial institutions, as financial intermediaries, collect money from savers in the form of deposit and provide that to business sector in the form of loan. These institutions pay the interest to the depositors for the money-borrowed and charge interest from the borrowers for money that has been lent.

The saving and investment in the economy, which are influenced by the interest rates, are the real economic variables. The incomes and expenditures of the variable sectors of the economy result in excess savings or excess investment in each of the sectors.

For example, an increase in the interest rate provides additional incentives to individuals and others to postpone current consumption and thereby free resources for investment. Government policies intended to expand the volume of saving; should aim at increasing the attractiveness of saving by increasing the return to saving- the interest. Interest rates send price signals to borrowers, lenders, and savers. As defined earlier, the interest rate is the price of money: the price renting the use of resources that money commands for a specified period. The interest rate plays a vital role in the allocation of resources and in the decision making of consumers and business. Higher interest rates generally bring forth a greater volume of savings and stimulate the lending of funds. Lower rates of interest, on the other hand, tend to dampen the flow of borrowing and reduce lending activity. Higher interest rates tend to reduce the volume of borrowing and interest investment, and lower rates stimulate borrowing and investment spending (Rose, 1997:301).

Investment is function of interest rate. The quality and flow of investment determines the income in the economy. Therefore, the impact of interest rate is both on the saving and investment in the economy. Further, the borrowings and savings are always influenced by the interest rates. The cost of production, which depends upon the production function, is influenced by the interest rate. Nepal Rastra Bank, as a guardian, fixes the terms and conditions regarding the interest and other activities of financial institutions in Nepal. However, in recent years, banks are permitted to fix the interest rates they charge and offer on loan and deposit. Interest rate in the free market economy is determined by the free interplay of the demand and supply forces. Nepalese economy has not developed to that level that free market can determine the interest rates.

2.2 Interest Rate in Nepal

The rate of interest on saving deposits were raised to 5 percent (increased by 0.5 percentage point) but the rate of interest on 3 months and 6 months fixed deposit were reduced. However, the rate on fixed deposits having the maturities of more than 1 year was raised varying by 1 to 1.75 percentage points. Another change in interest rate structure was introduced on July 16, 1974. The interest rate on saving deposits was fixed

6.5 percent; that on fixed deposits of 3 and 6 months maturities were kept constant and interest rates on all other categories of fixed deposits were raised by 2 percentage points. While observing the historical background of the interest rate structure of Nepal, frequent changes can be noticed. In the beginning, the interest rate charged and offered by banks and financial institutions were mentioned at a lower level with a view to stimulate real income and employment. However, change had been made time to time. Studies of the annual reports of Nepal Rastra Bank (NRB) divulge the changes made the objectives behind such changes and their justifications. The lending rates of commercial banks were also revised respectively. The lending rates were lowered in some cases, however, the loan for unproductive purposes were made costlier by 2 percentage points. Giving different justifications, NRB issued directives to the banks and financial institutions to apply new interest rates from April 18, 1975 which was a drastic change. The interest rate was increased from 6.5% to 8% on saving deposits and that on fixed deposits of 3 months and 6 months were increased to 4 percent and 10 percent respectively. The interest on deposits was increased by 1 percentage point that prevailed upto August 30, 1966. Similarly, other two categories of fixed deposits 3 to 5 years and above 5 years were created and interest rates on those two types of deposits were 5 percent and 6 percent respectively. On August 31, 1966 the interest rate on all types of deposit was increased approximately by 1 percentage point. The interest structure was again revised on April 14, 1971. The interest rate on 1 year deposits was increased from 9.5 percent to 16 percent and all 2 years and above fixed deposits rate was increased from 9.75 percent to 16 percent. Prior to the revision there were nine different categories of lending carrying the interest rate between 8 to 15 percent. But the revision categorized the loan only in two categories. 15 percent interest rate was applicable to all loans; small sectors, agriculture sector, industry, export credit and credit against development bonds whereas 18 percent minimum rate was fixed for other purposes.

In addition, the lending rates on all types of loans were raised by 1 percentage point. NRB authorized the commercial banks and other financial institutions to charge an additional 2.5 percent interest above the specific rate on all over due loans and minimum of 17 percent interest rate on misuse loan of agriculture, industry and service sectors. A

provision of 1 percent rebate for timely repayments was also made. NRB further revised the interest rate on August 17, 1982, which was a slight change on lending rate. Giving right in offering the interest rate on saving and time deposit to the extent of 1.5 percent and 1 percent respectively above prevailing rate, NRB issued direction to the commercial banks. On May 29, 1986, commercial banks and financial institutions were given freedom in fixing the interest rate on deposits and loans. However, the higher limit and lower limit was fixed by NRB. The interest rate on the loan against fixed deposit receipts was fixed two percent high Next amendment in interest rate was made on 15 June 1982, and the interest rates on all types of deposits were increased by 0.5 percentage point The minimum of 8.5 percent interest rate was fixed for saving deposits. The rate on fixed deposits of less than 1 year maturity needed to be at least not less that the rate on saving deposits. Minimum of 12 percent interest rate was fixed on 1 year fixed deposits. The interest rate on more than 1 year fixed deposits could be fixed by the banks themselves but that ought to be higher that the rate on 1 year fixed deposit. Banks and financial institutions were given freedom to fix lending rate subject to a minimum of 15 percent for the priority sector. Commercial banks and financial institutions were granted complete freedom in determining their own deposit and lending rates. They had also been given complete freedom to make rules and working procedures about the kinds of deposits, time period of deposits, repayment conditions, punitive interest rates and interest interestization on overdue loans. NRB since then has not administered and regulated interest rate. Monetary management has been conducted through open market operation. Than on fixed deposits. On February 12, 1977, NRB revised interest rate again. The rate offered on savings and 3 months fixed deposits was lowered to 9 percent (by one percentage point). However, the interest rate on one year fixed deposits was lowered by 2 percentage point to 12 percent and that on 2 years and above fixed deposit was declined by 2 percentage point.

However, on August 22, 1992, NRB issued some directives to banks and financial institutions to clearly spell out the interest on deposits of at least up to 1 year, not to create the range of percentage in interest rates on credit of same types and purposes and, to stop fixing the interest rate on flat basis. In addition to this, NRB also instructed the

bank and financial institutions to limit their interest rate on deposit and credit at 6 percent within the mid-December 1993. Then after, NRB has not regulated interest directly but has given instructions in time-to-time regarding the interest rate and terms and conditions of lending and keeping accounts. Currently interest rate spread required to be maintained by bank and financial institutions has also been removed.

2.3 Theoretical Review

2.3.1 Meaning of Interest

Government policies intended to expand the volume of saving should aim at increasing the attractiveness of saving by increasing the return to saving, the interest rate. The interest rate is the price of money; the price of renting the use of the resources that money commands for a specified time by the free interplay of supply and demand in a market economy. The interest rate plays a vital role in the allocation of resources and in the decision making of consumers and business.

2.3.2 Theories of Interest

The closest approximation to this pure rate in the real world is the market yield on the government bonds minus inflation. The rate of interest on Treasury bond is called risk free rate of interest which consists of real rate of interest plus premium for inflation. It is a rate of return presenting no risk of financial loss to the investor and representing the opportunity cost of holding idle cash, because the investor can always invest in no risk bonds and earn this minimum rate of return. Once pure rate of interest is determined, all other interest rates may be determined from it by examining the expected future inflation and special characteristics of the securities issued by individual borrowers. For example, only the government can borrow at risk-free interest rate; other borrowers pay higher rates due to the greater risk of loss attached to their securities. Numerous interest rates exist in the financial markets and these different rates are due to the risk premium associated with the issuer. Even securities issued by the same borrowers often carry a variety of interest rates. In this section, we focus upon those basic forces that influence the level of different interest rates. To uncover these basic rate-determination forces, we must make a simplifying assumption. In this chapter we assume 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. Difference in liquidity, marketability and maturities are other important factors causing interest rate to differ from the pure or risk free rates (Rose: 1997:403).In this study mainly four theories of interest are reviewed. They are:

i. The Classical Theories of Interest Rates

The determinant of pure or risk free interest rate is a concern of this theory which is one of the oldest. Number of British economist put forward this theory during the 18th and 19th century and was further elaborated by Irving Fisher in 1930.The classical theory argues that the rate of interest is determined by two forces:

- The supply of savings, derived mainly from households and
- The demand for investments interest comes mainly from the business sector.

ii. Saving by Households

Generally, the volume of household savings rises with income. Higher-income families and individuals tend to save more and consume less relative to their total income than families with lower incomes.

Although income levels probably dominate saving decisions, interest rate also plays an important role. Interest rates affect an individual's choice between saving and current consumption. The classical theory of interest assumes that individual have a definite time preference for current over future consumption. A rational individual, it is assumed, will always prefer current enjoyment of goods and services over future enjoyment. Therefore, the only way to encourage an individual or family to consume less now and save more is to offer a higher rate of interest on current savings. If more were saving in the current period at a higher rate of return, future consumption and future enjoyment would be increased. The classical theory considers the payment of interest as a reward for waiting the postponement of current consumption in favor of greater future consumption. Higher interest rate increase the attractiveness of saving (and future consumption) for some quantity of current consumption. This so-called substitution effect calls for a positive

relationship between interest rates and the volume of savings. Higher interest rates bring forth a greater current volume of savings.

Current savings, therefore, are equal to the difference between current income and current consumption expenditures. In making the decision on the timing and amount of saving to be done, households typically consider several factors: the size of current and long-term income, the desired savings target, and the desired proportion of income to be set aside in the form of savings (i.e. the propensity to save).

iii. Saving by Business Firms:

Retained earnings are the form in which most of the businesses hold their saving balanced (as reflected in their equity or net worth accounts). The increased retained earnings are reported by business each year and is the key measure of the volume of the current business saving interest rate (7.5%) and these retained earnings supply most of the money for annual investment spending by business firms. The volume of business saving depends on two key factors: the level of business profits and the dividend policies of corporations. To purchase securities and make loans, but only household but also businesses save and direct their savings into the financial market. These two factors are summarized in the retention ratio, the ratio of retained earnings to net income after taxes. This ratio indicates the proportion of business profits retained in the business for investment purposes rather than paid out as dividends to the owners. The critical element in determining the amount of business savings is then the level of business profits. If profits are expected to rise, business will be able to draw more heavily on earnings retained in the firm and less heavily on the money and interest markets for funds. The result is a reduction in the demand for credit and a tendency toward lower interest rates. On the other hand, when profits falls but firms do not cut back on their investment plans, they are forced to make heavier use of the money and interest markets for investment funds. The demand for credit rises and interest rates may rise as well. Although the principal determinant of business saving is profits, interest rates also play a role in the decision of what proportion of current operating costs and long-term investment expenditures should be financed internally and what proportion externally. Higher

interest rates in the money and interest markets typically encourage firms to use internally generated funds more heavily in financing projects. Conversely, lower interest rates encourage greater use of external funds from the money and interest markets.

iv. Saving by Government

Governments also save, though less frequently than households and businesses. In fact, most government saving (i.e. a budget surplus) appears to be unintended saving that arises when government receipts unexpectedly exceed the actual amount of expenditures. Saving rate 8.4%Income flows in the economy (out of which government tax revenues arise) and the pacing of government spending programs are the dominant factors affecting government savings.

v. The Demand for Investment Funds

The savings made by business, government and households are important determinants of interest rate but they are only one side of determinants. But according to the classical economist, interest rate and invest able fund have inverse relationship. At low rates of interest, more investment projects become economically viable.

vi. The Equilibrium Rate of Interest in the Classical Theory of Interest:

According to the classical economists, the interest rates in the financial markets were determined by the interplay of the supply of saving and the demand for investment. 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. The factor is investment, expenses made by business firms, government and in some case households. Business requires huge amounts of funds each year to purchase equipment, machinery and inventories and to support the construction of new buildings and other physical facilities. The majority of business expenditures for these purposes consist of what economists call replacement investment.

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

vi. Supply of Loan able Funds:

The major sources of supply of loan able fund are from two sources:

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

vii. Saving:

There is little reason to believe that the volume of saving at business firm is strongly influenced by the level of interest rates. For governments, the volume of saving is defined as the difference between revenues and expenditures such that saving exists when revenues exceed expenditures (a budget surplus) interest rate 7.5.

The decision to save is the decision to forgo current consumption in order to have a larger quantity of consumption in the future (Cooper & Donald: 1983:304). Saving refers to the postponement of current consumption. Individual or household save for a variety of reasons but there is little evidence to suggest that the quantity of loan able funds supplied through saving is clearly influenced by the level of the interest rate. A higher interest rate represents a greater reward to the saver for postponing current consumption and thus might be expected to produce a higher quantity of saving for some individuals. In general case, the quantity of savings supplied by individuals is principally determined by the

level of income and it is influenced to a lesser degree by the level of interest rates. Business saving refers to the net income after taxes of the firm, less any cash dividends i.e. retained earnings.

viii. New Money:

Although the volume of saving is the principal source of loan able funds in financial markets, the supply of the loan able funds may be increased through the creation of new money beyond the amount made possible by current saving. The amount of new money created is determined jointly by the actions of the commercial banking system and the central bank. Commercial banks use any excess reserves to make loans and purchase securities and create money (demand deposits) through the credit creation process. However, the ability of commercial bank to create money is limited by the central bank through the use of its monetary policy tools like open-market operations, reserve requirement changes, and discount rate changes.

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

ix. The Demand for Loadable Fund:

The demand for loadable fund is composed of the demand by individual, business and governments.

x. Consumer Demand:

Most business credit is for such investment purposes as the purchase of inventories and new plant and equipment. As noted earlier in our discussion of the classical theory of interest, a high interest rate eliminates some business investment projects from consideration because their expected rate of return is lower than the cost of funds. On the

other hand, at lower rates of interest, many investment projects look profitable with their expected returns exceeding the cost of funds. Therefore the quantity of loadable funds demanded by the business sector increases as the rate of interest falls.

Domestic consumers demand loadable funds to purchase a wide variety of goods and service on credit. Recent research indicates that consumers are not particularly responsive to the rate of interest when they seek credit but focus instead principally on the non price terms of a loan, such as the down payment, maturity and size or installment payments.

xii. Domestic Business Demand:

The credit demands of domestic business generally are more responsive to changes in the rate of interest than in consumer borrowing. This implies that consumer demand for credit is relatively inelastic with respect to the rate of interest. Certainly a rise in interest rate leads to some reduction in the quantity of consumer demand for loadable fund (particularly when home mortgage credit is involved) whereas a decline in interest rates stimulates some additional consumer borrowing. However, along the consumer's relatively inelastic demand schedule, a substantial change in the rate of interest must occur before the quantity of consumer demand for funds changes significantly.

xiii. Government Demand:

Government demand for learnable funds is a growing factor in the financial markets but doesn't depend significantly on the level of interest rates. Government decision on spending and borrowing depends in response to social needs and the public welfare, not the rate of interest. Moreover in case of central government, it has the power both to tax and to create money to pay its debts. State and local government demand on the other hand, is slightly interest elastic because many local governments are limited in their borrowing activities by legal interest rate ceilings. When open market rates rises above these ceilings, some state and local governments are prevented from offering their securities to the public.

xiv. Total Demand for Loanable Fund:

The total demand for the loanable fund is the sum of domestic consumer, business and government credit demands. These demand curve slopes downward and to the right with respect to the rate of interest. Higher rate of interest lead some businesses, consumers and governments to curtail their borrowing plans; lower rates bring forth more credit demand.

xv. The Equilibrium Rate of Interest in the Loanable Funds Theory:

Two forces of supply and demand for loanable funds determine not only the volume of lending and borrowing in the economy but also the rate of interest. The interest rate tends towards the equilibrium point at which the supply of loanable funds equals the demand for loanable funds. If the interest rate is temporarily above equilibrium, the quantity of loanable funds supplied by domestic savers and foreign lenders, by banking system, and from the dis-hoarding 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. The interest rate will be bid up by borrowers until it settles at equilibrium once again.

xvi. The Liquidity Preference Theory of Interest Rate:

Wealth holders are persuaded to hold financial assets other than money only because these non-money assets offer an interest return greater than between the yields by money. Further, greater the spread between the yields on non money financial assets and money, lesser will be the demand for money holdings and greater the demand for other financial assets and vice versa. The outcome of course, is that public still holds, in the aggregate, the same amount of money but at the lower rate of interest, this is now the desired amount. The loan able funds approach to interest rate determination focuses on supply and demand for loanable fund. An alternative approach the liquidity preference view focuses instead on the supply and demand for money. It is assumed that individuals inherently prefer money among all financial assets since money can be used to make payments and is thus the most liquid assets.

xvii. The Rational Expectation Theory:

This theory is new to the financial market so it is in still development stage. The main theme of this theory is that "money and interest markets are highly efficient institutions in digesting new information affecting interest rates and security prices" (Rose: 1997:314). This theory assumes that equilibrium interest rate depends upon the change in investor's expectation regarding future security prices and return. Investor's decision towards the borrowing and lending funds come from the availability of new information. When new information appears about investment, saving or the money supply, investors begin immediately to translate that new information into decision to borrow and lend funds. So rapid is the process of the market digesting new information that security prices and interest rates presumably impound the new data from virtually the moment they appear. In the absence of new information, next period's interest rate will be equal to current periods interest rate. In other words, the knowledge of past interest rate will not be a reliable forecast of future interest rate. In a perfect efficient market it is impossible to win excess returns continuously by trading on publicly available information.

The important assumptions and conclusions of the rational expectation theory are:

- The price of securities and interest rates should reflect all available information and the market uses all this information to establish a probability distribution of expected future prices and interest rates
- Change in rates and security prices are correlated only with unanticipated information
- The correlation between rates of return in successive time periods is zero
- No unexploited opportunities for profit can be found in the securities' markets
- Transaction and storage costs for securities are negligible and information costs are small relative to the value of securities traded and
- Expectation concerning future security prices and interest rates are formed rationally and efficiently.

If the money and interest markets are highly efficient in the way we have described, this implies that interest rates will always be at or very near their equilibrium levels. Any deviation from equilibrium rate dictated by demand and supply forces will almost instantly eliminate security trader who hope to consistently earn windfall profits from correctly guessing whether interest rate are "too high" (and therefore will probably rise) are unlikely to be successful in the long run. Interest rates fluctuations around equilibrium are likely to be random and momentary. If market participants were expecting increased demand for credit (with supply unchanged), an unexpected announcement of reduced credit demand implies lower interest rates in the future. Similarly, a market expectation of less credit demand in the future (with supply unchanged) when confronted with an unexpected announcement of higher credit demand, implies that interest rate will rise.

2.3.3 Functions of Interest Rate in the Economy

It helps to ensure that current savings to flow into investment for promoting economic growth. It also allocates the available supply of credits; specially providing funds to the investment projects with highest expected returns. The supply of money with the public's demand for money is also balanced by the interest rate. And most importantly, serve as a crucial tool for the governmental policy for stimulating or discouraging saving and investment through its influence on the volume of saving and investment. The interest rate has opposite relation with the value of financial assets. It means that if the interest rate increases, the value of assets decreases and vice versa. This concept is very useful for the valuation of the investable securities. Besides this there are some important functions that interest plays in the economy. If the economy is growing too slowly and unemployment is rising, the government can use its policy tools to lower interest rates in order to stimulate borrowing and investment. On the other hand, an economy experiencing rapid inflation has traditionally called for a government policy of higher interest rates to slow both borrowing and spending.

2.3.4 Change in Interest & Its Effect Upon Value of An Asset

The price of the security and its yield (rate of interest) has inverse relationship. It means that a rise in yield implies a decline in price; conversely, a fall in yield is associated with a rise in the security's price. The investing funds in financing assets can be viewed from two different perspectives, the borrowing and lending of money or the buying and selling of securities. Similarly the equilibrium rate of interest from the lending of funds can be determined by the interaction of the supply of loan able funds and the demand for loan able funds. Demanders of loanable funds (borrowers) supply securities to the financial marketplace and suppliers of loanable funds (lenders) demand securities as an investment. Hence, the equilibrium rate of return or yield on a security and the price of that security are determined at once and at same moment. The borrowing and lending of loanable fund are simply different aspects of the same phenomenon although they are determined at once and at the same instance.

2.3.5 Factors Influencing the Difference in Interest Rates:

In real world, different financial institution quotes different interest rate. It means that the same types of instrument carries different interest rate so there is presence of interest spread. Although it is assumed deposit increases as interest increases but interest rate is affected by numerous factors. For this difference there are numbers of factors influencing the difference in interest rates (Thygerson: 1993:314).

1. Credit of Default Risk:

Credit or default risk involves the potential that a saver will receive less principal and interest on the financial claim than the contract specifies. Default risk is related to the probability that some or all of the initial investment will not be returned. The degree of default risk is closely related to the financial condition of the company (Cheney & Moses). Credit risk requires making estimates of the potential for loss. This probability is then converted into an interest rate premium, the credit or default risk premium and added to the saver's required nominal yield. Typically, the securities issued by the government, (esp. T-bills), are considered to be credit risk free.

2. Marketability Risk:

Marketability is the capability of being sold quickly at low transaction cost (Kohn: 1999:318). Marketability risk deals with the degree of difficulty in being able to convert a financial claim into cash at its most recent transaction price or very close to it. Savers who purchase investments with poor marketability expect to be compensated for the lack of marketability. This represents an additional interest spread and is referred to as the marketability or liquidity risk premium.

3. Call or Prepayment Risk:

The investor in the financial claim that is callable or subject to repayment accepts risk. The risk is that if interest rates fall, the borrower will call the bond or prepay the mortgage. The investor receiving the cash funds that he or she cannot reinvest it at an interest rate as high as the rate on the previous investment. This risk is called a call or prepayment risk. The compensation that investors demand to accept this risk is an additional interest spread reoffered to as the call option premium. Some financial claims offer the borrower the right to repay the principal debt prior to maturity, on financial claims like bond, these provision are referred to as call provision. On financial claims such as home mortgage and installment auto loans, they are called pre-payment provisions. These provisions are options. The borrower has the option to call or prepay the debt.

4. Servicing Cost:

Some financial claims are difficult to service. This means that the process of collecting interest and principal payments providing accurate records or monitoring the ongoing credit position of the borrowing involves considerable operating costs. Lenders must be compensated for the servicing costs. This cost is included in the interest rate charged and is referred to as the servicing cost (Thygerson: 1993:315).

5. Exchange Rate Risk:

As our financial markets have become more global, there has been a significant growth in the borrowing and investing in foreign denominated financial claims. A Nepalese

company establishing a manufacturing facility in Belgium might be inclined to issue bonds denominated in Belgium francs rather than Nepali Rupees. Investors also have available to them many investments that are denominated in foreign currencies. This transaction involves exchange rate risk. This risk relates to the potential that the rate of exchange between the domestic currency and foreign denominated currency will change as a result of any number of factors. The primary risk for the borrower is that the value of the domestic currency. This results in an unexpected cost on the international loan. Since the loan would have to be repaid in the foreign currency that has risen in value relative to the domestic currency. This potential change in currency values must be reflected in computing the cost of borrowing.

6. Taxability:

The final factor influencing the change in interest rate is taxability. Financial claim income is typically subject to taxation. Since the value of a financial claim is based on its anticipated cash flow, taxation acts to reduce those cash flows. Not all incomes are taxable equally.

2.4 Concept of Deposit:

The bank attracts deposits from customers by offering different rates of interest and different kinds 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 s/he should deposit his surplus funds in current deposit a/c, saving deposits or fixed/time deposit a/c. Bank deposits arise in two ways. When the banker receives cash, it credits the customer's account, it is known as a primary or a simple deposit. Deposit is a sum of money lodged with a bank, discount house or other financial institution (Shrestha & Bhandari). Deposit is nothing more than the assets of an individual which is given to the bank for safekeeping with an obligation to get something (interest) from it. To a bank these deposits are liabilities. Commercial bank Act 2031 (1974) defines “Deposits” as the amount deposited in a current, savings or fixed accounts of a bank or financial institution (Bhandari:2004:104). The deposits are subject to withdrawals by means of cheques or on a short notice by customers. There are several

restrictions on these deposits, regarding the amount of deposit, number of withdrawal etc. They are used more as investments and hence they earn some interest. The rate of interest varies depending on the nature of the deposits. People deposit cash in the banking system and thereby convert one form of money, cash, into another form, bank money. They prefer to keep their money in deposit accounts and issue cheques against them to their creditors. Deposits also arise when customers are granted accommodation in the form of loans. When a bank grants a loan to a customer it doesn't usually pay cash but simply credits the customer's account with the amount of loan. Of course, there is nothing that prevents the borrower from withdrawing the entire amount of borrowing in cash but quite often s/he retains the amount with the bank in a deposit.

2.4.1 Types of Deposit

There are different types of deposits. But for this study, major three types of deposit are taken. They are:

Current Deposit:

A current deposit is a running account with amounts being paid into and drawn out of the account continuously. This type of account is just a facility offered by the bank to its customers. So such deposit doesn't yield any interest return. These accounts are also called demand deposits or demand liabilities since the banker is under an obligation to pay money in such deposits on demand. The account never becomes time barred, because the limitation does not run until a demand is made by the customer on the bank for the payment of deposit. These accounts are generally opened by business houses, public institutions, corporate bodies and other organization whose banking transactions are numerous and frequent.

Saving Deposit:

According to Commercial Bank Act 2031 (1974) saving account means "An account of amounts deposited in a bank for savings purposes." The saving deposit bears the features of both of the current and fixed period's deposits. Saving accounts are 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

Fixed Deposit:

Fixed deposits constitute a very important resource for banks as bank need not keep greater reserve in respect of such deposits. Under the commercial Bank Act 2031 (1974), "Fixed account means as account of amounts deposited in a bank for certain period of time." The customers opening such account deposit their money in the account for a fixed period. Usually, only the person or institution who wants to gain more interest opens such type of account. High interest rate is paid to this deposit as compare to saving deposits. The bank and the customer can take benefit from this 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.

In England these deposits are repayable subject to a period of notice and hence known as time deposit or time liabilities means that these are withdraw able subject to a period of notice and not on demand (Radhaswamy & VasuDevan: 1979). Fixed deposit receipt is not transferable by endorsement and certainly not negotiable. However the debt covered by the fixed deposit receipts can be assigned. Bank generally gives loans up to 90% of the deposit against the security of the deposit. For this bank charge some interest higher than the interest allowed on the deposit.

Nari Deposit

These accounts are generally opened by business houses, public institutions, corporate bodies and other organization whose banking transactions are numerous and frequent. 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. Fixed deposit receipt is not transferable by endorsement and certainly not negotiable. However the debt covered by the fixed deposit receipts can be assigned.

2.4.2 Importance of Deposit

It means that the deposit has very important role in the economy. There is a direct relationship between deposit of banks and the investment in the economy. If the volume of deposit is low, the investment in the economy also lags behind due to lack of resources. The deposit of banks is the accumulated interest which can directly be invested. There is a great need of such deposit in the developing countries. Deposit includes the idle money of the public, bank being the inter-mediator to accept this sort of money and help to channelize this in productive sector. So the importance of banks and financial intermediaries is larger in present context.

2.5 Concept of Lending (Credit)

Another important function of commercial bank is to provide different types of loans or credit. The word "credit" means "trusting". In credit transaction the lender (or banks) must have confidence in the borrower that s/he will be able to repay the money. In credit transactions, the creditor turns over to the debtor to repay an equivalent amount usually money in future plus as added sum called interest. In other words the commercial bank earns profit by lending the amount in terms of loan or credit and in return it gets interests. Banks loan are classified as: a) Loans and advances, b) Overdrafts c) Cash credit d) Discounting of bills and so on (Shrestha & Bhandari). But besides this, the other forms of credit are: Bills of 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 purposes 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 source of credit to both private and public debtor. Sometimes bank also take credit. There is another type of credit know as investment credit and commercial credit which can be divided according to the purposes of using credit. The former refers to the credit which is used for investment and the latter for trade purposes. Similarly, another classification is consumer's credit and producers' credit. The latter type of credit is the advances made to individuals firms, companies and

governments, which are used to facilitate the carrying on of the various branches of utility creation.

2.5.1. Factors Affecting the Volume of Lending

The volume of credit within a country depends upon different factors. For this study only the effect of interest rate is taken into consideration and other factors are not considered. Some of the factors affecting the volume 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 volume of credit and interest rate of credit has inverse relation. People invest very little in productive sectors 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 high. The basic thing for investment stimulation is easy and cheap credit etc.

4. Pace of Financial Development:

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

5. Basic Infrastructure:

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

6. Political Condition:

Political condition, especially political in-stability, is also one of the major causes of low volume of credit. In such a case none would like to risk his interest 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, currency condition are also the factors affecting the volume of credit.

2.6 Concept of Inflation

Inflation in common sense is increment in general or average price level in the whole economy. It means that it is the increase in general price level, not the increase in individual prices. Inflation is not a temporary fluctuation in price but it is a sustained and appreciable increase in price (Joshi: 2056:109). 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 Economist Crowther "Inflation means a state in which the value of money is falling i.e. prices are increasing." Inflation is a general rise in prices across the economy. G. Ackley defines inflation as, “Inflation is persistent and appreciable rise in the general level or average level of price.” 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 fall the debtors gain, and the creditor loses.

Inflation has severe social, political and economic effects. Hence, some like to call it 'worst than taxes' and 'legal robbery'. During last 30- 40 years, almost all countries of the world have experienced some degree of inflation. For example, Germany, Russia, Austria in 1920s and Hungary, Romania, China and again Germany in 1940s had experienced the strain of hyper-inflation. Inflation brings political instability. According to Milton Friedman the rise of Hitler was due to hyper-inflation. Today each and every nation of the world is suffering from the economic evil of inflation. The trend of rising prices has the general phenomenon of every country. The most developed and industrialized countries have adopted various method like credit control via bank interest rate, checking money supply and various other price control policies yet they have not been able to

remain aloof from this disease. On the other hand the developing nations who have much less sufficient type of economy are suffering severely from both domestic as well as imported inflation.

If the rate of increase in money incomes overcomes the rate of increase in production, there is excess purchasing power in the hands of public. Inflation is reflected in high prices and increased imports. There are many theories regarding how inflation occurs in an economy. Some of these theories are demand pull inflation, cost-push inflation, wage-push inflation etc. Similarly there are various methods of checking inflation, such as, government spending, taxes which lie under fiscal tool of checking inflation and higher reserve requirements, open market operation etc. which lie under the monetary method of checking inflation. But these are not going to be discussed here because these are not the concern of our present study.

2.6.1 Inflation and Interest Rates

Inflation occurs when the average price level in the economy rises. Interest rates represent the "price" of credit. Are they also affected by inflation? The answer could be positive; one can derive from several price levels for the answer to be yes. There is positive correlation between interest rates and inflation.

In other words, increase in inflation increases the interest rates. But the exact effect of inflation on interest rate is not identified yet. On this regards, there are many theories. Here in this case, mainly two theories are going to be discussed.

The Nominal and Real Interest Rates:

Before exploring 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 quoted interest rate on a security or loan. These rates are the actual rates that are used to transact with the customers. In other words, “nominal rate of return are money rates of return that are not adjusted for the effect of inflation” (Francis). For example an announcement in the financial press that

major commercial banks have raised their prime lending rate to 10 percent per annum indicates what nominal interest rate is now being quoted by banks to their best customers (Rose: 1997:603).

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 i.e. by using following equation: $(1 + rr) = \frac{(1 + r)}{(1 + q)}$

Where

rr = real rate of return

r = nominal rate of return

q = inflation rate

The Fisher Effect:

Economic theory tells us that interest rates reflect expectations about likely future inflation 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 the money. This relationship was first formalized by economist Irvin Fisher and is referred to as the Fisher's effect (Shrestha & Bhandari). According to Fisher effect, nominal interest rate is related to the real rate by the following equation:

Nominal interest rate = Expected real rate + Inflation Premium rate + (Expected real × Inflation Premium)

According to Fisher, the cross-product term in the above equation (i.e. Expected real rate × Inflation Premium) is often eliminated because it is usually quite small except in countries experiencing severe inflation.

So the fisher's equation can be written as

Nominal Interest rate = Expected real rate + Inflation Premium

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. But this does not necessarily means that an increase in expected inflation automatically increase nominal interest rates. There are several different views on this matter but according to Fisher expected rate of return tends to be relatively stable over time because it depends on such long term factors as the productivity of interest and the volume of savings in the economy. Therefore, a change in the inflation premium is likely to influence only the nominal interest rate, at least in the short run. The nominal rate will rise by the full amount of the expected increase in the real rate of inflation.

If this view, known today as the Fisher effect, is correct, it suggests a method of judging the direction of future interest rate changes. To the extent that a rise in the actual rate of inflation causes investors to expect greater inflation in the future, higher nominal interest rates will soon result. Conversely, a decline in the actual rate of inflation may cause investors to revise downward their expectations of future inflation, leading to lower nominal rates. This will happen because, in an efficient market, investors will be compensated for the risk of expected changes in the purchasing power of their money.

The Harrod-Keynes Effect of Inflation:

There is another view about inflation-interest rate relationship propounded originally by British economist Sir Roy Harrod. This view conflict with that of Fisher's effect. It is based upon the Keynesian liquidity preference theory of interest rate. Harrod argues that the real rate will be affected by inflation but the nominal rate need not be. Following the liquidity preference theory, the nominal interest rate is determined by the demand for and supply of money. Therefore unless inflation affects either the demand for and supply of money, the nominal rate must remain unchanged regardless of what happens to inflationary expectations. According to this principle, Harrod argues that a rise in inflationary expectations will lower the real rate of interest. In liquidity preference theory, the real rate measures the inflation-adjusted return on bonds. However, conventional bonds, like money, are not a hedge against inflation, because their rate of return is fixed by contract. Therefore, a rise in the expected rate of inflation lowers investors' expected

real return from holding bonds. If the nominal rate of return on bonds remains unchanged, the expected real rate must be squeezed by expectations of rising prices.

2.6.2 Tools to Measure Inflation

There is no completely satisfactory way to summarize the price changes that have occurred over a given time period for the large number of goods and services available in the country. Nevertheless, the government has attempted to do so by measuring the cost of specific mix of major items a basket of goods, consisting of specified quantities and qualities of various items of food, clothing, housing and health care products bought by the average urban household (Francis) at various point of time. The "overall" price level computed for this representative combination of items is termed as cost-of-living index. The percentage change in this index over a given time period can be viewed as a measure of the inflation that took place from the beginning of the period to the end of the period (Sharpe, Alexander & Bailey: 2004:253).

Similarly most governments compute a number of alternative price indices in order provide a wider choice for analysis. Nevertheless, many people tend to focus on one index as an indicator of the price level .Generally, in most of the countries, Consumer price Index, CPI, is used as this tools to calculate the inflation rate. The percentage change in the CPI over time measures the rate of inflation, as shown below in equation. The inflation rate is denoted by q.

$$q = \frac{CPI_1 - CPI_0}{CPI_0}$$

Where

CPI_1 = Consumer price index of period 1

CPI_0 = Consumer price index of period 0

Nepal Rastra Bank too, uses CPI as the tools to measure inflation in the country taking 1995/96 fiscal year as base index.

2.6.3. Interest Rate Spread

Interest spread is the difference between average interest earned on earning assets and average interest paid on interest paying liabilities. It can be calculated as follows:

Interest rate spread = interest income/earning assets-interest expenses/interest paying liabilities.

2.7 Review of Books, Journals and Articles

Commercial banks are financial institutions which make profit by lending the money that are collected in the form of deposits from their customers. That's why risk associated in lending policy of the banks is always critical. Banks can lose the confidence of the customers and can lead towards bankruptcy, if they don't have a sound credit policy.

Khan and Jain view in the book *'Financial Management'*, "The type of relationship to be investigated depends upon the objective and purpose of evaluation. The purpose of evaluation of financial statements diggers among various groups (creditors, shareholders, potential investors, management, government, labor leaders and so on) interested in the results and relationships reported in the financial statements. For example, short-term creditors are primarily interested in judging the firm's ability to pay its currently-maturing obligation."(Khan and Jain, 1988:116).

Again, the same author expressed that "While it is true that general economic conditions and industry practices have a strong impact on the level of receivables, a firm's investments in these type of current assets is also greatly affected by its internal policy."(Khan and Jain, 1988:669)

2.8 Review of Journals and Articles

Banks can lose the confidence of the customers and can lead towards bankruptcy, if they don't have a sound credit policy Commercial banks are financial institutions which make profit by lending the money that are collected in the form of deposits from their customers. That's why risk associated in lending policy of the banks is always critical.

Shrestha (2008) an article entitled *"Portfolio Management in Commercial Bank, Theory and Practice"* mentioned that the portfolio management becomes very important for both individuals as well as institutional investors; investors would like to select a best mix of investment assets subject to the following aspects.

Thapa (2009) published an article *"Portfolio Analysis on Investment with special Reference to Nepalese Commercial Bank"*stating the subsequent issues. Banking and financial service are among the fastest growing industries in the developing world and are also emerging as cornerstone for the other developing and underdeveloped nations as well. According to him, the primary function of a bank is trade risk. Risk cannot be avoided by the bank but can only be managed. There are different types of risk. Among them interest rate risk is one of the common risk the banks facing owing to the volatility of the interest rate in the market.

Pendleton (2010) *in an article "Nepal's Financial Reform: A Tardy Pace of Deliberate Race"* Pendleton, B. tries to explore the need and relevancy of financial reform program in Nepal. In this article Pendleton suggests that "HMG has way to go for complete financial reform, restore financial soundness to deserving public, much work is left to be done; however, the Government had set to "Road Map" to complete this phase and continues to improve the reform process, a process vision to sustain the economy for generations to come." An investment of money is expected to generate additional money. Every investment entails some degree of risk; it requires a present certain sacrifice for a future uncertain benefit. This book describes various ways to select the investments that will provide the maximum future return at an acceptable level of risk. It examines such marketable financial instruments as common stocks, preferred stocks, bonds, put potions, and call options, combination options, and futures contracts on the traditional commodities, financial futures and other investments, as well as the risks associated with each. It analyses these assets, the markets in which they are traded, the laws governing the trading, the valuation of he assets, the construction if a diversified portfolio and other important investment management techniques

Bhattarai (2011). In an article, Bhattarai, M. tries to indicate the problem of banks' bad debt and non performing asset. According to the author "if a bank cannot recover its loan lending, bank's cash flow will be badly affected." Similarly it can affect the close relationship between depositors

Karki, (2012). In an article, "*Challenges of non-performing loan management in Nepal*", Karki, U has mentioned the causes of increasing trend of non- performing loan. Karki identified the major causes such as "poor loan analysis, guarantee oriented loan system, and depreciation on valued assets, misuse of loan, lack of regular supervision of loan

Pradhan (2013). In an article, *"Importance of Credit Information Burro and its Activities"* Pradhan, M.L tried to identify the need of credit information burros. In this article the author tried to dig out about the establishment of credit information burro and major activities, which are assured by the Nepal Rastra Bank Act 2058 section 58

Gautam, (2014) in an article, *"WTO and Challenges of Financial Services Liberalization in Nepal"* Gautam, B., has put an opinion in the context of financial service liberalization and financial reform in Nepal. According to Gautam "the process of financial services liberalization in Nepal is very recent phenomenon". It has been gathering pace gradually, the process of liberalization was started with the financial sector reform in mid eighties. It was surged up after the initiation of structural Adjustment Program and Enhanced Structural Adjustment Program with respective loan and assistance of the World Bank and International Monetary Fund. Financial sector reform was implemented on a phase wise basis. It was designed to address the institutional deficiencies and closed and controlled financial system. Various macroeconomic policies were modified and adjusted during the period to facilitate the liberalization process. The procedural relaxation on the entry of joint venture banks (with collaboration), determination of interest rate (first, in 1986 with certain limit and then in 1989 without any limit) and operation of various financial transactions are mainly attributable for the reform.

2.9 Review of Theses:

In the preparation of this thesis, some research papers and thesis related with the current study contributed some ideas and help in the presentation of this study regarding to this thesis. These are very few thesis submitted to the libraries of Tribhuvan University and its wing colleges on the same topics. But beside this, there are some other theses which are related to this study to some intent. The review and the extract from them are presented in this section.

Bhandari (2008), *"The Impact of Interest Rate Structure on Investment Portfolio of Commercial Banks of Nepal"* has concluded followings:

Relationship between interest rate and deposit. Significance of interest rate on lending. Impact of liberalization on banking performance, especially in terms of interest rates of commercial banks has been fluctuating. Deposits and lending rates were increased immediately after liberalization of the interest rate on August 31, 1989 but however, started to decline which have helped in increasing the credit flow. Interest rate structure has direct influence on profitability of commercial banks. Decreasing lending rate helps to increase the profitability through increasing the credit .Most of the banks are having similar interest rate structure which lessens the importance of liberalization of interest rate.

The Main Objective

- Effective interest rate structure helps in proper utilization of resources as measured by loan to deposit ratio
- Deposits are more interest rate conscious and positively co-related. Loans and advances of commercial banks have been found to be continuously increasing with the decline in interest rates

The Major Finding

- It has used more long term sources of financing than short term sources and followed conservative working capital policy.
- The major components of current assets in Royal Drugs Limited are cash and bank balance, receivable, inventory. Among these current assets inventory holds largest portion of current assets.
- Company cannot efficiency utilize current assets and there is also inefficient management of receivable policy.

Dangol (2009) Study conducted by Dangol, N. on the *"Impact of Interest Rate on Financial Performance of Commercial Bank"*shold the following objectives:

To examine the relationship of interest rate with amount deposits and amount lent. To examine the sensitivity of interest rate with inflation rate. The study made by Dangol on the whole concluded. Most of the commercial banks contradict the general financial theories.

The Main Objective

- The relation between amount of deposits and interest rate on deposit, in general concept, must be positive. But deposits are increasing despite the decrease in the general level of interest.
- The result of such phenomenon is that there are fewer investment opportunities for the banking sectors as well as general investors.

The Major finding

- The relation between total amount of loan and the lending rate is negative and significant.
- However, the change in the total amount of loan flow is not proportionate with the change in the lending rate. Correlation between interest rate and inflation is not significant.
- Not only interest rate is responsible to shape the profitability of banks but also the operating efficiency also has major influence on it.

Bhatta: (2010), *"Interest Rate and its effect on Deposit and Lending".* In this study, the disseminator tried to portray the relation of interest rate with deposit and lending amount which was the major objective of this study. But Bhatta's findings. The conclusions drawn from Bhatta's work:

Deposit rates of all sample banks under study are in decreasing trend; meaning that every year deposit 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 Main Objective

- The correlation coefficient between these two variables, (deposit rate and lending rate of sample banks comes highly positive
- Lending rates of all sample banks under study are also in decreasing trend; means that every year lending rates of sample banks under study have decreased

The Major finding

- The research found that the operation efficiency of the bank is in satisfactory condition. Interest earned in comparison of total assets is not fair enough.
- The financial and statistical tools of used by most of the researcher were ratio

Pokharel (2011), *"Determinants of Interest Rates in Nepalese Financial Markets"* also gave some ideas about the interest rates in Nepalese markets. Though, this thesis tried to identify the factors that shape the interest rates in Nepalese markets, it also tried to explore the relationship between the interest rate, deposits, credit rates and inflation.

The Main Objectives

- In other words, negative coefficient of other organizations means that more amounts is demanded at lower interest which means that when demand increases, price (interest rate on lending) also increases.
- Similarly considering about the relationship between interest rate on deposit and on lending for all sample banks, disseminator found it to be highly positive correlated.

- In his own words, it is “Variation in one rate also brings variation in another rate in same direction.” Therefore it is concluded both interest rate are determining factor of each other.

The Major Finding

- The company should always concern about the Interest rate Leading and regular check should make. It will control the excess and shortage of working capital of the company.
- The company should give attention to manpower planning and should avoid both under staffing and over staffing.

The Main Objective

- To show the relationship between the liquidity position and interest rate on deposit and lending.
- To identify the effect of inflation on interest rate charged and offered by various Nepalese financial institutions.
- To identify the different methods used by Nepalese financial institutions to calculate interest on lending. During the study, Pokharel found similar results as discovered by Bhatta.

The Major finding

- The company should always concern about the current assets and current liabilities and regular check should make. It will control the excess and shortage of working capital of the company.
- The company should give attention to manpower planning and should avoid both under staffing and over staffing.

Neupane (2012). Neupane, M.R carried out a study entitled *“Interest Rate Structure and Its Influence on Deposit and Lending of Joint Venture Banks in Nepal”* The researcher has shown the influence of interest rate on deposit and lending in Nepalese Joint Venture Banks. The major objectives of the study were:

The Main Objective

- To explore the relationship between interest rate and deposit.
- To examine the effect of interest rate on borrowing amount.
- To examine the influence of interest on performance of joint venture banks in Nepal.

The Major finding

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

Poudyal (2013) ***conducted a study entitled "Interest Rate and its Impact on Lending, Deposit and Inflation"*** The thesis was carried out with a main objective to explore the relation of interest rate with deposit, lending and inflation. To support the main objectives the following sub objectives were formulated: To scrutinize the relationship of interest rate with deposit amount. To spot out the sensitivity of interest rate with investment. To identify other major qualitative factors determining interest rate charged and provided by Nepalese financial institution.

The Main Objective

- In the study conducted by Pokhrel it is found that the correlation coefficient between interest rate on deposit and amount of deposit collected of all sample organizations were highly negative.
- It means that, deposit amount of all sample banks are found to increase even if the interest rate of deposit, the attracting factors for deposit, is decreasing. This is against the theory.
- The substitution effect doesn't hold true for all the samples taken.

The Major finding

- The interest rate on both deposit and lending of all sample banks are found to be in decreasing trends.
- Analysis of sample banks shows that there exits negative relation between lending amount and lending ratet was also concluded that interest rate on deposit and inflation rate is negative.
- The interest rate on lending and inflation rate has high degree of negative correlation coefficient.

2.10 Research Gap

This study includes the variable like deposit amount, interest rate on deposit, amount of loan, lending rate, perception of management over the financial performance of commercial banks (Nabil, HBL and EBL). This study is original work on interest rate structure of Nepalese financial market and tries to provide with an idea how the financial institutions function. Various previous works that has been consulted during the preparation of this thesis are found to be copied or done without placing original and updated data. It is also found that various other factors affecting interest rate like maturity period, political instability, and impact of open border with India etc. are lacking in many thesis. This study has been conducted considering only commercial banks. This study also includes the very recent data and information about the sample banks chosen from various websites and possible available data different studies that has been so far. However sophisticated tools for calculation and various computer softwares have not been adopted. Some previous theses are found to have used latest computer softwares. Despite of critical market situation the study shows how these companies are growing. Though detail analyses of international trends have not been made, various theories developed by renowned international researcher have been considered and the findings and conclusion are drawn based on those theories.

CHAPTER-III

RESEARCH METHODOLOGY

3. Research Methodology

Research methodology is a systematic way to solve the research problem. In other words, research methodology describes the methods and process applied in the entire aspect of the study. It refers to the various sequential steps (along with a rational of each step) to be adopted by a researcher in studying a problem with certain objectives in view (Kothari: 1994). Thus the overall approach to the research is presented in this chapter. This chapter consists of research design, sample size and selection process, data collection procedure and data processing techniques and tools.

3.1 Research Design

A research design is the specification of methods and procedures for acquiring the information needed. It is the overall operational pattern of framework for the project that stipulates what information is to be collected, from which sources and by what procedures. A research design is the program that guides the investigator in the process of collecting, analyzing and interpreting observations (Nachmais and Nachmais, 1987:29). Thus a research design is a plan for the collection an analysis of data. The design also enables the researcher to anticipate potential problems of data gathering operationalization of concepts, measurement, etc. (Black and Champion, 1976:77). For research there exits different types of research design like; Historical research.

Some research can be done only with the help and assistance of historical data and as such historical method for the study of social research occupies a very significant place.

It is the critical investigation of events, development and experiences of the past, the careful weighing of the validity of sources of information on the past and the interpretation of the weighed evidence. Historians, philosophers, social psychiatrists, litery men and social scientists use the historical approach as an aid in visualizing society

as a dynamic organism, and its structures and functions as steadily growing and undergoing change and transformation (Young, 2000).Descriptive research.

Descriptive research design seeks to describe a field or a problem by using questionnaires and opinionates. The approach is directed towards identifying the various characteristics of the research problems and to create observations conducive to further research. Case study research. A comprehensive study of a social unit-be that unit a person, a group, a social institution, a district, or a community is called a case study (Young, 2000:26). As the case study helps in studying behaviour in specific, precise detail, its is also called “the social microscope” (Burgees, 1949:25:26)

3.2 Field Study Research

This is the research design which involves direct study of field situations. Though this method has broken down the narrow walls of the traditional experimental laboratory in research on complex problem of human relationships but it permit the introduction of controls in the data collection.ction research.

Action research is also known as applied research or behavioral research which is associated with particular project and problem. It aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework (Clark, 1972: 22-23). This type of research is conducted through direct action.

3.2.1 True Experimental Research

A true experimental research is one, which has two basic requirements. One is complete control over the manipulation of independent variable and another is complete control over the assignment of subjects in equivalent group. In a true experiment random assignment of subjects to experimental and control treatments provide the equivalence of the experimental and control groups (Best and Kahn, 2002:148)

This study mainly concerned with historical research. Sometime descriptive and analytical approach has also been used. But generally, to show the relationship of interest rate with deposit amount, lending (credit) amount past historical data are used. The relevant and needed data has been collected from various publications of different commercial banks and Nepal Rastra Bank.

3.3 Population and Samples:

The term "population" or universe for research means the universe of research study in which the research is based (Wolf & Pant: 2000). A population element is the subject on which the meseaurement is being taken. A population is the total collection of elements about which we wish to make some interference. Since the study is about interest rate, all the lending and depository institution of Nepal are the member of population study. The population for the study comprises 31 commercial banks, 81 development banks, 79 finance companies, 20 micro credit development bank, 15 saving and credit co-operatives (limited banking), one employee provident fund and other 46 non-government financial organizations (NGOs) licensed by NRB (NRB website). Due to the time and resources factors, it is not possible to study all of them regarding the study topic. Therefore samplings are done selecting from population. Among the population only 3 Joint venture banks are chosen as sample. Only three banks has been taken for study for the greater accuracy of results, greater speed of data collection as well the banks taken as sample make a good representation ion of the financial performance of many banks in Nepal to great extent. Organization under study are as follows, whose general introduction are presented in chapter one.

- NABIL Bank Limited
- Himalayan Bank Limited
- Everest Bank Limited

3.4. Nature and Source of Data

For this study, mainly secondary data have been used. These secondary data have been collected mainly from published sources like annual report, prospectus, balance sheet,

newspaper, journal, internet and other sources. Besides this, have also been used to have a clear understanding of managerial perception regarding the performance of commercial banks. They were collected through and observation. Secondary data published on annual reports of concerning organizations, like interest rate and amount and their organizational profiles were collected through personal visit of respective organization as well as from various newspapers, magazines and their websites. Some secondary data like source and use of funds of respective bank, and inflation rates are collected from Nepal Rastra Bank.

3.5. Data Processing and Presentation

The information or data obtained from the different sources are in raw form. Direct presentation is not possible from that information. So it is necessary to process data and converts them into required form. After then only, the have been can be presented for study. The process is called data processing. For this study, required data are taken from the secondary source (bank's publication, websites, magazines and newspaper) and primary source (observation and interview) . For presentation, different tables are used. Similarly, in most case graphical presentation is also made. So far as the computation is concerned, it has been done with the help of scientific calculator and computer program.

3.6. Data Analysis Tools

In order to get the concrete results from this research, data are analyzed by using different types of tools. As per for our study corrected topic requirements, emphasis has been given on statistical tools rather than financial tools.

3.6.1. Statistical Tools

Arithmetic Mean:

It is the sum of all the observations divided by the number of observations. In such case all the items are equally important (Pant & Chaudhary: 1999). As arithmetic mean is most common and popular tools for data analysis, here in this study also, arithmetic mean is used. It is computed by using following formula:

$$\text{Mean } (\overline{X}) = \frac{\Sigma X}{n}$$

Where $\overline{X}$ = Mean

ΣX = Sum of all the Variable X

n = Variables involved

Coefficient of Correlation:

By this statistical tool, the degree of relationship between two variables is identified. In other words, this tool is used to describe the degree to which one variable is linearly related to other variables. Two or more variables are said to be correlated if change in the value of one variable appears to be linked with the change in the other variables. The correlation analysis refers the closeness of the relationship between the variables (Sharma & Chaudhary: 2003). Correlation may be positive or negative and ranges from -1 to +1. Simple correlation between interest rate and deposit amount, interest rate and credit or lending amount and interest rate (both deposit rate and lending rate) and inflation is computed in this thesis. For example, let's say that the correlation between interest rate and inflation is positive. It indicates that when inflation increases, interest rate also increases in same direction and vice versa. For our study following reference is used (Panta & Chaudhary: 2053).

- Correlation may be positive or negative and ranges from -1 to +1. When r = +1, there is positive perfect correlation; when r = -1, there is perfect negative correlation; when r = 0, there is no correlation and when r < 0.5 then there is low degree of correlation.When 'r' lies between 0.7 to 0.999 (or -0.7 to -0.999), there is high degree of positive (or negative) correlation.When 'r' lies between 0.5 to 0.699, there is a moderate degree of correlation.

The simple correlation coefficient, r, is calculated by using following formula:

$$\text{Simple Correlation Coefficient (r)} = \frac{n\Sigma X_1X_2 - (\Sigma X_1)(\Sigma X_2)}{\sqrt{n\Sigma X_1^{\,2} - (\Sigma X_1)^2}\sqrt{n\Sigma X_2^{\,2} - (\Sigma X_2)^2}}$$

Alternately,

$$r = \frac{\text{Cov}(X_1X_2)}{\text{Var}X_1, \text{Var}X_2}$$

Where,

$$\text{Covariance } (X_1, X_2) = \frac{1}{n}\Sigma(X_1 - \overline{X}_1)(X_2 - \overline{X}_2)$$

n = Total number of observations.

X_1 and X_2 = two variables, correlation between them are calculated.

$$\text{Multiple Correlation Coefficient } (R1_{23}) = \sqrt{\frac{r_{12}^2 + r_{13}^2 - 2r_{12}r_{13}r_{23}}{1 - r_{23}^2}}$$

Where,

r_{12} = correlation coefficient between variables one and two.

r_{23} = correlation coefficient between variables two and three.

r_{13} = correlation coefficient between variables one and three.

Multiple correlations is used for the measure of degree of association between one variable and a group of other variables as the independent variable. It lies between 0 and 1. The close it is to '1', the better the linear relationship between the variables. The closer it is to '0', the worse is the linear relationship (Gupta: 2000).

Coefficient of Multiple Determinations:

The square of the multiple correlation coefficients is called coefficient of multiple determination. It is very useful tools to interpret the value of multiple correlation coefficients. The main significance of the coefficient of multiple determinations is to represent the portion of total variation in the dependent variable which is explained by the variations in the two independent variables.

$$\text{Coefficient of multiple determination} = R_{1.23}^2$$

T-test for significance of sample correlation coefficient:

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

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

i.e. t follows t-distribution with n-2 degree of freedom (d.f.), 'n' being the sample.

The (1-α) % confidence limits for estimating population correlation coefficient (ρ) are given by

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

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

3.6.2 Financial Tools

Financial tools are used to examine the strength and weakness of performance. In this study, financial tools like interest rate spread and ratios have been used. Ratio is the mathematically relationship between two accounting figures. Ratio analysis is used to compose a firm's financial performance and status so 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 to total deposit ratio:

This ratio is calculated to find out how successfully the banks are utilizing their total deposit 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 bank. A high ratio indicates better mobilization of collected deposit and vice versa. It should be noted that too high ratio may 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:

Interest Rate Spread

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: Interest rate spread= Interest rate on lending – Interest rate on deposit Higher spread shows the banks charge high rate for the borrowers than they provide for depositors.

CHAPTER-IV

PRESENTATION, ANALYSIS AND FINDINGS OF DATA

4. Introduction

The filtered data are presented and detail analysis of some researches is included in this section. With set objectives, analysis and interpretation of data from Nepalese market are carried out. The necessary and relevant data information essential for the study is analyzed in this chapter. A set of bank is chosen to perform the study in order to analyze the interest rate and its effect on deposit amount, lending amount and financial performance. For the easy understanding, and to make the effective and precise, presentation, analysis and interpretation are categories into which the focus has been divided.

Tables, graphs and charts are displayed in the presentation section according to need to present the overview of the information, these data are then analyzed using different statistical tools and finally the results are interpreted. The sequence of three sections has no clear demarcation line but the arrangement is as per the organization (presentation, analysis and interpretation). The data obtained are of primary and secondary nature. The analysis is done in a simple way, at first relationship of deposit and interest rate of all 3 sample banks are analyzed then, the relationship between interest rate and credit (lending) amount is made. While analyzing, different statistical tools like correlation coefficient, coefficient of determination, t-statistics for significance are employed.

Presentation and Analysis of Secondary Data

Secondary type of data is used to analyze about deposit amount, lending amount and interest rate.

4.1. 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 only saving and fixed deposits have been considered because current deposit doesn't earn any interest.

4.1.1. NABIL Bank Limited (NABIL)

Prior to entering into the main topics, it is preferable to take a 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. These 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 & development bank quotes higher interest rate on deposits than commercial banks

Table: 4.1

Interest rate structure on deposit of NABIL (in Percentage)

Deposit	2008	2009	2010	2011	2012	2013
Savings	2.5	3.5	3.5	4	4	6
Fixed						
14 Days	2.5	2.5	2.5	2.5	NA	NA
1 Months	3	3	3	3.5	4	7.5
3 Months	3.25	3.25	3.25	6.75	5	9
6 Months	3.5	3.5	3.5	6.75	6	10
1 Years	4	4	4	5	8	10.5
2Yrs/Above	4	4.25	4.25	6.75	8.5	13
Fixed Deposit Mean	3.375	3.417	3.417	5.21	6.3	10

Source: Banking and Financial Statistics, No: 45-53 and Interest rate structure of CBs Mid July 09 and 2013 NRB

Table no 4.1 shows the deposit interest rate of NABIL bank in six different FYs. For this study 2008 is has been taken as initial year & 2013 as final year. The table portrays the interest rate that prevailed in the Nepalese financial markets during past 6 fiscal years. The data shows the increasing tendency of interest rate. The interest rate on saving deposit in the beginning year was 2.5% and increased to 6% in 2013. In same manner, the bank used to quote the interest rate of fixed deposit in different short term period like 14 days, 1 months, 3 months, 6months, 1year 2 yrs and above. The fixed deposit rate was in increasing trend. The average interest rate for fixed deposit are 3.375%, 3.417%,3.417%,5.21%,6.3% and 10% respectively for the year 2008, 2009, 2010, 2011, 2012 and 2013. The average figures also show the increasing tendency in interest rate from 2008 to 2013 but the huge increment shown in the year 2013. The graph 4.1 reveals that, previous period interest rates are on declining trend. It means from 2008 to 2013 interest rates are inclining trend. The interest rate is constant and increasing for fixed deposit 14 days to 2 yrs and above. The three months and 6 months interest in the year 2012 are slightly decreased. The interest rate in 2013 is increased by more percentage then other year. This more increment due to the high demand of the fund and scarcity of the liquidity in the financial market.

Figure: 4.1

Interest Rate of NABIL on Fixed Deposits

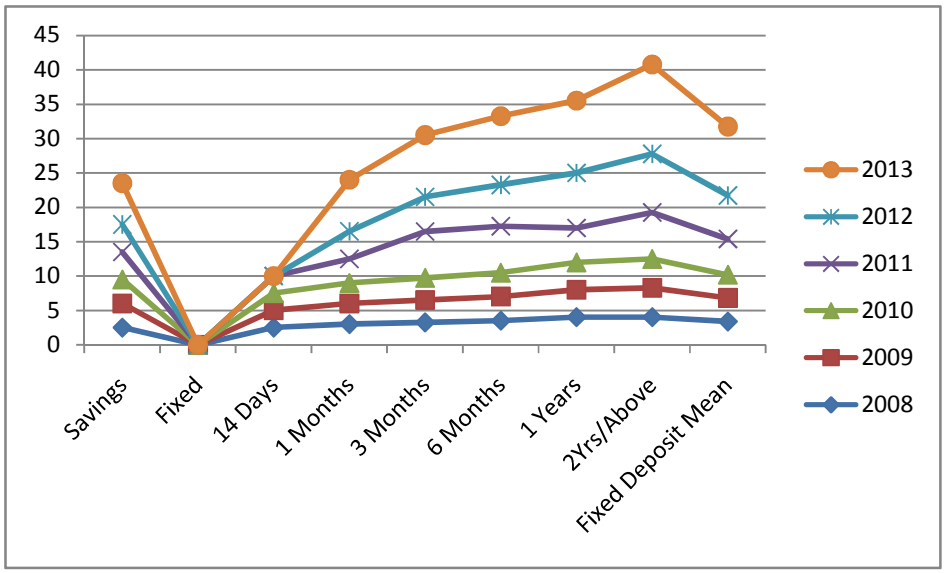


Table: 4.2

Relationship between Interest Rate and Deposit amount of NABIL (in %)

Year (1)	Saving Deposit Interest Rate (2)	Saving Deposits Amounts (3)	Fixed Deposit Interest Rate(4) %	Fixed Deposit Amounts (5)
2008	2.5	7026.4	3.375	2078.6
2009	3.5	8770.8	3.417	3450.2
2010	3.5	10187.4	3.417	5435.2
2011	4	12160	5.21	8464.1
2012	4	14620.4	6.3	8310.7
2013	6	13783.6	10	14711.2
Correlation	$r_{23} = 0.7659$		$r_{45} = 0.9588$	
Coefficient of determination	$r_{23}^2 = 0.5866$		$r_{45}^2 = 0.9194$	
t-statistic	t-cal = 2.382	t-tab = 2.571 Insignificant	t-cal = 6.7546	t-tab= 2.571 Significant

Source: Banking and Financial Statistics, No: 45-53 NRB Annual Report 2013

The above table shows the total amount of fixed deposit and saving deposits and the interest rates offered on such deposits by NABIL on six fiscal years starting from FY 2008 to FY 2013. The table depicts that the both interest rate has been increased by fluctuating magnitude. Deposit amount has been increased during the study period. There is positive relationship between the deposit and interest rate. It can be quantified by calculating correlation coefficient between them. This relationship can also be shown in graph as shown in

Figures: 4.2

Relationship between Interest Rate and Deposit amount of NABIL

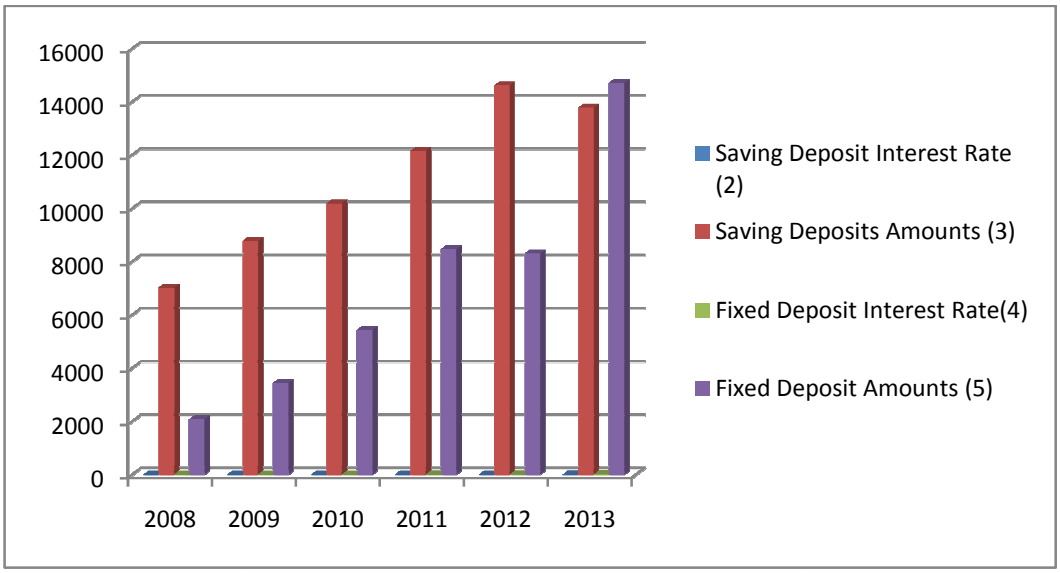


Figure 4.2: Deposit Amount of NABIL

According to table no 4.2, the interest rate on saving deposit has been increased from 2.5% to 6% during six FYs. The upward tendency is little up to 2012 and it jumped by 2% in 2013. In same period the deposit amount was Rs 7026.4 millions which amount increase to Rs. 14620.4 millions in 2012 but decreased to 13783.6 in the year 2013.

Similarly, for fixed deposit the table 4-2 shows that total amount of fixed deposit and interest rate on fixed deposit offered by NABIL on six consequent FY started from 2008 to FY 2013. The table reveals that fixed interest rate on has been increased during FY 2008 to 2013. In the FY 2008 the average interest rate deposit was 3.38% on fixed deposit but it is 10% in the year 2013. This shows that the fixed deposit interest rate increased by more percentage. It reflects the scarcity of liquidity in the market. The amount of the fixed deposit is higher than saving deposit in the year 2013. In that year the fixed deposit interest rate increased by 3.7%. So, the amount of fixed deposit increased by more. In this regards, the substitution effect holds true in the case of fixed deposit.

This shows that the interest rate on fixed deposit was increasing trend which reached to high rate from 2013.

To verify the above have been used trend, the correlation coefficient and t-statistics. The correlation coefficient has been calculated for saving deposit and deposit amount, then it is (r_{23}) =0.7659. This high positive correlation coefficient indicates that they have positive relationship each other. Increase in interest rate is followed by an increase in saving deposit amount. This shows that the position effect in of NABIL for saving account is applicable. The coefficient of determination between these two variables is r_{23}^2 = 0.5866, which means that total variation in dependent above variable (saving deposit amount) has been explained by independent variable (interest rate) to the extent of58.66% and remaining is the effect of other factors. The t-value for testing the significance of the correlation coefficient between variables is 2.382. Since the tabulated t-value at 5% level of significance for 5 degree of freedom (t-tab = 2.571) is greater than calculated value (t-cal = 2.382), the correlation coefficient is insignificant.

In the same manner, the correlation coefficient between interest rate on fixed deposit and fixed deposit amount (r_{45}) is 0.9588. This means that these two variables are highly correlated when interest rate on fixed deposit decreases or (increases) the deposit amount also decreases or (increases). This is exactly the matter what the theory (substitution effects) says. The coefficient of determination between these two variables is r_{45}^2 = 0.9194, which means 91.94% of total variables in dependent variables (deposit unit) is explained by the independent variable (deposit rate) & remaining is due to the effect of other factors. Similarly test of significance of correlation coefficient between deposit rate and deposit amount gives the value of t = t-cal = 6.7546. The tabulated value at 5% significant level with d.f. 5 is 2.571 (i.e. t-tab = 2.571). Here $t_{cal} > t_{tab}$ so H_0 is not accepted i.e. there is significant relation between two variables. Though the correlation coefficient indicates that the both variables have high level of relationship and the t-statistics clarifies that their relationship is significant.

4.1.2. Himalayan Bank Limited (HBL)

The general interest rate structure for HBL for saving deposit and fixed deposits during past six fiscal years is as follows:

Table: 4.3

Interest Rate Structure on Deposit of HBL (Percentage) (in %)

Deposit	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Savings	2.75	2.75	2.75	4	4.25	6.5
Fixed						
14 Days	2.5	2.5	1.75	2	2.5	3
1 Months	3.3	3.3	2	2.25	3.25	4
3 Months	3.75	3.75	2.5	2.5	3.75	4.75
6 Months	4	4	3	3.25	4.5	10
1 Years	5.25	5.25	3.75	5.5	6.5	11
Above 2Yrs	5.75	5.75	3.75	5.5	8.75	11.5
Fixed Deposit Mean	**4.10**	**4.10**	**2.79**	**3.5**	**4.875**	**7.375**

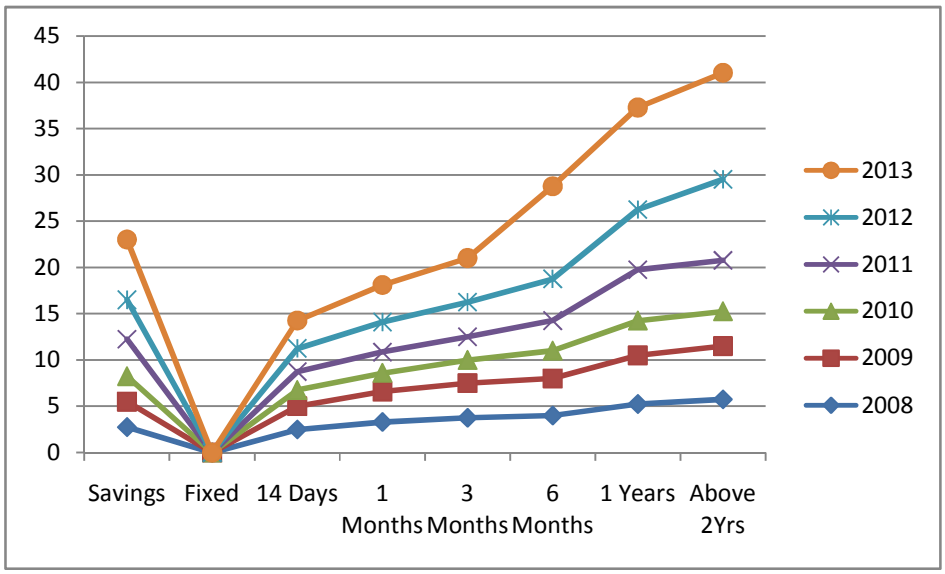
Source: *Banking and Financial Statistics, No: 45-53 and Interest rate structure of CBs Mid July 09 and 2013NRB.*

From table 4.3 it is clear that the interest rate on fixed deposit of HBL is in increasing, decreasing and increasing trend. The interest rate on saving deposit is in increasing trend. The average interest rate on fixed deposit is 4.10%, 4.10%, 2.79%, 3.5%, 4.875% and 7.375% in FY 2008, 2009, 2010, 2011, 2012 and 2013 respectively. It shows that the average interest rate is in increasing trend during FY 2008 to 2009 and decreased at 2010 then again increased at 2011 then slightly increased at 2012 and increased highly in 2013. The interest on fixed deposit is decreased in the year 2010 and 2011 due to excess amount of deposit available in the bank. In the year 2013 the interest rate on the all kinds and all time period deposits are in increased. This shows that the scarcity of the fund in the banking system. This phenomenon can be portrayed in the graph as figure no 4.10.

The figure below shows the fixed deposit interest rate for different time period. The interest rate on the year 2010 is decreased and then it starts to increased. In this study period the interest rate is in fluctuating trend. Interest rate is depending upon the demand and the supply of the liquidity available in the market.

Figure: 4.3

Interest Rate of HBL on Fixed Deposit



Correlation Coefficient, Coefficient of Determination and t-statistics of HBL

Table: 4.4

Relationship between Interest Rate and Deposit amount of HBL(in %)

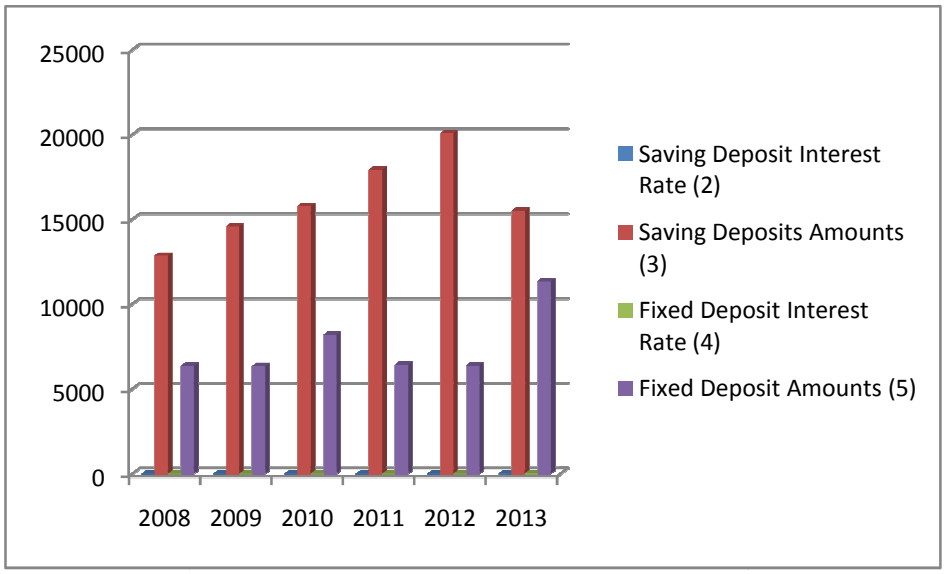
Year (1)	Saving Deposit Interest Rate (2)	Saving Deposits Amounts (3)	Fixed Deposit Interest Rate (4)	Fixed Deposit Amounts (5)
2008	2.75	12852.4	4.10	6364.3
2009	2.75	14582.8	4.1	6350.2
2010	2.75	15784.7	2.79	8201.1
2011	4	17935	3.5	6423.9
2012	4.25	20091	4.88	6377.1
2013	6	15494.6	7.38	11328.6
Correlation	r_{23} = 0.3740		r_{45} = 0.7124	
Coefficient of determination	r_{23}^2 = 0.1398		r_{45}^2 = 0.5076	
t-statistic	t-cal= 0.8065	t-tab = 2.571 Insignificant	t-cal = 2.8936	t-tab = 2.571 Significant

Source: Banking and Financial Statistics, No: 45-53 NRB Annual Report 2013

The table 4.4 shows the amount of saving deposit and its interest rate as well as amount of fixed deposit and its interest rate for six fiscal year. The table indicates that, in one hand deposit rates are increasing and deposit amount is increasing in each fiscal year. This suggests that interest rate and deposit amount may have positive relationship, i.e. when one variable is found to be increased; other variable is found to be increased. This situation can be revealed in graph as figure no 4.4 in following ways:

Figure: 4.4

Deposit Amount of HBL



The graph 4.5 shows saving deposit amount is continuously rising each year but fixed deposit 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 rate of fixed deposit and saving deposit can also be .To quantify the exact relationship between interest rate and deposit amount, it is necessary to calculate the co-relation coefficient. The correlation coefficient of saving deposit amount and its interest rate is r_{23} = 0.3740. It means that these two variables have moderate positive relationship. Though the two variables have direct relationship but correlation coefficient tells that increase in one variable result the increase in other variables. The correlation coefficient for fixed deposit rate and amount is r_{45} = 0.7124, which is very high positive correlation. Therefore for both saving and

fixed deposit, the case is not against the substitution effect. The value of t-statistics for saving deposit and saving interest is found to be t-cal= 0.8065. The tabulated value for this condition at 5% level of significance with 5 degree of freedom is 2.571. It means that in this case t-calculated is greater than t-tabulated. So alternative hypothesis is not accepted, which means that there is insignificant relation between saving deposit and interest rate. Similarly for fixed deposit, the calculated value for t is t-cal = 2.8936. This value is greater than t-tabulated. So in this case the magnitude of correlation coefficient is significant. It means H1 hypothesis is accepted. Thus in the case of saving deposit it is clear that there is substitution effect & fixed deposit, there is substitution effect in the context of HBL.

4.1.3 Everest Bank Limited (EBL)

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

Table: 4.5

Interest rate structure on deposit of EBL (in %)

Deposit	2008	2009	2010	2011	2012	2013
Savings	3.25	3.25	3	4	3.5	4
Fixed						
14 Days	2.25	2.25	NA	NA	NA	NA
1 Months	2.25	2.25	2.75	2.75	2.75	2.75
3 Months	2.5	3	3	3	3	3
6 Months	3	3.5	3.5	3.5	3.5	3.5
1 Years	3.5	4	4	5	5	5
Above 2Yrs	4	4.5	4.5	5.5	5.5	5.5
Fixed Deposit Mean	2.92	3.25	3.55	3.95	3.95	3.95

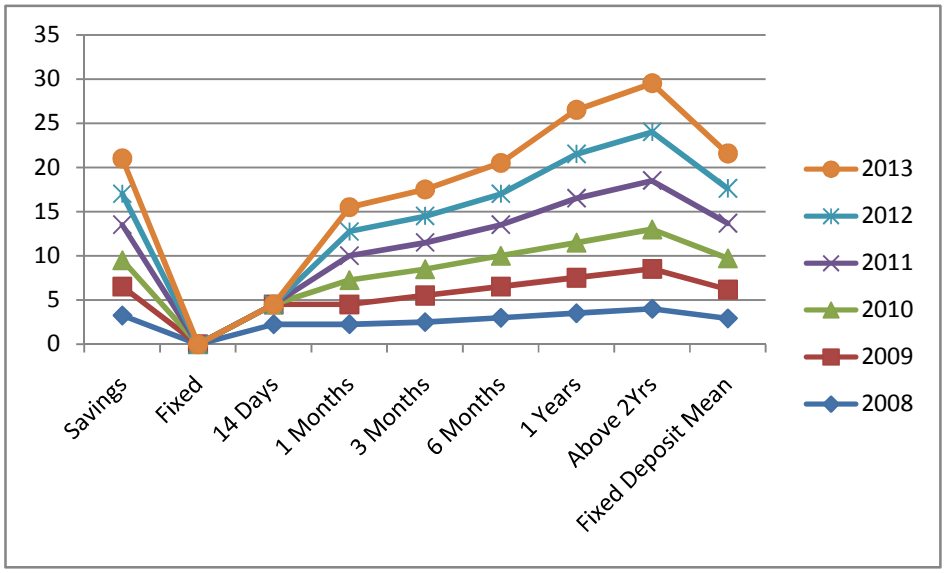
Source: Banking and Financial Statistics, No: 45-53 and Interest rate structure of CBs mid July 013 and 013 NRB

The table 4.5 reveals the interest rate of EBL on saving deposit and fixed deposits. The interest rate on deposit is fluctuated, means both on increasing and decreasing trend. But

the tendency towards decrement is similar to HBL because interest rates remain increase, constant and decrease during the various FYs. In the six years fiscal periods, the interest rate is fluctuating and increasing trend. This can be shown clearly if average of all interest rate is taken. The average interest rate for fixed deposit is 2.92%, 3.25% 3.55%, 3.95%, 3.95% and 3.95% for the year 2008, 2009, 2010, 2011, 2012 and 2013 respectively. As compared to other two banks the interest rate of EBL is not more fluctuating. The similar interest rate for the last three years is similar. That mean the bank had sufficient liquidity at this period. This tendency can be exhibited in the pictorial form as in figure no 4.5 as follows.

Figure: 4.5

Interest Rate of EBL on fixed Deposits



The figure 4.7 shows that the interest rate on 3 months and 6 months fixed deposit has increased in the year 2009 and remains constant then after. The 14 days interest rate is given zero after the year 2009.

Correlation Coefficient, Coefficient of Determination and t-statistics of EB

Table: 4.6

Relationship between Interest Rate and Deposit amount of EBL (in %)

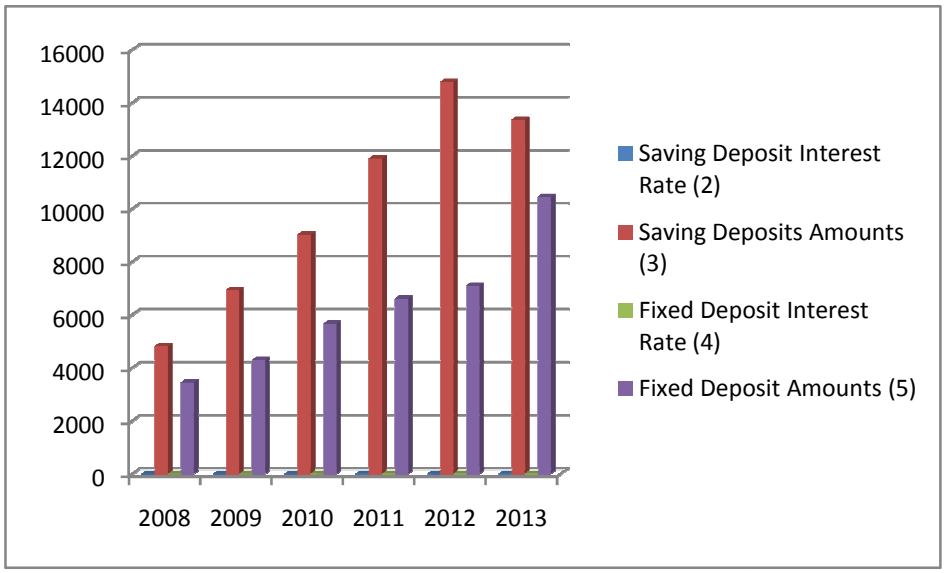
Year (1)	Saving Deposit Interest Rate (2)	Saving Deposits Amounts (3)	Fixed Deposit Interest Rate (4)	Fixed Deposit Amounts (5)
2008	3.25	4806.9	2.92	3444.5
2009	3.25	6929.2	3.25	4298.2
2010	3	9018	3.55	5658.7
2011	4	11883.9	3.95	6598
2012	3.5	14782.3	3.95	7094.7
2013	4	13360	3.95	10440.3
R	r_{23} = 0.6394		r_{45} = 0.8359	
R_2	r_{23}^2 = 0.4089		r_{45}^2 =0.6986	
t-	t-cal = 1.6633	t-tab = 2.571 Insignificant	t-cal = 3.0452	t-tab = 2.571 Significant

Source: Banking and Financial Statistics, No: 45-53 NRB Annual Report 2013

The table 4.6 also shows both deposit amount and interest rate are in increasing trend. It means interest rate and deposit amount have positive relationship. But to find exact quantity of positive relationship it is necessary to compute the correlation coefficient. Prior to this it is helpful if the data are presented on graph no 4.6.

Figure: 4.6

Deposit Amount of EBL



The graph shows that EBL collected more funds on fixed deposit than saving deposits in last year of the study period. Similarly the relationship of saving interest rate and deposit interest rate can be shown on figure no 4.9 as follow. The excel sheet is used to compute the correlation coefficient, then the value for correlation between saving deposit and interest rate is $r_{23} = 0.6394$. This is moderate degree of positive correlation. It means that during the last six fiscal years, there was sharp increase in saving deposit amount. The coefficient of determination $r_{23}^2 = 0.4089$. Similarly the calculated value for t is 1.6633 for saving account. The value of tabulated t at 5 d.f. and 5% level of significance is only 2.571. So for saving account t-cal < t-tab, and hence H0 is accepted. It means that there is no significant relationship between two variables (deposit amount and interest rate).

In same manner for fixed deposit, the value of correlation coefficient is $r_{45} = 0.8359$, which indicates that the two variables have very high positive relationship. In other words, when increment occurs on one variable occur then there occur increment on other variables. The coefficient of determination $r_{45}^2 = 0.6986$. To identify the significance or insignificance of this correlation, it is necessary to calculate the value of t -statistics. The calculated value of t is 3.0452. Similarly the tabulated value for t is 2.571, which is less than calculated t. As a result null hypothesis is rejected and alternate hypothesis is accepted. It means that the correlation coefficient is highly significant. Thus from the both study it reveals that substitution effect is not applicable for EBL.

4.2 Analysis of Lending and Interest Rate

This is second area of the analysis where mainly the relationship between lending interest rate and its effect upon lending amount is measured. Generally, when there is higher interest rate (esp. lending or credit rate) in the economy, people normally borrow lesser amount than the period when lending interest rate is low. According to theory, when there is low lending rate, then there should be higher amount of borrowing. 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 lending rate and lending amount in Nepalese context.

4.2.1. NABIL Bank Limited (NABIL)

The sector where NABIL grant its credit during last six FYs and their corresponding interest rate, average interest rate and lending amount are presented in the table 4.7 below

Table: 4.7

Lending Rate of NABIL on Different Sectors during six fiscal years

Sector	2008	2009	2010	2011	2012	2013
Overdraft						
Export Credit	11	11	10.5	10.5	12	14
Import LC	11	11	10.5		12	14
Against Govt. Bond	7.5	7.5	7.5	7	10.5	14
Against BG/CG	9	9	9	8	11	16
Other Guarantee	10	10	NA	NA	NA	NA
Industrial Loan	NA	NA	NA	NA	NA	NA
Commercial Loan	NA	NA	NA	NA	NA	NA
Priority Sector Loan	12	12	11	11	NA	NA
Deprived Sector Loan	9	9	9	9	10	12
Term Loan	13	13	12	12	12.5	16
Working Interest	12	12	11.5	11.5	12	15
Hire Purchase	12.5	12	12	12	NA	NA
Others	13	13	12	12	12.5	17
Average Int. Rate(1)	**10.91**	**10.86**	**10.5**	**10.33**	**11.56**	**14.75**
Lending Amount (2)	11078	13021.3	15657.1	21514.6	27816.6	32268.87
Correlation (r_{12})	0.7493					
Coefficient of determination (r_{12}^2)	0.5615					

Source: Banking and Financial Statistics, No: 45-53 and Interest rate structure of CBs Mid July 09 and 013 NRB

Lending activity of joint venture commercial banks can be diversified into different sectors. But according to the publication of Nepal Rastra Bank- Banking & Financial statistics- the loan of commercial banks are classified in different sub-sectors like overdraft, export credit, Import LC, commercial loan and so on. Besides this there are other section (area) when bank provides loan and these areas are placed in the topic of "others". For this study, lending area are categorized as classified by NRB. According to table 4-7 it shows that interest rate on lending on different area are in declining stage. The table shows that the maximum interest rate is 14.75% in FY 2013 and, minimum rate is 10.33% on FY 2011. This shows that the interest rate was fluctuating and increasing more significantly. Generally the productive sector loan rate (like commercial loan, industrial loan, priority sector loan, working interest rate and so on) fluctuate less in magnitude than non-productive sector loan like overdraft, loan against government bond, BG/CG rate and so on. But the figure shows that these sectors loan were somewhat lesser than other non productive loan.The average lending interest rate is 10.91% (2008), 10.86% (2009), 10.50% (2010), 10.33% in 2011, 11.56% (2012) and 14.75% (2013).

The average rate was also in increasing trend up to the year 2009 and then started to decline for year 2010 and 2011 and then it started to increase. In the year 2013 it is increased by more percentage as compared to other fiscal year. In the year 2010 the declination was quite fast where as the declining tendency was little in later year. This concludes that interest rate on lending was also in decreasing tendency for past few years. With harmony to interest rate, the lending amount of NABIL is also seen to be in increasing tendency but with some fluctuation. These can also be present.

Figure: 4.7

Lending Amount of NABIL

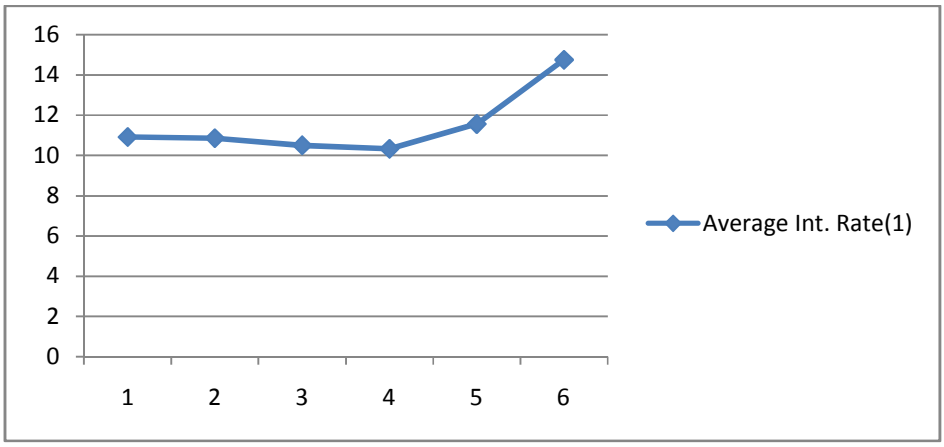
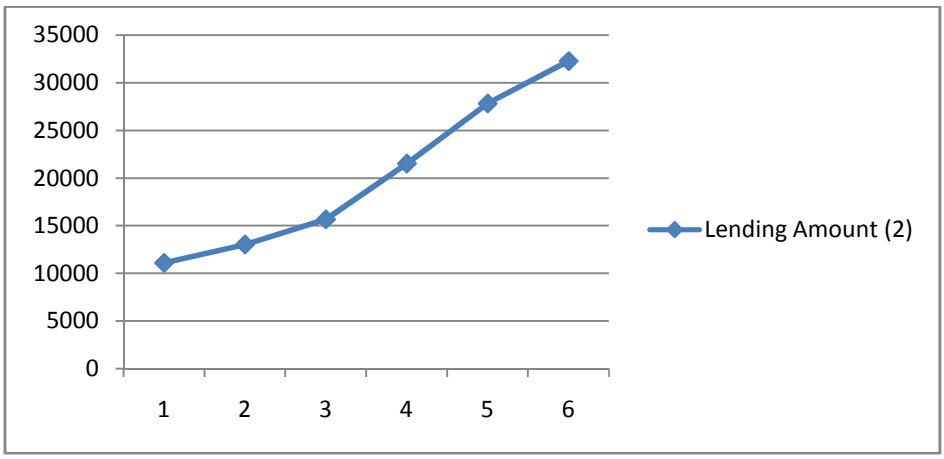


Figure: 4.8

Average Lending Rate of NABIL



Correlation Coefficient, Coefficient of Determination of NABIL

From table 4.7 the correlation coefficient (simple correlation) between lending rate and lending amount (r_{12}) is 0.7493. According to our classification, this positive correlation is "high degree" correlation. In this case it is clear that interest rate on lending & lending amount has positive relationship. It means they move in same direction i.e. increase in lending rate result decrease in total lending amount. According to the theoretical concept of lending rate and lending amount, people prefer or use more money when the market interest rate is low in the market. But the lending rate is going upward and the lending amount also increased. Therefore the interest rate does not matter for lending. The simple

determination of correlation coefficient (r_{12}^2) is 0.5615. When total lending amount is taken as dependent variable and lending rate as independent variables, then 56.15% of total variation in dependent variable is explained by lending rate and remaining percentage is due to the effect of other variables in the economy. That is the same relation shown by two variables lending amount and lending rate is not strong. The increase in demand of lending amount does not affect the lending rate. This shows the liquidity demand in the market.

4.2.2 Himalayan Bank Limited (HBL)

HBL also grant credit on different area like commercial loan, industrial loan, overdraft, working interest and so on. These rates on the different fiscal years are as follows:

Table: 4.8

Lending Rate HBL on Different Sectors During Six Fiscal Years

Sector	2008	2009	2010	2011	2012	2013
Overdraft	12	12	10	10	10.75	18
Export Credit	8.75	8.75	8.75	9.75	10.75	16
Import LC	11.75	11.75	9.5	9.5	10.25	16
Against Govt. Bond	6	6	6.5	7	8	11
Against BG/CG	9.25	9.25	8	8	10	16
Other Guarantee	NA	NA	NA	NA	NA	NA
Industrial Loan	12.75	12.75	NA	NA	NA	NA
Commercial Loan	12.5	12.5	NA	NA	NA	NA
Priority Sector Loan	12.25	12.25	10	NA	10	NA
Deprived Sector Loan	8.25	8.25	8.25	8.75	8.75	11
Term Loan	11.75	11.75	10.5	10.5	12.5	16
Working Interest	NA	NA	NA	NA	NA	NA
Hire Purchase	11.5	11.5	9	9.5	12	17
Others	13.5	13.5	12	10.5	11.25	18
Average Int. Rate(1)	10.85	10.85	9.25	9.28	10.425	15.44
Lending Amount (2)	13245	15515.7	17672	19985.2	25282.1	29123.7
Correlation (r_{12})	0.6270					
Coefficient of determination (r_{12}^2)	0.3931					

Source: Banking and Financial Statistics, No: 45-53 and Interest rate structure of CBs Mid July 09 and 013 NRB

The table 4-8 shows the interest rate of HBL on lending on six fiscal years granted in different sectors. HBL lending rate was somewhat more than NABIL. The maximum interest rate quoted by the HBL during six FYs was 18% on overdraft and "other" categories. The interest rate of HBL is also in fluctuating trend. But the increasing magnitude is high. The average interest rate was 10.85%, 10.85%, 9.25%, 9.28%, 10.43% and 15.44% in 2008, 2009, 2010, 2011, 2012 and 2013 respectively. Conversely, the lending amount of HBL is seen to be in increasing trend. With compare to 2008 lending, lending of 2013 is more than two times. So it can be said that lending of HBL has expanded rapidly within that six fiscal periods. These phenomenon shows that lending interest rate and lending amount have inverse relationship. The increment of interest leads decrease in lending which shows the inverse relationship.

To quantify this relationship, it is necessary to calculate correlation coefficient. But prior to this it is fruitful if the trend of lending interest rate and lending amount is shown in the figure as in figure no 4.9.

Figure: 4.9

Lending Amount of HBL

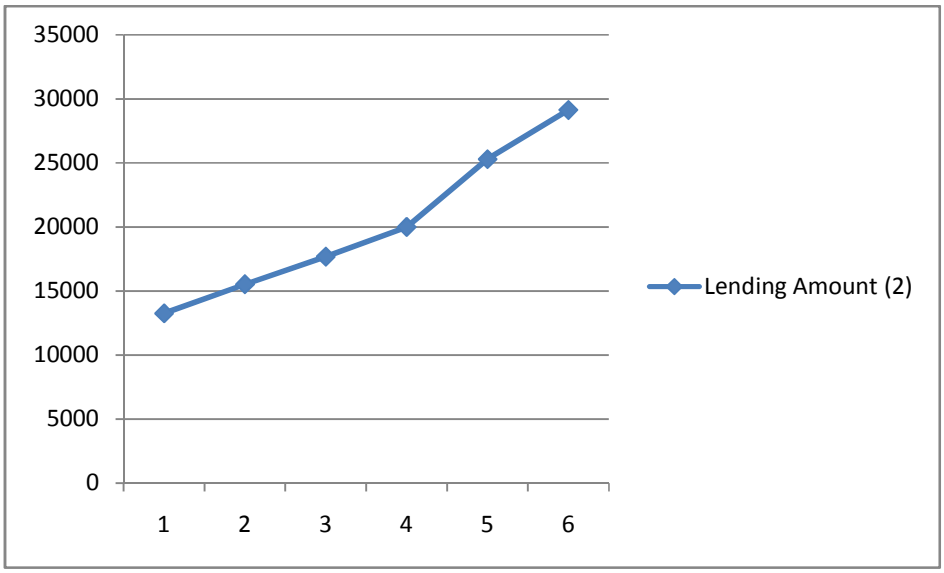
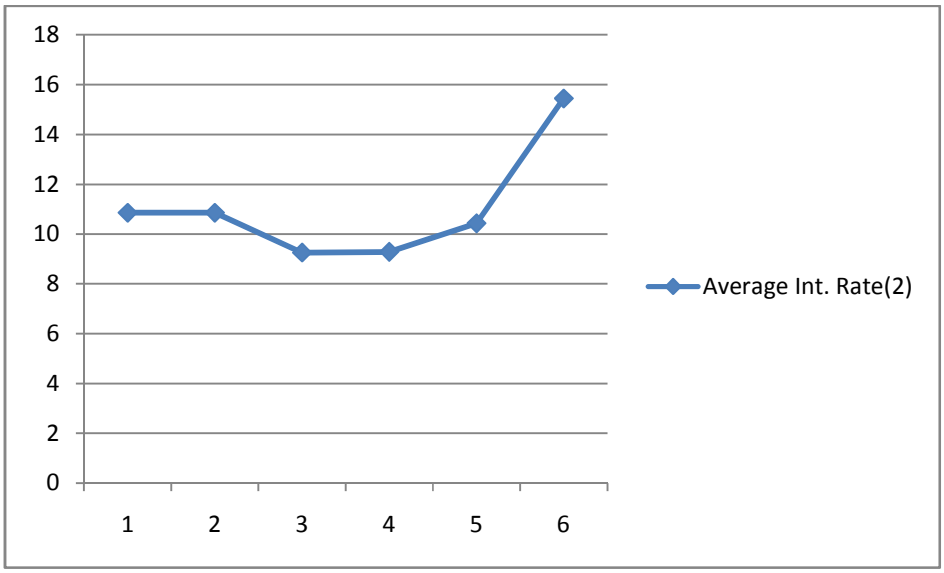


Figure: 4.10

Average Lending Rate of HBL



The figure 4.13 shows that interest rate of lending falls slowly up to FY 2010. But after FY 2010 it starts to increased and more percent increment in shown in the year 2013.

Correlation Coefficient, Coefficient of Determination of HBL

The correlation coefficient of HBL between lending amount and lending rate is 0.6270. It is high degree positive correlation. It indicates that increment in one variable result the increment in other variables. In this case increase and fluctuate in lending interest rate increases the lending amount. This is similar with the slaying of theory. Similarly the coefficient of determination between two variable (r_{12}^2) = 0.3931. It means that the relationship between dependent variable and independent variable is defined up to the extent of 39.31%.

In conclusion the same relationship between lending rate and lending amount is not exactly applicable for HBL. So it is clear that the increase in lending amount is not significantly due to fluctuate in lending interest rate.

4.2.3 Everest Bank Limited (EBL)

At last, another bank for analysis is Everest 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 provided the loan to its customers on following sectors.

Table: 4.9

Lending Rate EBL on Different Sectors During Six Fiscal Years

Sector	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Overdraft	11.5	11	11	11	11	11
Export Credit	8.5	8	8	10	10	10
Import LC	10	10	10	10	10	10
Against Govt. Bond	6.5	6	6	8	8	8
Against BG/CG	8.5	8.5	8.5	8.5	8.5	8.5
Other Guarantee	NA	NA	NA	NA	NA	NA
Industrial Loan	12	11	11	11	11	11
Commercial Loan	11.5	11	11	11	11	11
Priority Sector Loan	12	NA	NA	NA	NA	NA
Deprived Sector Loan	11	10	10	10	10	10
Term Loan	12	11	11	11	11	11
Working Interest	10.5	11	11	11	11	11
Hire Purchase	12	7	10.5	10.5	10.5	10.5
Others	12	11	11	11	11	11
Average Int. Rate (1)	**10.61**	**9.625**	**9.92**	**10.25**	**10.25**	**10.25**
Lending Amount (2)	**7914.4**	**10124.2**	**14059.2**	**18814.3**	**24366.2**	**28156.4**
Correlation (r_{12})	0.1583					
Coefficient of determination (r_{12}^2)	0.0251					

Source: Banking and Financial Statistics, No: 45-53 and Interest rate structure of CBs Mid July 2013 and 010 NRB

The table 4.9 shows the lending interest rate structure of EBL on six FYs on different sectors. From table it is clear that the interest rates of EBL are in falling stage for two year 2009 and 2010 and then increased to 10.25% in 2011 and remains constant. During the first phase of FY the interest rate fell by more than 1%. But in later year the falling speed is low. This phenomenon can be seen clearly with the study of average interest rate. The average interest rate for FY 2008, 2009, 2010, 2011 and 2012 are 10.61%, 9.63%, 9.92%, 10.25%, 10.25% and 10.25% respectively. In this bank also, lending interest of non productive loan falls more than lending interest of productive sector loan. In same manner, for lending amount, the lending amount of EBL increased each year. During the last FY the lending amount rises by more than 4 times. This is very significant figures among these aforementioned sample banks. This shows that the lending amount and interest have positive relationship. The figure for changing trend of interest rate and lending amount is given on figure no 4.14 and figure no 4.11.

Figure: 4.11

Lending Amount of EBL

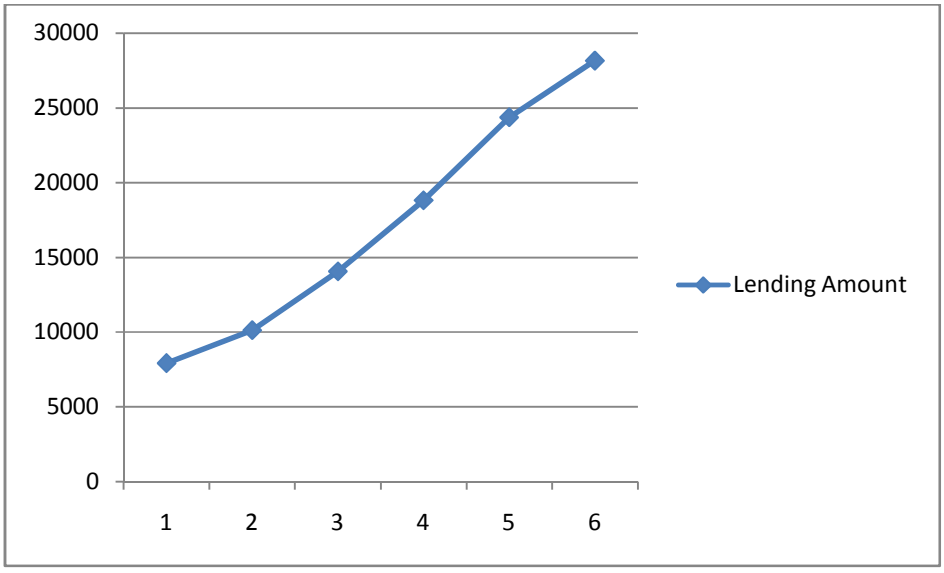
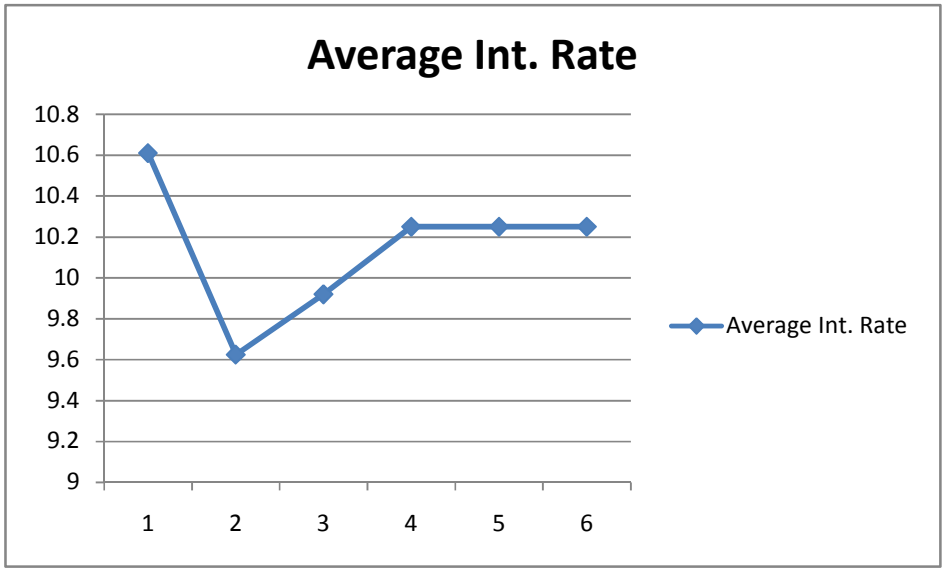


Figure: 4.12

Average Lending Rate of EBL



Correlation Coefficient, Coefficient of Determination of EBL

The correlation coefficient of EBL between lending amount and lending rate is 0.1583. It is low degree positive correlation. It indicates that increment in one variable result the little increment in other variables or vice versa. Similarly the coefficient of determination between two variable (r_{12}^2) = 0.0251. It means that the relationship between dependent variable and independent variable is defined up to the extent of 2.51%. The remaining percentage is due to other factors. This mean the increment in lending is due to the other economic variables.

4.3 Analysis of the Position of Interest Rate Spread and Loan and Advance Ratios

Interest rate spread is a different between interest rate on lending and interest rate on deposit. Generally banks charge more interest rate on lending than they provide interest on deposit. Similarly loan and advance to total deposit helps us showing the relationship between loans and advances which are granted and the total deposit collected by the bank and also find out how successfully the banks are utilizing their total deposits on loan and advance for profit generating purpose.

4.3.1 NABIL Bank Limited (NABIL)

Position of interest spread and loan and advance ratios of NABIL is given in table 4.10.

Table: 4.10

Position of Interest Rate Spread And Loan and Advance Ratios Of NABIL

Year	Interest rate on deposit (X_1)	Deposit amount in Million Rs (X_2)	Interest rate on lending (X_3)	Loan Amount in million Rs (X_4)	Interest rate spread (X_3 - X_1)	Loan & advance ratios (X_4 ÷ X_2)
2008	3.25	14586.8	10.91	11078	7.66	0.7594
2009	3.43	19348.4	10.86	13021.3	7.43	0.6730
2010	3.43	23342.4	10.50	15657.1	7.07	0.6708
2011	5.04	31915	10.33	21514.6	5.29	0.6741
2012	5.92	37348.3	11.56	27816.6	5.64	0.7448
2013	9.33	46410.7	14.75	32268.9	5.42	0.6953

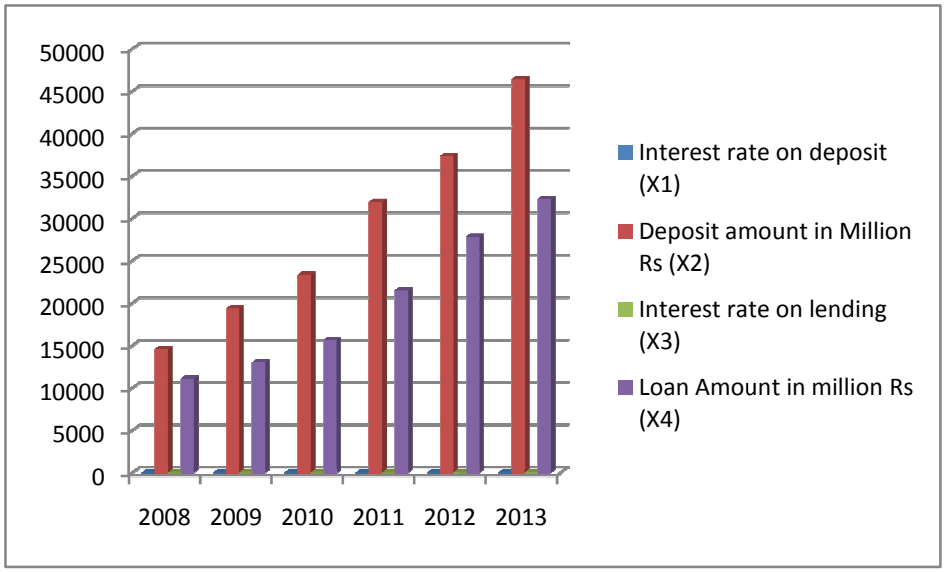
The above table 4.10 shows a clear picture of interest rate on deposits and lending, deposit amount and lending amount for six FYs of NABIL as well interest rate spread and total loan & advance ratios. The average spread rate during the period is 7.66%, 7.43, 7.07, 5.29, 5.64 and 5.42 in FYs 2008, 2009, 2010, 2011, 2012 and 2013 respectively. The interest rate spread shows how greater rate charge by NABIL for lending than deposit rate. The interest rate spread is in declining but fluctuating trend. This means the rate of interest on deposit is increasing trend.

From the calculation of loan and advance to total deposit ratios shows that NABIL was able to utilized 75.94%, 67.3%, 67.08%, 67.41%, 74.48 and 69.53% of total deposited fund on loan and advance for profit generating purpose in FYs 2008, 2009, 2010, 2011, 2012 and 2013 respectively. Generally greater loan and advance to total deposit ratio implies the more utilization of total deposit fund as loan. The more mobilization of

Deposit in the form of loan increase in profit but it is high riskier than other investment. Nabil utilized more than 67% its total deposit in this study period. The high percentage is shown in the year 2008.

Figure: 4.13

Relationship between Deposit Rate and Lending Rate of NABIL



4.3.2 Himalayan Bank Limited (HBL)

Position of interest spread and loan and advance ratios of HBL is given in table 4.14.

Table: 4.11

Position of Interest rate spread and loan and advance ratios of HBL

Year	Interest rate on deposit (X_1)	Deposit amount in Million Rs (X_2)	Interest rate on lending (X_3)	Loan Amount in million Rs (X_4)	Interest rate spread (X_3 - X_1)	Loan & advance ratios ($X_4 \div X_2$)
2008	3.9	24831.1	10.85	13245	6.95	0.5334
2009	3.9	26456.2	10.85	15515.7	6.95	0.5865
2010	2.79	29905.8	9.25	17672	6.46	0.5909
2011	3.57	31805.3	9.25	19985.2	5.68	0.6284
2012	4.78	34681	10.43	25282.1	5.65	0.7290
2013	7.25	37611.2	15.44	29123.7	8.19	0.7743

The above table 4.11 shows interest rate on deposits and lending, deposit amount and lending amount for six FYs of HBL as well interest rate spread and total loan & advance ratios. The average spread rate during the period is 6.95%, 6.95%, 6.46%, 5.68%, 5.65% and 8.19% in FYs 2008, 2009, 2010, 2011, 2012 and 2013 respectively. The interest rate spread shows how greater rate charge by HBL for lending than deposit rate. The spread is shown in the year 2013 it is 8.19%. From the calculation of loan and advance to total deposit ratios shows that HBL was able to utilized 53.34%, 58.65%, 59.1%, 62.84% 72.9% and 77.43% of total deposited fund on loan and advance for profit generating purpose in FYs 2008, 2009, 2010, 2011, 2012 and 2013 respectively. Generally greater loan and advance to total deposit ratio implies the better utilization of total deposit fund and vice versa. But from above table, HBL has able to better utilized total deposit fund. The table 4-14 can be clarified by the figure 4.21 and 4.22.

Figure: 4.14

Relationship between deposit rate and lending rate of HBL

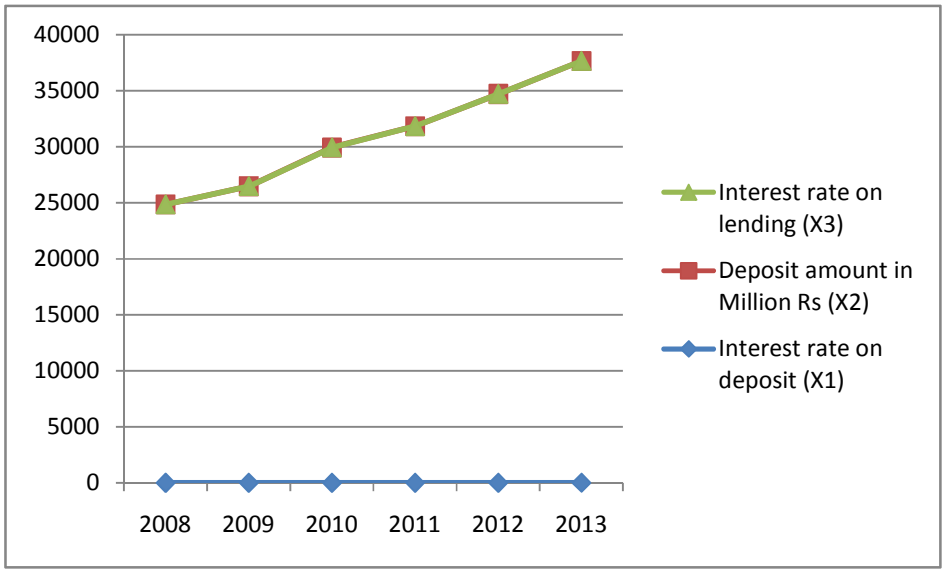
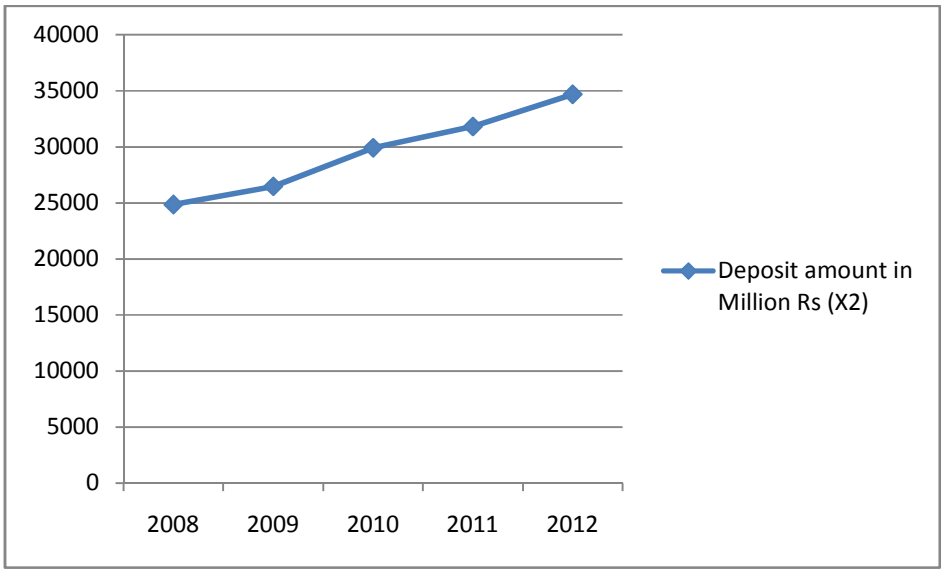


Figure: 4.15

Deposit Amount and Loan Amount of HBL



4.3.3 Everest Bank Limited (EBL)

Position of interest spread and loan and advance ratios of EBL is given in table 4.15.

Table: 4.12

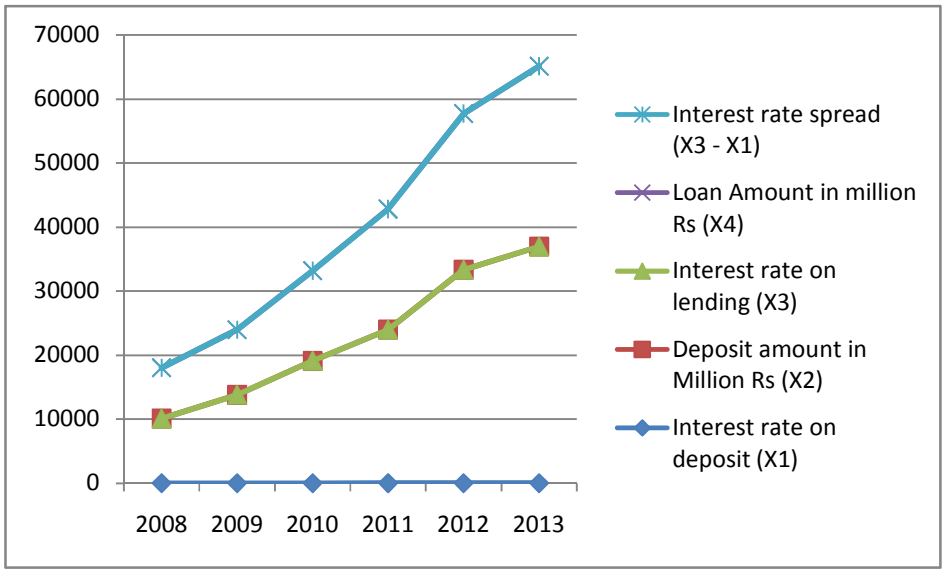
Position of Interest Rate Spread and Loan and Advance Ratios of EBL

Year	Interest rate on deposit (X_1)	Deposit amount in Million Rs (X_2)	Interest rate on lending (X_3)	Loan Amount in million Rs (X_4)	Interest rate spread ($X_3 - X_1$)	Loan & advance ratios ($X_4 \div X_1$)
2008	2.96	10097.8	10.61	7914.4	7.65	0.7838
2009	3.25	13802.5	9.63	10124.2	6.38	0.7335
2010	3.46	19097.7	9.92	14059.2	6.46	0.7362
2011	3.96	23976.3	10.25	18814.3	6.29	0.7847
2012	3.88	33322.9	10.25	24366.2	6.37	0.7312
2013	3.96	36932.3	10.25	28156.4	6.29	0.7624

The above table 4.12 shows a clear picture of interest rate on deposits and lending, deposit amount and lending amount for seven FYs of EBL as well interest rate spread and total loan & advance ratios. The average spread rate during the period is 7.65%, 6.38%, 6.46%, 6.29%, 6.37% and 6.29% in FYs 2008, 2009, 2010, 2011, 2012 and 2013 respectively. The interest rate spread shows how greater rate charge by EBL for lending than deposit rate. From the calculation of loan and advance to total deposit ratios shows that EBL was able to utilized 78.4%, 73.4%, 73.6% ,78.5% , 73.1% and 76.2% of total deposited fund on loan and advance for profit generating purpose in FYs, 2008, 2009, 2010, 2011, 2012 and 2013 respectively. The lending deposit ratio is in fluctuating trend. This ratio shows the utilization of deposit. From above table, EBL has able to better utilized total deposit fund in all FYs. The table 4-15 can be clarified by the figure 4.23 and 4.24.

Figure: 4.16

Relationship between Deposit Rate and Lending Rate Of EBL



4.4 Major Findings

This study is conducted to identify the practical applicability of some of the theories in the context of Nepal that are taught on the University and colleges. With this motive, this study is mainly focused on three objectives. First one is to determine the actual situation of substitution effect in the context of Nepalese financial markets. Similarly, next objective is to determine the relationship between lending rate and corresponding lending amount. And lastly, the next objective is to explore the managerial perspective in regards to performance of commercial banks. From the presentation and analysis of data; using different financial tools the major findings can be tabulated as follows:

Table: 4.13

Unified (Integrated) Results of All Data Analysis.

Particulars		**NABIL**	**HBL**	**EBL**
Substitution Effect (Deposit and Interest Rate)	r (Saving rate & Deposit Amount)	0.7659	0.374	0.6394
	r (Fixed rate and Deposit Amount)	0.9588	0.7124	0.8359
	t-cal (Saving rate & Deposit Amount)	2.382	0.8065	1.6633
	t-cal (Fixed rate & Deposit Amount)	6.7546	2.8936	3.0542
Lending and Interest	r (lending)	0.7493	0.6270	0.1583

- The interest rates on both deposit and lending of all sample banks are found to be in fluctuating and increasing trend. But contrary to this, deposit amount and lending amount is increasing every year. The saving deposit amount and saving interest rate have negative relationship ranging from 0.374 to 0.9588. It means that they have highly positive relationship, if one variable increases, other variable increases. This case is favoring the theory of substitution effect. This may be due to the fact that, in last six FYs, people accumulated most of their funds on saving accounts though they don't get appropriate interest on it. It may be just because of unavailability of other acceptable investment opportunity, in which a separate study can be made. Similarly, the convenience of using saving accounts provokes the investor to deposit more on saving

account. Similarly the excess supply of saving deposit reduces the interest rate of saving account. Analysis of fixed deposit amount and fixed interest rate shows positive relationship. According to correlation coefficient, the substitution effects occur for all banks in case of fixed deposit that means fixed rate decrease/increase when interest rate on fixed deposit decrease/increase. The correlation coefficient of all banks for fixed deposit amount and fixed deposit interest rate is positive, the t-statistics clarify that their relationship is strong and somehow is not strong. One of the variables that affect the demand of fund (lending activity) is lending interest rate. Theoretically, there is positive relationship between lending interest rate and lending amount. In this study for the three sample banks, it is found that all sample banks have positive correlation between these two variables. By using correlation tools, it can be inferred that all sample banks same relationship as suggest by theory. 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 six FY this spreads was large but on later years, the spread declined to some extent. That may be due to competitive financial environment and less availability of investment opportunity. It is also found that, lending interest rate of the productive sector loan such as commercial loan, industrial loan, trade credit, working interest loan were decreased lesser in magnitude in comparison to the non productive sector loan. The analysis of substitution effect for both fixed and saving deposit shows that substitution effect does work for EBL and saving deposit of HBL. This means that, people are oriented to deposit more amounts if the interest rates on deposit are rising every year. The increasing deposit amount clarifies this fact. And rest of them NABIL both fixed and saving and fixed deposit of HBL have accordance with theory. The correlation between deposit and interest and positive highly. The t statistics shows the most of the relation is significant. According to theory, lending interest rate and lending amount should have same relationship. From this study, it is found that all sample banks except HBL have strong relationship as required by theory. The increment in demand of loan able fund for NABIL, HBL and EBL do not affect by the increment in interest rate. The interest rate spread is more than 5% for all study period of NABIL and HBL. The more spread is found of the EBL. The banks use its deposit as the form of lending more than the 67%. It shows banks lend high amount of loan which is most risky area of investment. More

customers are attracted towards Nabil Bank and Everest Bank as compared to Himalayan Bank. Various new schemes are considered important tool to attract customers. Present rules and regulations are not sufficient for the growth of banks in competitive environment. Highly competent man powers are being employed in banks.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The main finding of the research is summarized in this chapter to provide an overview of the whole study. The several chapters discussed above are briefed and the main results are summed up together with recommendations for further improvement based on the current research study.

5.1 Summary

The government of Nepal with an aim of mobilizing the limited interest adopted the liberalization policy. The result of which till now 31 commercial banks, 81 development banks, 79 finance companies, 15 co-operatives (Limited Banking) and 46 financial (NGOs) licensed by NRB are established within the financial system of Nepal. It is the financial system that could lift the living standard of the people by developing the economy. Financial intermediaries mobilize the fund by collecting the scattered resources from the savers (household, business or government) and provide the collected funds to the users or investors (i.e. lending collected amount from depositors to borrower). A developing country like ours has many unused resources which could be of huge potential for the economic growth of the country. Lack of financing, technical disabilities is some reasons due to which the country is lagging behind. The intermediaries of financial systems sustain by lending the fund on higher interest rate and paying the deposit holder a little interest. This indicates; through a large interest spread on deposit and lending these organizations survive. The profit position of the organization depends on the decision made to charge and provide interest on lending and deposit. So the decision making job is very crucial and has to taken with great care. One very effective way of luring the depositors by offering higher interest and in the same way, high credit distract the investors which force the country to shrink down.

This flexibility of NRB gave freedom to banks and other financial institutions to quote the interest rate on lending and deposit in past few years. As a result of this competition rises between the financial institutions which play important role in country's economy. This study has been carried out thus to identify whether some of the theories of finance and economics are applicable or not in the Nepalese financial markets. These major theories are like substitution effect, fisher effect and inverse relationship between interest rate and lending amount. The first chapter of provides brief introduction about Nepalese economy, interest rate, sample organizations, statement of problem, significance of the study, research hypothesis, and so on. Interest rate is one of the major factors that affect deposit and lending amount, though there are various factors in the economy that affects the deposit amount and lending amount. With the major objective of showing relationship between deposit rate and deposit amount i.e. substitution effect, lending rate and lending amount, this study is undertaken.NRB loosen the rigidness to fix the interest rate that financial intermediaries charge and offer, after the liberal policy by the government. But being a responsible organization, NRB issued directives regarding overall performance of the financial institutions from time to time.The second chapter presents the theoretical review as well as review of previous researches, different views about interest function of interest, theories of interest, factors affecting interest rate. The Classical Theory, Liquidity Preference Theory, Loanable Fund Theory and Rational Expectancies Theory - are reviewed as part of interest theories along with the factor affecting interest rate like default risk, marketability risk, exchange rate risk .The third chapter is research oriented for the analytical purpose. Three banks are chosen and primary and secondary data are used for the analysis. The chapter provides an explanation of various research methods as well as statistical and financial tools used in study. The collection of data both in tabular and graphical from analyzed using different statistical tools are organized in chapter four. Data are analyzed and presented in various graphical forms. The major findings of the study are also explained in chapter four.

5.2 Conclusion

The study conducted with objectives to identify the relationship of interest rate with deposit and lending is based on the application of secondary data. The analysis shows that the interest rates on both deposit and lending of all sample banks are found to be in fluctuating and increasing trend. The deposit amount and lending amount is increasing every year. By using correlation tools, it can be inferred that all sample banks same relationship as suggest by theory.. The rate of interest is in increasing trend except in the year 2010 and 2011. The lending amount is also increasing though the lending rate is rising. This mean the demand of the fund is increasing every year. The significant increment in the deposit rate may cause from the increase in the competition in the banking industry. 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 six FY this spreads was large but on later years, the spread declined to some extent. That may be due to competitive financial environment and less availability of investment opportunity. It is also concluded that, lending interest rate of the productive sector loan such as commercial loan, industrial loan, trade credit, working interest loan were decreased lesser in magnitude in comparison to the non productive sector loan. For all analysis the amount of the both deposits and lending amount is increased. With an objective to explore perception of management in the financial performance of commercial banks, primary survey was conducted. The survey shows that commercials banks are making their great effort in improving their performance level. Competition has increased and that too have forced banks to change their policy in accordance with their competitors to attract more customers. Various attractive schemes are being introduced in order to attract more customers as well competent man powers are given more priority in job place. During a study it was found that managers are quite motivated to increase the profitability level of their institutions.

5.3 Recommendations

To fulfill the objectives of this study, related data and ideas are collected from different sources. These data are presented; analyzed and interpreted then conclusions are made. Based on the analysis, interpretation & conclusions, certain recommendation can be made here so that the concerned authorities, future researchers, academicians, bankers can get some insights on the present conditions on 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:

- The high spread between deposit interest rate and lending interest rate is another factor to be considered. Higher spread merely increases the profit figures of the banks but at the same time it reduces the deposit collection and investment in the country. So the financial institutions are suggested to reduce the interest spread as minimum as possible. Liquidity crises occurred due to low interest rate on deposit as well as high interest rate on lending. As the central bank of the country, NRB has power to specify the range or spread between lending rate and deposit rate. So NRB takes increasing interest rate on deposit policy. So NRB is suggested to strictly apply this policy to financial institutions and regularly monitoring so that the problem of higher gap between two interest rates in the country will be solved. As the key to success for any organization and for good financial system in the country interest and investment is essential, this is possible only by proper decision making of interest. So all the joint venture banks are suffused to set proper and practical interest rate policy. While reducing the lending rate, it is suggested to reduce more on productive sectors than nonproductive sectors. If not possible then bankers can reduce the rate of all sectors proportionately. Manuals of credit policy assets and liability management of international standard had needed to put in operation while the loan realization and restructuring after review of banks credit portfolio is currently underway. To introduce lending management, various departments and units had needed to set up. Such efforts are underway for loan restructuring and realizing outstanding loans from big clients through continued follow-up. Additional measures also needed to initiate

for realize loans. New credit policy guide, guideline for credit decision process and problem loan guidelines should be formed. As NRB's publications are the major sources of collecting the secondary data and information regarding this topic from the experience, it is suggested that NRB should pay special attention to publish detail information on timely manner. The untimely publication of the bulletins handicaps the research workers and students Increase in investment only secured and government enterprises it may brings less return and possibility of ignorance to small private and cottage industries. To foster economic growth small enterprise should not be neglected. All banks efforts need to improve the credit flow through introduction of new consumer loans to lift the credit extensions. Interest rate on deposit is too low in Nepal. Joint Venture Banks are suggested to increase the interest rate on deposit as far as possible so that the depositors are attracted which helps to generate more interest for the development of the economy. Though this situation reduces their profit opportunities, but it will enhance the economic condition of the country in the long run. Sample institutions are also suggested to include their interest rate structure in their annual report as well as kindly requested for the co-operation and sincere support to the research students. Banks are suggested to introduce various schemes through a detail analysis of facilities being provided by foreign banks. Banks are found to be accumulated more in urban areas. It would be more beneficial if they start providing their service to the areas having less excess to banking facilities.

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