CHAPTER – ONE

1. INTRODUCTION

1.1.   Background of Study

Interest rate is one of the important tools for shaping economy. It plays the dominant role in borrowing & lending. Simply, interest rate is defined as price that a borrower must pay to secure scarce loanable funds from lender for an agreed, upon period. It is the price of credit. But unlike other prices in the economy, the rate of interest is really a ratio of two quantities: The money cost of borrowing divided by the amount of money actually borrowed, usually expressed on an annual percentage basis. The cost of borrowing money, measured in rupee per year per rupee borrowed, is the interest rate. When we examine how money affects economic activity, we will focus on the interest rate, which is often called "The price of Money". Interest is rent paid for the use of money. In other words, people must pay for opportunity to borrow money. Financial institutions, as financial intermediaries collects money from savers in the form of deposit & provides that for business sector in the form of loan. These institutions pay the interest to the depositors for the money borrowed from them & charge interest from the borrowed for money lended to them. As any price is determine, theoretically, by the interplay of demand & supply in a market economy. The price of money, the interest rate plays a vital role in allocation of resources in the decision making of consumer & business. For example, an increase in the interest rate provide additional incentives to individual & other to postpone current consumption and thereby free resources for investment. Interest rate send price signals to borrowers, lenders and savers. Higher interest rate generally bring forth a great volume of saving and stimulate the lending of fund i.e. substitution effect. Lower rate of interest on the other hand tend to reduce the volume of borrowing and capital investment, and lower rate stimulate borrowing and investment spending. 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 on both the saving and investment in the economy. Further the borrowing and saving are always influenced by the interest rates. The cost of production which depends upon the production function is influence by the interest rate, since the credit is also one of the components of production process. The saving in investment in the economy, which are influenced by the interest rates are the real economic variables. The income and expenditures of the variable sector of the economy result in excess saving or excess investment in each of the sectors.

Whenever we talk about interest rate, we also have to remember another important factor, which have direct relation with interest rate; that is inflation. These two things are two side of same coin. Theoretically market interest rate is determined only after adding inflation premium:

Nominal interest rate = real interest rate + inflation premium.

Inflation can be defined as the increase in general price level. In other words it is a rise in the average level of price for all goods and services. It is known that inflation and interest have some positive correlation but there is considerable debate as to exactly how and by how much inflation affects interest rate. On this regard economist Irving Fisher as well as sir Harrod Keynes propound their own theories.

1.1.1. Commercial bank

Every commercial bank are performing its all kind of banking transactions by accepting deposits, advancing loans, credit creation and agency function. They provide short-term loan, medium term loan and long-term loan for trade and industrial promotion. They are also operating off balance sheet function such as issuing guarantee, bonds letter of credit etc.

As per commercial bank Act 2031 B.S., "A commercial bank means the bank which deals in exchanging accepting deposit, giving loans and doing commercial transaction".

Keeping above act in mind, we can say that commercial banks play an important on growth of Nepalese economy. Nepal Bank Ltd. is the first commercial bank of Nepal, which was established in 1937 A.D. in private sector participation. The government owned Nepal Banijya Bank is also established in 1966 A.D. and this bank is spread over most of the rural and urban areas of Nepal.

In 1980's, government introduced financial sector reforms, which facilitated the establishment of joint venture banks. Government of Nepal has initiated the establishment of joint venture banks, especially foreign banks were implemented to bring the modern technological management as well as foreign capital in banking industry. The first joint venture banks are Nepal Arab Bank Ltd. and other famous banks are Standard Chartered Bank, Himalayan Bank and Everest Bank, NB Bank etc.

The main function of the commercial banks is accepting the deposit and lending it in the productive industries and service. They are implementing loan and service to draw the interest of the consumer. The function of commercial banks is to collect funds for lending loan, open letter of credit, bank guarantee, payment of bills, collects the remittance to generate the interest and commission.

1.1.2. Brief introduction of sample banks

The function of commercial banks are given below (**Bhandari, 2004 p 79**)

1. **To accept the deposit**
   - **Current a/c---**   No interest rate provided
   - **Saving a/c---**   Interest rate fluctuations
   - **Fixed a/c---**   Fixed interest rate

2. To provide the loans

- The loan provides to party and people for short-term and long-term. It provides the loan by accepting the security of debtors.

3. Agency function

As per commercial banks, act as an agency.

- Banks make the payment of customer cheque, draft and bill of exchange presented by the customer.
- A bank on the request of its customer, transfers. Money from one place to another place by change transfer.
- Buying & selling a share and Government security.

4. General utility function

- Foreign currency transaction & Exchange.
- Issuing the Traveling cheque
- Loans provided.
- Economic & professional advices.
- Collect information from his customer.

5. Overseas trading services

- Help to export and import in factory organization.

6. Information and other services

- Regular bulletin, Special reports published within is very useful to customers.

(a) Everest Bank Limited (EBL)

Formally came into operation from 18th Oct. 1994, Everest Bank limited has been established with the objective of extending professionalism in banking services. Its joint venture partner is Punjab National Bank (PNB), India maintains 3700 branches in India and 200 foreign correspondents around the world. Pnb has century old tradition of successful banking and known for its financial strength and well laid down banking system. PNB is one of the largest commercial bank in India. Professionals from PNB currently manage the bank

under Technical Services Agreement signed between the two institutions. EBL, thus , has the advantage of the banking expertise since the joining of PNB as a partner in the bank. Looking into the shareholding participation, PNB holds 20% share, Nepalese promoter 50 % and the residential are allocated to general public. The bank is operating in most of the town of Nepal with 19 branches.

(b)   Nepal Arab Bank Limited (NABIL)

NABIL bank Limited (NABIL) commenced operation on 12 July 1984 as the first joint venture bank in Nepal. Dubai Bank Limited, Dubai (later acquired by Emirates Bank International Limited, Dubai) was the first joint venture partner of NABIL. Currently, NB International Ltd. Ireland is the foreign partner. NABIL Bank Ltd. had the official name Nepal Arab Bank Ltd. till 31 December 2001. NABIL is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with 15 branches and 2 countries in all major cities. It is the only bank having it's presence at Tribhuvan International Airport, only international airport of the country. Also, the number of outlets in the country is the highest among the joint venture and private banks operating in Nepal. Success of NABIL is a milestone in the banking history of Nepal and it paved the way for the banking establishment of many commercial banks and financial institutions.

NABIL provides a full range of commercial banking service through its outlets spread across the nation and reputed correspondent banks across the globe. Moreover, NABIL has a good name in the market for its highly personalized service to the customers.

The share subscription of NABIL is divided in 5 parts, NB international Ltd, Ireland has taken 50 % , NIDC has taken 10 % Nepalese general public has taken 30 % and the remaining 0.33% of share is taken by NEPSE. The bank was awarded as the title of "The Bank of the year 2004". The bank is operating in most of the town of Nepal with 17 branches.

(c)   Kumari Bank Ltd. (KBL)

Kumari Bank Ltd. was established in April 03, 2001 as a part of the policy of Nepal Rastra Bank's liberalization of the Nepalese Banking Industry. It has been established with an objective of providing a complete banking solution to customers backed by its state of the art infrastructure. Apart from its regular business loans, KBL is querying itself up to offer a wide range of consumer Banking product and like ; vehicle loan , education loan and home loans etc. At present it has 7 branches including main branched (head office) in Nepal. It was established fully investment made by Nepalese investors and its 100 % equity is held by Nepali promoters and public.

(d)   Nepal Investment Bank Limited (NIBL)

 Nepal investment Bank Limited (NIBL) ,previous , Nepal Indosuez Bank Ltd. was established as a third joint venture bank between Nepalese and French partners in 21st January 1986 under the company Act 1964. The French partner (hold capital of NIBL) was credit Agricole Indosuez a subsidiary of one of the largest banking world, 50 % of the share of Nepal Indosuez Bank Ltd. held by the credit Agricole. Indosuez was sold to the Nepalese promoters on April 25 2002 as per the transaction report of NEPSE. After, the divestment of share by Nepalese owners, the name of the comparing was changed to Nepal Investment Bank Limited. The bank is operating in most of the town of Nepal with 13 branches.

(e)   Laxmi Bank Limited (LBL)

Laxmi Bank Limited was incorporated in April 2002 as a commercial bank. The current shareholding constitutes of promoters holding 55.42 percent, Citizen Investment Trust holding 9.02 percent and the general public holding

35.56 percent. Promoters represent Nepal's leading business families with diversified business interests. The Bank's shares are listed and actively traded in the Nepalese Stock Exchange.

Laxmi Bank Limited has grown with branches in Birgunj, Banepa, two in Pokhara, Biratnagar, Narayanghat, Pulchowk, Lalitpur, Teku, New Road and more recently in Janakpur. Three more branches will soon be operated from New Baneshwor and Bhatbhatini in Kahmandu and from Damak on outside the Valley. Following the merger with Himself Finance Ltd. a decade old first generation finance company, its office in Hattisar, Kathmandu was converted to that of Laxmi Bank .This office was converted to a full branch and our corporate office in October 2005.

With a view to providing safe, seamless, quick and advance banking services the bank has been heavily investing in contemporary banking technologies. The Bank uses Flex cube as its main banking platform. Flex cube incidentally has been ranked the number one selling core banking solution globally, and has been embraced by over 500 financial institutions across over 90 countries. The Bank provides its services through a host of delivery channels including cell phone, Internet, ATM, Point of sales(PoS) etc. in addition to a network of physical branches .Internet banking facility comes with capabilities of online shopping in addition to regular Internet banking features. Similarly, through the bank's alliance with Smart Choice Technologies (SCT), the ATM/Debit cardholder of Laxmi Bank has access to a network of ATMs and PoS terminals located in all major urban centres of the country. The bank is the first in South Asia to have implemented SWIFT Net, the advanced version of the SWIFT technology which is used for speedy and secure payment and messaging services.

Under a professional management team, the bank has established itself as an emerging key player. Today the bank is recognized as an innovative and progressive geared to providing shareholders and customers with quality

earnings and value-added services. Transparency, good governance, and sound business growth are driving forces.

Table No. 1.1
List of grade "A" commercial banks in Nepal

Currently, there are 32 Grade "A" Commercial Banks operating in Nepal. They are

1. Nepal Bank Ltd.
2. Rastriya Banijiya Bank
3. Nabil Bank Ltd.
4. Nepal Investment Bank Ltd.
5. Standard Chartered Bank
6. Himalayan Bank Ltd.
7. Nepal SBI Bank Ltd.
8. Nepal Bangladesh Bank Ltd.
9. Everest Bank Ltd.
10. Bank of Kathmandu Ltd.
11. NCC Bank Ltd.
12. Lumbini Bank Ltd.
13. NIC Bank Ltd.
14. Machhapuchhre Bank Ltd.
15. Kumari Bank Ltd.
16. Laxmi Bank Ltd.
17. Siddhartha Bank Ltd.
18. Agriculture Development Bank Ltd.
19. Global Bank Ltd.
20. Citizens Bank International
21. Prime Commercial Bank Ltd.
22. Bank of Asia Nepal Ltd.
23. Sunrise Bank Ltd.
24. Development Credit Bank
25. NMB Bank Ltd.
26. Kist Bank Ltd.
27. Janata Bank Nepal Ltd.
28. Mega Bank Nepal Ltd.
29. Commerz and Trust Bank Nepal Ltd.
30. Civil Bank Ltd.
31. Century Commercial Bank Limited
32. Sanima Bank Limited

Source: Statement of NRB

1.1.3. Finance companies in financial system of Nepal

Finance companies in Nepal are licensed under the finance company act 1985 but recently they are incorporated under Company act, 2053 and the largest group of deposit taking financial institution after commercial banks and development banks. These commercial banks are the creation of early 1990's. Finance companies are established as public limited mainly for providing loans to procedure motor vehicles and other consumer durables on hire purchase terms, land acquisition and building construction and leasing plant and machinery. Finance companies lending operation have tended to complement the operation of commercial banks mainly on urban areas. These companies are not allowed to accept demand and saving deposit from public and have thus concentrated in mobilizing funds through fixed deposits. Thus finance companies are the institutions to perform non banking activities arrangement and operation of different schemes whereby they collect the fund under different arrangement they have made and disburse the funds to demanders of funds and meet their objectives.

Economic liberalization policy of the government has encouraged the establishment and growth of finance companies in the country. In 8th plan (1992-97), it has been clearly stated that "the vacuum in the present national financial system needs to be filled by institutionally developed capital market institutions like investment companies, finance companies, leasing and housing, finance in order to create healthy, competitive financial sector". In 10th plan (2002-07) it has been described that "encouragement will be made to establish finance companies in development regions where there are not yet established. At the same time the scope of service delivery will be expanded, where possible". In a situation when the existing financial institution, especially commercial banks to meet consumer need for credit, it is time to encourage the growth and operation of finance companies to meet individual credit needs,

undertake fee / based merchant banking function and to gradually curtail the upahar and dhukuti programs which were run unofficial.

In purpose to government's economic liberalization policy, NRB took some policy majors for the healthy and completive development of commercial banks and finance companies dissuade hem from contracting in Kathmandu. The approval and permission of NRB to encourage the establishment and growth to finance companies started in Nepal after the first amendment in finance company act, 1985(2042). Within the period of four years 1991 / 95 as per available data, there had been 56 finance companies of various capital sizes registered in Nepal Government company registered office.

But in the year 1994, the wave of establishing finance companies reached to the maximum number. Altogether 32 finance companies were registered as per official record in company register. Moreover, four additional finance companies were registered in 1995.

Out of the 56 finance companies, 23 finance companies were started operation in 1995. This finance company has authorized capital finance companies reached to 45 in mid January 1999. In the mid January 1999, the total resources of the finance companies amounted to Rs 9582 million. By the mid march 2003 the number of finance company licensed under the finance companies act 2042 BS totaled 55. The No. of finance companies reached 59 in mid April 2004 and they are already in operations.

In view of the growing numbers of finance companies registered and applying for license with NRB, a high level technical committee has been constituted for more serious and detailed study and analysis of feasibility report submitted by finance company under the management and leadership of NRB's deputy competitive environment in financial sector. Based on the recommendation of a high level committee, policy framework and guidelines will be published to

help and direct the establishment and regulations of finance companies in the country.

The recommendation of this committee will also help to determine basic eligibility criteria to apply why issuing licensed to new finance companies and also in monitoring to those already established and had started operation. There is tremendous growth in the number of financial institutions in Nepal in the last two decades at the beginning of 1080's. It is where financial sector was not licensed there where only two commercial banks and two per basis performing banking activities in Nepal and there were no micro credit development, finance companies cooperatives and NGO's. Financial market has made hallmark progress in terms of financial institution. By mid July 2005 NRB, license bank and non bank financial institution totaled 170 out of them 60 finance companies. It can be concluded that finance companies covers the large portions of the financial markets that collects the idle saving from the nook and corner of the country and make use of that in productive sector for the benefit of themselves and the welfare of the nation as a whole.

1.1.4. Interest rate

Interest rate is one of the important tools for shaping economy. It plays the dominant role in borrowing and lending, simply, interest rate is defined as price a borrower must pay to secure source loanable fund from lender for an agreed, upon period. It is the price of credit. But unlike other prices in the economy, the rate of interest is really a ratio or to quantities: the money cost of borrowing divided by the amount of money actually borrowed, usually expressed on and annual percentage basis. The cost of borrowing money, measured in Rupee per year borrowed is the interest rate (Samuelson and Nordhus, 2003, p. 469) when we examined how money affects economy activity, we will focus on the interest rate, which is often called 'The Price of Money'. Interest is rent paid for the use of money. In other words people must pay for the opportunity to borrow money. Financial institution, as financial intermediaries, collects funds

from savers in the form of deposit and provided that for business sector in the form of loan. This institution pay the interest to the depositors for the money borrowed from and charge interest from the borrower for money lend to them. As any price is determine, theoretically, by the interplay of demand and supply in a market economy. The price of money, the interest rate plays a vital role in the allocation of resources and in the decision making of consumers and business. For example, and increases in the interest rate provides additional incentive to individual and other to postpone current consumption (save) and there by free resources for investment. Interest rates send price signals to borrowers, lenders and savers. Higher interest rate generally bring forth a great volume of saving and stimulate the lending of found i.e. substitution effect. Lower rate of interest, on the other hand, tent to reduced the volume of borrowing and capital investment and lower rate stimulate borrowing and investment spending (Rose, Peter S. 1997 6th edition). Investment is the function of interest rate, the impact of interest rate is on both the saving and investment in the economy. Further the borrowing and saving are always influenced by the interest rates. The cost of production, which depends upon the function, is influenced by the interest rate. Since the credit is also one of the component of production process. The income and expenditures of the variable sectors of the economy result in excess saving or excess investment in the is of the sectors (Shake Spear '1990', p 17).

1.2. Brief history of interest rate in Nepal

While observing the historical background of the interest rate structure of Nepal frequent change can be noticed. In the beginning, the interest rate charged and offered by banks and financial institution was mentioned at a lower level, which view to stimulate real income and employment. However dramatic change had been made time to time. A study of the annual report of Nepal Rastra bank (NRB) avails the changes made, the objective behind such changed and their justification.

On April 13, 1965 the interest of deposits was increased by one percentage point which prevailed to august 30, 1996. Similarly, other two categories of fixed deposits 3 to 5 years and above five years were created and interest rates on those two types of deposits were 5 percent and 6 percent respectively. On august 31, 1996 the interest rate on all types of deposits was increased approximately by one percentage point. The interest structure was again raised on April 14, 1947 the rate of interest of saving the deposits was raised to 5 percentage (increased by 0.5 percentage point) but the rate of interest on 3 month and 6 month deposits was reduce however, the rate of fixed deposits having the maturities of more than one year was raised varyingly by 1 to 1.75 percentage points. Another change in interest rate in structure was introduced on July 16, 1974. The interest rate in saving deposits was fixed at 6.5 percentage: that on fixed deposits of three or six month maturities were kept constant and interest rate on all categories of fixed deposits were also revised respectively. The lending rates were lowered in some cases. However, the loans for unproductive purpose were costlier by two percentage points. Giving different justification, NRB issued directives to the bank which was a drastic change. The interest 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 rate on one-year deposits was increased from 9.5% to 16% and all two year and above fixed deposits was increased from 9.75% to 16%. Prior to the revision there, were nine different categories of landing caring the interest between 8 to 15 %? However, the revision categorized the loan only in two categories 15% interest rate was applicable to the entire loan to small sectors, agriculture sector, industry, export credit and credit against development bonds where as 18% minimum rate was fixed for other purpose. The interest rate on the loan against fixed deposits receipts was fixed 2% high than on fixed deposits. On February 12, 1997, NRB revised interest rate again. The rate offered on saving 3 month fixed deposits was lowered to 9 % (by one percent point). However, the interest rate on one year fixed deposits was also declined by 2 % point to 12 % and that on two

years and fixed deposits was also lowered by 2% point. Next amendment in interest was made on 15 June, 1982, and the interest rates on all types' old deposits were increased by 0.5% point. And the lending rates on all types of all type of loans were raised by 1% point. NRB authorized the commercial bank and other financial institution to charge an add national 2.55 interest above the specific rate on all over due loan and minimum of 17% interest on mis-utilized loan to agriculture. Industry and service sectors a provision of 1 % rebate for timely repayment was also made NRb further revised the interested on august 17,1982, whichwas a slight change on lending rate only, giving the right in offering the interest rate on saving and time deposit to the extent of 1.5 5 to 1 % rspectively above prevailing rate .NRB issued direction to the commercial bank. On May 29,1886, commercial bank and financial institution were given the freedom in fixing the interest on deposits and loans. However, the hghlight interest rate was fixed for saving deposit. The rate on fixed deposits of less than one – year's maturity needed to be at least not less than the rate on saving deposits. Minimum of 12 % interst was fixed on one year deposits. The interest institutions were given freedom to fix lendingrate subject to a minimumof 15 % for the priority sector.

On August 31,1989, commercial banks and financial institution were granted complete freedom in determining their own deposits and lending rates. However on august 22, 1992, NRB issued some directive to the banks and financial institutions to clearly spell out the interest on deposits of at least up to one year , not create te range of percentage in interest rates on credits of some types and purpose and to stop fixing the interest rate of flat basic . In addition to this, NRB also instructed the bank and financial institution to limit their interest rate on deposits and credits at 6 % within the mid- December 1993. Then after NRB has not regulated interestrate and term and condition of lending and keeping account. A last instruction to the bank snd financial instruction was issued in 2002. Currently interest rate spread required to be a maintained by bank and financial institutions has also been removed.

As a previously stated, the interest rate structure in the beginning was purely central bank's matter of concern. However, considering the needs of the country, NRB took a flexible approach in making some adjustments in interest rates by putting control on it. However, the impact of economics liberization in developing countries because of financial globalization began to influence Nepal. Thus ultimately brought be regulation in interest rate by leaving the interest rate to be determined by market forces.

1.3. Statement of the problem

Interest has direct relation with economic growth and development. According to economic theory (other thing remain constant), low interest rate is imputes for high investment. And this high investment leads to high production, high employment, more income and ultimately growth in economy.

In various books of economics and financial institution, interest occupies a crucial part. While studying of the evolution on interest rate, many theories has been introduced as a time spent and changes have taken place in market structure and different factors were considered as crucial in different time. Is developing country Nepalese market has not reached its maturity but commercial bank is determine their interest rate themselves. Thus, it is important to know whether the interest rate is determined by market forces or by managerial discretion. Some of the previous researchers in their thesis had studied in the limited areas such as interest rate structure, impact on interest on portfolio of policies etc. These studies are also very old i.e. of 1980s. This type of study has not been found in current scenario. So by this study is going to explore: 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 than 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 material 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 would increase the employment standard of leaving and status of country economy.

Bankers and others financial institution use various methods of interest calculation. Correspondingly, true effecting rate also differs. Therefore this researcher has influenced to analyse that what factors affects interest rate and what are the method used in interest calculation. More specifically this study is an attempt to answer the following questions:

   (i)   What are the factors that affect the interest rate?

   (ii) Is the interest rate charged by commercial banks affected by inflation?

   (iii) Is there any relationship between liquidity position and interest rate on deposit and lending?

1.4. Objectives of the study

The major objective of the study, to identify the influencing factors of interest rate charged and offered by Nepalese Commercial Bank through examination of the relationship between influencing factors and interest rate is the main aim this study is:

   (i)   To analyse the factors effecting interest rate.

   (ii) To examine the effect of inflation on interest rate charged by various Nepalese Commercial Bank.

   (iii) To evaluate the relationship between the liquidity position and interest rate on deposit and lending.

1.5. Significance of the study

Development of banking systems is a vital issue for the growth of economy. The economic development of any country depends upon the effective mobilization of the accumulated and mobilization of funds collecting and lending strategy is affected by interest rate. Interest rate is the main factor of the commercial bank. It is also important for depositors and lenders.

Nepal is suffering a high inflation rate and it is important factor in economy so interest rate influence the Nepalese Commercial Bank other factor that influence the interest rate are, default risk, political crisis, uncertainty, demand and supply etc. These various factor are responsible in influence and determinants of interest rate. The subject is important in national and international financial market person, parties, business holders, depositors, etc. It is a one key of business sector. It is also important to measure on running position of economy.

So, more knowledge can be achieved about the true picture in Nepalese market, this study is also considered to be useful to various parties such as further researchers, students, teachers, financial institutions, general individual etc. So many reason and objectives it is significant to study.

1.6. Limitation of the study

As a master degree thesis this study certainly has limitation, this study is limited by followings:

    (i)   Reliability of study depends upon the reliability of published data and the fairness of the opinion given by respondents.

(ii)   Only few organizations are selected in the bracket of studies and the samples have been drawn at random for convenience. So there may exit some sampling error.

(iii) This study covers only 5 fiscal years.

(iv)   The main objectives of this study is to fulfill partial requirement of master degree. Stipulated time and resources are also limitation of this study.

(v)   Only determining factors of interest rates are considered impact of interest rate on other aspects has not been studied.

1.7. Organisation of the study

The research has been confined in Five chapters. In the first chapter, Introduction of the study is conducted. The second chapter contains the literature accompanied with other credit principles, policies, practices and other supportive saying are elaborated so that the research could extract the exact theme of the topic. The third chapter is research methodology. This chapter expresses the way and techniques of the study that applied in the research process.

The fourth chapter is data presentation and analysis. In this chapter, the collected information and other statistical and financial tools are analysed. At the end of the chapter summary of whole research, finding & suggestion is made. Beside the, Bibliography and Appendix are also enclosed.

CHAPTER-TWO

2. REVIEW OF LITERATURE

2.1. Conceptual framework

The next step is to develop concepts and ideas about the selected topics by reviewing all the relevant materials regarding the study. In fact, it begins with the search for suitable topics and continues throughout the duration of the research work. It deals with a literature survey of the existing volume of similar related subjects. Review of literature means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted (Joshi, 1988).

A literature review is a 'critical analysis of a segment of a published body of knowledge through summary, research studies, reviews of literature and theoretical articles. (University of Wisconsin writing center).

Review of literature is an essential part of all the studies. It is way to discover what other research in the area of our problem has uncovered. It is also a way to avoid investigating problems what have already been definitely answered. The review of literature accomplishes the following functions:

- ❖ It establishes a point of departure for future research.
- ❖ It avoids needless duplication of costly research effort.
- ❖ It reveals area of needed research.

The literature survey provides the students with the knowledge of the status of their field or research. The primary purpose of the literature is to learn, not to accumulate. It enables the researcher to know.

- ❖ What research has been done in the subject?
- ❖ What others have written about the subject?
- ❖ What theories have been advanced?
- ❖ The approach taken by other researchers.
- ❖ Areas of agreement or disagreement.
- ❖ Whether there are gaps what you fill through the proposed research? (Wolf & Pant)

The purpose of literature review is thus; to find out what research studies have been conducted in one chosen field of study and what remains to be done.

2.1.1. Concept of banking

Bank is a financial institution which deals in money. It facilitates growth of trade and industry of the national economy. However Bank is a resource for economic Development, which maintains the self-confident of various segments of society and extends credit to people. In a common sense and institution involve in monetary transaction is called Bank.

Banks are in general recognizing as traders in money, which take deposits, provide loans and other banking related services. According to Random House Dictionary, "An institution for receiving, lending, exchanging and safeguarding money and in some case issuing notes and transacting other financial business."

According to Sayers, " Ordinary banking business consist of changing cash for bank deposits and bank deposits for cash, transferring bank deposits from one person or corporation to another, giving bank deposits in exchange for bills of exchange, government bond, the secured or unsecured promises of businessman to repay etc."

In the modern economy, banks are to be considered not as dealers in money but as the leaders of development which studies the management of money and other assets. Therefore, a bank is an institution that deals with money by accepting various types of deposits, disbursing loan and rendering other financial services. Bank came in existence mainly with the objectives of collecting the idle funds, mobilizing them into productive sectors and causing an overall economic development. That mobilized deposits contribute to the development of economic infrastructure of the nation. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving.

Therefore, banks are those financial institution that offer the widest range of financial services specially credit, saving and payments services and perform the widest range of financial functions of any business firm in the economy.

2.1.2. Concept of commercial bank

Commercial banks are the major component in the financial system. They work as the intermediary between depositors and lenders and facilitate in overall development of the economy, with major thrust in industrial development. So, commercial banks are those that accept deposits and finance to the business and finance to the business and project. They provide short term and long- term finance. As per Commercial Bank Act 2031 B.S, *"A commercial Bank means the bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions."*Commercial banks help the process of saving and of the holding of saving in a socially describe form. Though their advances bank also help the creation of the incomes which further saving by the community and further growth potentials emerge for the good of economy. All employment income distribution and other objectives of plan are as far as possible subsumed into production plan which banks finance. The importance of commercial banks is directing the economic activities in the system is indeed

overwhelming with the establishment of commercial banks the flood gates of development promising great hopes for people in the life open.

An institution which accepts deposits, makes business loans, and offers related services. Commercial banks also allow for a variety of deposit accounts, such as checking, savings, and time deposit. These institutions are run to make a profit and owned by a group of individuals, yet some may be members of the Federal Reserve System. While commercial banks offer services to individuals, they are primarily concerned with receiving deposits and lending to businesses.

Commercial banks are the important type of financial institution for the nation in terms of aggregate assets. The business of banking is very broad in modern business age. The number and variety of services provided by commercial bank will probably expand.

In banking includes introduction of credit cards accounting services for business firm, factoring, leasing participation in the euro dollar market and lock -box banking. The major functions of commercial banks are as follows;

1. Creating Money
2. Payment Mechanism
3. Pooling of nation is saving
4. Extension of credit
5. Facilities for the financing of Foreign Trade
6. Trust services
7. Safekeeping of Valuables

2.1.3. Meaning of interest rate

The rate of interest is the price a borrower must pay to secure scarce loanable funds from a lender for an agreed-upon time period. It is the price of credit. The rate of interest is the ratio of two quantities: the money cost of borrowing

divided by the amount of money actually borrowed, usually expressed on an annual percentage basis. Interest rate send price signals to borrowers, lenders, savers and investors. For example, higher interest rates generally bring forth a greater volume of saving and stimulate the lending of funds. Lower rate of interest, on the other hand tend to dampen the flow of saving and reduce the volume of borrowing and capital investment, and lower interest rates stimulate borrowing and investment spending.

The neo-classical economists, however, define it as a price for the user loanable funds but the modern economist in their effort to avoid these divergent and controversial views about the nature of interest, have explained it in terms of productivity, saving, liquidity preference and money. In other words, interest is simultaneously the pure yield of capital for saving, for the far going of liquidity and supply of money.

Gross and pure interest

The payment, which the borrower makes to the lender excluding the principal, is gross interest. Net interest is payment for the use of capital or money only. It is normally the same during a period even in different markets.

Reward for risk taking

The lender exposes himself to risk when he or she lends money gross interest includes the reward for risk taking. The greater the risk element the higher will be the rate of gross interest.

Reward for inconvenience

When a lender lends money, he or she forgoes its use for the duration of the loan. He/she will have to go undergo the inconvenience of the arranging it from

some other source. As such the rate of interest also includes the reward for such inconvenience.

Reward for management

The lender has to incur expenditure in keeping proper account of the borrowers. Therefore, the payment that the lender receives from the borrowers includes the expenses for management.

Pure interest is what remains with the lenders after deducting the reward for risk taking, management and inconvenience from gross interest.

2.1.4. Interest rates as the allocation mechanism

In market based economy, price is the allocating mechanism. When it is the market for allocating savings, interest rate becomes the price mechanism (Hazel J Jhonson, "Financial Institution and Markets : A Global Perspective", (1993)). Borrowers with unusually productive investment opportunities, as measured in terms of risk and return, can pay a saver a higher income in the form of an interest rate on the savings they borrow than borrowers with less productive investors.

2.2. Theories of interest rate determination

The term capital is used in two senses; (1) money capital, i.e. stock of money that could be loaned out, and (2) physical assets e.g. land, building, plant, machinery etc. Money capital in the form of bank deposit, share and debenture yields different forms of income – interest and dividend. Investment in physical capital yields income called return on capital. Money capital finally takes the form of physical capital and interest paid on money capital takes in the form of cost of capital. Because of this reason, the monetary theory of interest is given more importance than that of real theory of interest.

The common peculiarity of monetary theories of interest is that the interest is a monetary phenomenon. And monetary theorists believed that interest rate varies inversely with supply of monetary theories of interest argued that when supply of money increases, purchasing power (value) of money falls and, hence the rate of interest also come down. Economists agree that the real interest rate is determined in the market for investment and savings and thus by the forces of productivity and thrift. Hence, the real interest rate adjusts to equilibrate desired savings (providing the net supply of funds) with desired investment (generating the net demand for funds). In an increasingly integrated world economy with internationally mobile capital, the real rate of interest is determined largely by global forces of saving and investment. For relatively small open economies, the world real rate of interest is somewhat independent of domestic circumstances, especially over the medium to long term.

2.2.1. Classical theory of interest rates

One of the oldest theories concerning the determination of the pure or risk-free interest rate is the classical theory of interest rates, developed during the eighteenth century and the nineteenth centuries by a number of British economists and elaborated by Irving Fisher (1930) and others more recently . The classical theory argues that the rate of interest is determined by two forces: (1) the supply of saving, derived from households, and (2) the demand for investments capital, coming mainly from the business sector.

 Classical theory posits that interest rate is a real phenomenon and hence real factors determine the level of interest rate. The real factors are the supply and demand for capital. It is argued that the supply of capital comes from savings (thrifts) and the demand for capital comes from the productivity of capital. Interaction of supply of and demand for capital gives us the equilibrium level of interest rate. Therefore, if there is recession in the economy, the return from investment will be low. This will bring down the overall demand for capital.

Given the level of savings (the supply of capital), the lower level of demand for capital will bring down the level of interest rates.

The Neoclassical or loanable fund theory includes both real and monetary factors as the determinants of interest rate. This is an acknowledgment of the fact that monetary factors also influence the level of interest rates. According to Keynes Liquidity Preference Theory, interest rates are purely monetary phenomena. On the basis of these theories, a number of factors, which influence the level of interest rate, can be discussed. Among the factors influencing the level of interest rates, the size of government borrowing is very important. The higher the size of the budget deficit, the higher is the level of interest rate and vice-versa. This fact has been one of the factors affecting the level of interest rate in Nepal (Thapa, 2005). It is to be noted that both the government and the private sector borrow from the domestic market. Obviously, funds that can be borrowed from the domestic financial market are given. With the given funds, when the government domestic borrowing increases, it puts pressure on domestic interest rates. With the rise in domestic interest rates, the government borrowing crowds out the private sector investment. The second factor relates to business conditions. When economic recovery takes place, economic activities increase, putting an upward pressure on interest rates and vice-versa. The third factor relates to the role of lobbies and pressure groups. In the society, the different interest groups play their roles in raising or lowering interest rates. Retirees will like to see deposit rates going up. Likewise, households will also prefer higher interest rate on their deposits. On the other hand, industrialists and business community will put pressure for lower interest rates. In the Nepalese context, industrialists and business seems to be found exerting pressure on monetary authority and the political authorities for a lower level of interest rate.

Whether market determined or determined by the monetary authority there are two aspects of interest rates. The first is the level of interest rate and the second

aspect relates to the structure of interest rates. In an interest rate deregulated economy, market forces determine the level and the structure of interest rates. With respect to the former, one of the questions that are very often asked is about the appropriate level of interest rate. For that matter, one can ask: what is an optimal rate of interest for an economy? Nonetheless, there could be a number of ways of judging the appropriate level of interest rate. First, real rate of interest, which should be positive to encourage saving. It discourages low yielding investment and thus has positive impact on growth. Again the question remains unanswered, what should be the optimum level of real interest rate. If some inferences can be drawn from the Taylor's monetary policy decision rule, the level of real interest rate should be 2.0% (Woodford, 2001). Once we agree to this and add the inflation rate to the 2.0% desired real interest rate, optimal nominal interest rate can easily be calculated. Second, interest rates abroad should also be taken into account while judging the optimum level of domestic interest rate. It is important to attract foreign capital to accelerate the economic growth of the country. In this case, the domestic interest rate must be higher than international interest rates. In Nepal's case, Indian interest rates could serve as reference rates. Third, returns on investment projects are also important factors to judge the appropriate levels of interest rates. Fourth, in a developing country like Nepal, interest rates in unorganized markets can also be used to judge the appropriate level of interest rate.

2.2.2. Interest rate and saving-investment

The impact of interest rates on consumption, savings and investment is well established in the literature. Classical and Neoclassical economists took a position that higher interest rates resulted in high savings and lower level of consumption. Keynes, on the other hand, argued that low interest rates increased investment and income, and thereby generating higher savings. Keynes put forward his ideas on interest rates in his famous book, 'General Theory of Employment, Interest and Money' in 1936. He strongly established a

negative relationship between the level of investment and interest rate. In order to boost investment, he suggested a lower nominal interest rate. He argued that given marginal efficiency of investment, a lower interest rate would encourage investment, which in turn, would increase output. This phenomenon, in economic literature, is known as Keynes effect. In case, nominal interest rate could not be lowered, he suggested for expansion in money supply leading to a rise in inflation. A rise in inflation would lower real interest rate. This, in turn, would boost investment.

Following Keynes, Tobin also developed a model of money and economic growth and argued that households would maintain their portfolios between money and productive capital assets. He argued that if the return of capital exceed the return on money, the demand for capital in relation to money would increase, resulting in an increased capital to labor ratio. This would enhance labor productivity and per capita income would go up. This analysis suggests for keeping nominal interest rates lower. In case, nominal interest rates could not be maintained at low level administratively, a case was made for an expansion in the money supply. This would generate inflation, driving down real interest rates.

2.2.3. How open market operation affect interest rates?

Even though most-interest rates are market determined the central bank has considerable authority and powerful mechanism to affect the level of interest rates by controlling the supply of loanable funds. The primary tool is open market operation. Through open market operation the central bank purchases or sells securities. These are primarily treasury securities. When central bank purchases the securities it adds to the supply of loanable funds, the sellers of the securities the central bank purchased can reinvest in other loans and investments. When the central bank sells securities, the opposite occurs.

When the central bank uses open market operation to increase bank funds, banks have a larger supply of excess funds to lend out. Second, banks with excess funds may offer new loans at lower interest rates in order to make use of these funds. Third, these banks may also lower interest rates offered on deposits because they have more than adequate funds to conduct existing operations.

As bank deposit rates decline household with available fund may search for alternatives investment such as treasury securities or other debt securities, the yield will decline. Thus, open market operation used to increase bank funds influence not only bank deposits and loan rates but the yield on other debt securities as well. The reduction in yield on debt securities lower the cost of borrowing for the issuers of new debt securities. This can encourage potential borrowers to borrow and make expenditures that they might not have made if interest rates were higher.

If open market operation is used to reduce banks funds by, selling the treasury securities by increasing the level of discount rate and by increasing the reserve requirements the opposite effect occurs. More banks have different funds and fewer banks have any excess funds. Thus, there is upward pressure on the interest on the interest rates offered to bank deposits rate rises some investors may be encouraged to create bank depositors rather than invest in other debt securities thereby increasing the yield offered on the instruments.

The actions of the central bank also affect the level of aggregate employment and inflation. The central bank tends to faster simulative open market policies when the economy has slack resources and unemployment and restrictive policies during period of low employment and rising inflation.

2.3. Review of relevant studies

2.3.1. Review of articles

J. M. Keynes in his book, "The General Theory of Employment, Interest and Money", has mentioned the following the viewpoints about the rate of interest. According to him, community's liquidity preferences and quantity of money determine the level and rate of interest. These three things liquidity preferences, quantity of money and rate of interest are negatively correlated. At low rate of interest, the liquidity preference of community is high and it is low at high rate of interest.

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

Where,

I = Investment and S = Savings.

Keynes in his argument said, "interest stems directly form the supply of and demand for money itself rather that the use of money. Liquidity is the unique characteristics of money and calls the demand of money to hold liquidity preferences. It is this, which requires the payment of interest. The marginal efficiency of capital determines the degree of liquidity preference and the rate of investment and interest there on.

A vital role is played by the cost of capital in the economic decisions Empirical studies have looked for rate, effects and investment decisions and expenditures

since the rate of interest is a major determinant in capital costs. Short-term rates are supposed to influence the inventory investment and trade credit, while long-term rate, influence plans for plant and equipment installations and for residential housing. Philip Cagon studied and tested the pattern of bond yields. He opined "if we expect the interest rate to influence the investment expenditures and thus aggregate business activity, a rise in interest rates early in a business expansion should restrain aggregate expenditure and shorten the duration of expansion."(Cagon, 1969)

Higher interest rate affects loan/advances and deposits differently. There are opposing views of higher interest rate on loans.

According to H.D.Crosse, when funds are plentiful, market rate generally tends to decline. Banks seek loans more aggressively, and therefore lower their rates, including marginal borrower to come into the market. When the funds are scarce, banks raise their interest rates and potential borrowers may defer to use credit or seek it from elsewhere."

The views of some economists on interest rates differ. According to these few, the interest rate is a major determinant, and also traced out the time preference in the determination of interest rate. The level of capital measured by the level and structure of interest rate. So, the interest rate must be taken as an important factor of economic policies of developing or less developed countries.

Classical economists have their own say that interest rate depend upon the level of saving and the demand for real investment interest is that point where both the amount of saving and demand of investment are equal.

According to Neo-classical economists, demand and supply, factors are important in the determination of interest rate structure. The supply of loanable fund is composed of real saving and credit money and demand of the loanable

found is composed of the demand for the investment funds. The interplay monetary and non-monetary forces determine the rate of interest.

Loanable funds theory of interest is mentioned in Mr. K. K. Deveet's Book, "Modern Economic Theory." The loanable funds theories believed in time preference explanation of how interest arises. According to loanable funds theory, also called Neo-Classical Theory, the interest is the price paid for the use of loanable funds. Like the classical and Keynesian Theories of Interest, it is also a demand and supply theory. It asserts that rate of interest is determined by the equilibrium between demand and supply of loanable funds in the credit market. There are several sources of both supply and demand of loanable funds, which we discuss below.

2.3.2. Review of unpublished thesis

Before this, several thesis works have been concluded by various students regarding the various aspects of commercial banks such as financial performance, interest rate structure, deposit etc. Some thesis have been conducted for the partial fulfillment of M.B.S & MBA in T.U. which are related, to some extent, to this topic, are reviewed here.

Bhandari (2001), entitled, "A study on impact of interest rate structure on investment portfolio of commercial banks" has focused to cast a glance of the historical background of interest rate structure of commercial bank, policies, decision and strategies regarding it and their impact, and to access the impact of interest rate structure of commercial banks on their investment portfolio by analyzing their deposits, loans/advance, interest spread, investment and bills purchased and discounted. The interest rate is important for amount of deposit collection of the commercial banks is incensement declining with the deposit rate. The depositors are very conscious. They increases their deposit if higher deposit rates are offered.

Chettri (2003) studied "Interest rate structure and its relation with deposit, inflation and credits in Nepal." The main objective of his study is to examine and analyze the position of interest rate on loan and advances ratio of commercial banks, to analyze the effect of NRB direction in interest and to explore the problems and to suggest for further improvement on the basic of finding of the study. He had concluded in his study that deposit is highly affected through the factors of income, inflation and interest rate.

Rajbhandary (2005) entitled "The Interest Rate Structure of Commercial Banks in Nepal". Some important factors in his study are the relation of interest rate with saving and fixed deposit with loans and advances and with interest earning, Deposits are positively and significantly correlated with the interest rate, there is significant correlation between the saving deposits and the rate of interest, negative correlation between loans and interest rate which mean that loans decrease higher interest rate and vice-versa. He has concluded that the net interest earning is depended upon interest convey.

Bhatta(2006), in her thesis entitled "Interest Rate and Its Effect on Deposit and Leanding". The objective of her study was to present and analyze the interest rate structure of various commercial banks at different time period, examine the influence of interest rate on deposit and lending amount of commercial banks, recommend appropriate suggestions based on the analysis of the data to concern authority.

Based on these objectives she has found out that deposit rate of all sample banks under study are in decreasing trend i.e. every year deposit rates of sample banks under study have decreased. 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. Analysis shows that interest rates on lending are higher than deposit rates of sample banks.

Pokhrel (2007) entitled "Determinants of interest rate in Nepalese financial market" shows the relationship between the liquidity position and interest rate on deposit and lending, the effect of maturity period and other economic factors on the interest offered by finance companies, the effect of foreign employment and remittance income to the interest rate.

Pokharel has found out the determination of interest rate in Nepalese financial markets banks, finance etc. He has found the objectives qualitative method and quantitative method. He found that the correlation coefficient between interest rate on deposit and amount of deposit 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 decrease. This is against the theory. According to theory, there must be positive relationship. Lending rate and lending amount correlation coefficient to be found negative, which means that more amounts is demanded at lower interest i.e when demand increases, prices(interest rate on lending) also increases. Finally according to his finding it is observed that interest rate charged and offered by various Nepalese financial institutions is affected to some extent by inflation.

Shrestha (2009) conducted a study on "Interest rate structure of commercial banks of Nepal". The main objective of his study is to show the relationship of interest rate with deposit and lending based on the application of secondary data. The analysis shows that the interest rates on both deposit and lending of sample banks are found to be in fluctuating and increasing trend. For all analysis the amount of the both deposit and lending amount is increased.

Shrestha has concluded that 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 capital 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. 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 in the country. So the finance institutions are suggested to reduce the interest spread as minimum as possible.

Neupane (2011) has conducted a research topic in "Interest rat 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 charges.

He has found 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. It means that interest rate on lending in Nepalese financial market is not affected by risk free rate of interest. Based on the objectives, the study made by Neupane concluded that the interest rates of all sample banks are found to be in decreasing trends.

2.4. Concluding remarks

Hence, by studying the different thesis it can be concluded that the interest rate is important for deposit collection of the commercial banks. The deposit is highly affected through the factors of income, inflation and interest rate. Loans and advances of commercial banks have been found to be continuously increasing with the decline in interest rate. Effective interest rate structure helps in proper utilization of resources as measured by loan to deposit ratio. Most of the banks are having similar interest rate structure which lessens the importance of liberalization of interest rate.

The study on the relationship between interest rate on deposit and inflation rate is little positive which shows that the interest rate charged and offered by various Nepalese financial institutions are affected to some extent by inflation. Theoretically, there should be a positive and perfect relationship between them but practically the degree of positive correlation is somewhat less. So, it is concluded that the interest rate on lending in Nepalese financial market is affected by inflation only to some extent.

Also it is found that the interest rate on deposit is not so much affected by risk free rate of interest. And it is even found that the high spread between deposit interest rate and lending interest rate is another factor which merely increases the profit figure of the banks but at the same time it reduces the deposit collection and investment in the country. So, the financial institution should reduce the interest spread as minimum as possible.

CHAPTER-THREE

3. RESEARCH METHODOLOGY

3.1. Introduction

Research methodology is a way to systematically solve the research problem. It may be understood as a science to systematically solve the research is done scientifically. It is necessary for the researcher to know not only the research methods but also the methodology. When we talk about the research methodology we not only talk of research methods but also consider the logic behind the methods we use in the context of our research study and explain why we are using a particular method or technique and why are not using others so that research results are capable of being evaluated either by the researcher himself or by others. The study of research methodology gives the student the necessary training in gathering materials and arranging them, participating in the field work which required and also training in techniques for collection of data appropriate to particular problems, in the use of statistics questionnaires and controlled experimentation and in recording evidence, sorting it out and interpreting it.

3.2. Research design

The research design is the conceptual structure within which research is conducted. It constitutes the blue prints for the collection, measurement and analysis of data. As such the design includes an outline of what the researcher will do from writing the hypothesis and its operational implicational to the final analysis of data. Research design is needed because it facilitates the smooth soling of the various research operations, thereby making research as efficient as possible yielding maximal information with minimal expenditure of effort, time and money (Cooper & Schindler).

Research design is the plan and structure of investigation so conceived as to obtain answers to research question. The plan is overall scheme or program of the research. A research design expresses both the structure of the research problem and the plan of investigation used to obtain empirical evidence or relations of the problem. In this study descriptive cum analytical research design has been followed.

3.3. Population and sample

A small portion chosen from the population for studying its properties is called a sample and the number of unit in the sample is known as the sample size. The method of selecting for study a small portion of the population to draw conclusion about characteristics of the population is known as sampling. Sampling may be defined as the selection of part of the population on the basis of which a judgment or inference about the universe is made (Sharma & Chaudhary, 2058). Since the research topics is about interest rate, all the lending and depository institution of Nepal are the member of population study. The population for the study comprises 32 commercial bank.

These are 32 Commercial Bank prevailing in Nepal. The number of total commercial bank is population of the study i.e. 32. Out of these only 5 commercial banks are taken as the sample of the study. Two Bank namely Nabil Bank, Everest Bank are taken from the Joint Venture group and three are pure Nepalese investment banks are Nepal Investment Bank, Kumari Bank, Laxmi Bank. The sample organization are as follows :

   (i)   Nabil Bank

   (ii) Everest Bank

   (iii) Nepal Investment Bank

   (iv) Laxmi Bank

   (v)   Kumari Bank

3.4. Sources of the data & collection procedure

For this study mainly secondary data are used, besides this primary data be used:

3.4.1. Primary data collection procedure

A convenient sampling technique was followed to collect opinion of more than two professions from the financial institution sector. Question was awaited and return within a week. Research personal visited main sector for all activities of financial transaction mainly in financial institutions office and worksite to request for the respondents to fill up the questionnaire and were described to the respondents. Primary data are collected through direct interview and observation.

3.4.2. Secondary data collection procedure

The secondary data are collected mainly from published sources like annual report. Prosperous balance sheet, Newspaper, websites, secondary data is collected From various publication or commercial bank Nepal Rastra Bank and even from websites of various commercial bank. Thus this study is based on secondary data besides this primary data can be used

3.5. Data processing and presentation

Data obtained from various sources can be directly used in their original form as they are raw data. When data will not be presented in understandable and easier way there would be no use of conducting research study or analysis of data. Analysis would be difficult to understand to the readers without processing the data. So, to make the understandable at the first sight data would be processed.

As, presentation of data means to keep raw data into understandable form by editing, re-checking and using various study also data are presented using all above mentioned tools so as to make understand the analysis part in proper & easier way. So far as the computation is concerned, it will be done with the help of scientific calculator & computer software programmed.

3.6. Tools to analyse data

In order to get the concrete result from the research, data are analyzed by different types of tools. As per the topic requirement in this study the following statically tools are going to be used Financial tools are also used to some extent

<u>Arithmetic Mean</u>

Arithmetic Mean of a given set of observation is their sum divided by the number of observation (Gupta, 2002). In such a case all the items are equally important. In this study simple arithmetic mean is used. It is used in computing by using following formula:

$$\text{Mean} = \frac{\sum X}{n}$$

Where, X= Mean

$\sum X$ =Sum of all the Variable X

n = Variable involved

<u>Standard Deviation</u>

The standard deviation is the best tools to measure fluctuation in any data. It is usually denoted by the Greek letter σ (small sigma). The standard deviation is defined as the positive square root of the arithmetic mean of the square

deviations from their arithmetic mean of a set of values. It is also known as 'Root Mean-Square Deviation ' (Pant & Chaurdhary).

$$S.D.(\sigma) = \frac{\sqrt{3(x-\overline{x})^2}}{n}$$

Greater the magnitude of standard deviation, higher will be the fluctuation in data and vice versa.

Correlation Coefficient

Correlation coefficient is the statistical tool which measures the degree of relationship of one variable with other variables. Two or more variables are said to be correlated if change in the value of one variable appears to be related or linked with the change in the other variables. It refers the closeness of the relationship between two or more variables. Correlation says just degree of relationship between two or more variables. It does not tell us anything about cause and effect relationship (Sharma &. Chaudhary, 2058).

Correlating may be positive or negative and ranges from -1 to +1. Simple correlation between interest rate on deposit and deposit amount, interest rate on lending and credit or lending amount and interest rate and inflation is computed in this thesis. The correlation between interest rate on deposit and deposit amount is positive interest rate on lending and lending amount is negative. When inflation increases, interest rate also increases in same direction and vice versa. For our study following reference is used (Pant & Chaudhary, 2053).

❖ Correlation may be positive or negative and ranges from -1 to +1, there is positive perfect correlation; when r = -1. There is perfect negative correlation; when f = 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 :

Simple correlation coefficient (r) = $\dfrac{n\Sigma x_1 x_2 - \Sigma x_1 x_2}{\sqrt{n\Sigma x_1{}^2 - (x_1)^2} - \sqrt{n\Sigma x_2{}^2 - (x_2)^2}}$

Where,

N = Total number of observations.

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

Coefficient of Determination

The square of the simple correlation coefficient is called coefficient of determination and it is very useful in interpreting the value of simple correlation coefficient. The main significance of the coefficient of determination is to represent the portion of total variation due to independent variable (Sharma & Chaudhary, 2058).

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

t-test for significance of simple correlation coefficient

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

$$t = \frac{r \sqrt{n-2}}{\sqrt{1 - r_{12}{}^2}}$$

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

Coefficient of Multiple Determination

The square of multiple correlation coefficients is called coefficient of multiple determination and it is very useful in interpreting the value of multiple correlation coefficient. The main significant of the multiple determinations is to represent the proportion of total variations in the dependent variable which is explained by the variations in the two independent variables.

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

CHAPTER – FOUR

4. DATA PRESENTATION AND ANALYSIS

4.1. Introduction

This part is core of any research study. Without this part the study is incomplete in a sense that the above set objectives in chapter one cannot be met and conclusion and finance cannot be drawn. Ignoring this part is not possible to know what the real problems are & what factors are affecting those problems in the real world.

This chapter is the main body of the study which includes detailed presentation, analysis and interpretation of data relating to interest rate in deposit and lending deposit and lending, deposit collection and loan advance of each selected commercial banking industries from Nepalese financial system. In this chapter relationship between variables i.e. between interest rate on deposit and deposit amount and lending interest rate and lending amount is presented, analyzed and interpreted. This chapter consists of various calculation made for the analysis of interest rate and its impact on deposit amount lending amount and inflation rate of the sample commercial bank. To make our study effective and precise as well as easily understandable, this chapter is categorized into three parts; presentation, analysis and interpretation. The analysis is fully based on secondary data. Firstly data are presented in tabular and chart form according to the need. The presented data are then analyzed using various statistical tools as mentioned in chapter three according to the requirement of the study, at last following the analysis part and interpretation is made.

Data presentation, analysis and interpretation of the study are made commercial banking sector wise i.e. one by one. To show the response of interest rate toward inflation rate and real rate of interest, correlation between these variables has been analyzed and testing significance using t-statistics. The data

and information gathers from different sources as described in previous chapter have been broadly grouped into the following two groups:

a) For the quantitative analysis various publish data from NRB and concerned organizations have been analyzed for showing their relationship.

b) For quantitative analysis primary data collected by means of questionnaire and direct interview with respondent have been presented and analyzed.

Besides above analysis tables and diagram have been used to make the result clearly understandable.

4.2. Quantitative analysis

Two or more variables are set to be correlated if changes in the value of one variable appear to be related or linked with the change in other variables. Thus, the correlation analysis is generally used to describe the degree to which one variable is related to another it helps to identify whether a positive or negative relationship between various variables assumed to be influencing factors of interest rate charged and offered by sample Banking industries. Multiple correlation has also been computed to show the simultaneous effect of two factors on interest rate the coefficient of correlation is also tested using t-stastical of hypothesis to show whether it is statistically significant or not. Details analysis of individual Banking industries is presented in coming sections.

4.2.1. Everest Bank Limited (EBL)

Table 4-1
Amount of deposit and lending, interest rate on deposit and lending of EBL, inflation and risk free rate

Fiscal Year	Deposit Amount (Rs. in million) "a"	Interest Rate on deposit "b"	Loan Amount (Rs. in million) "c"	Interest rate on lending "d"	Inflation rate "e"	Risk Free Rate "f"
2007/08	19097.7	3.36	14059.2	7.59	6.4	2.42
2008/09	23976.3	3.60	18339.1	8.15	7.7	4.22
2009/10	33323	3.60	23885	8.15	13.2	5.83
2010/11	36932.3	3.88	28129.7	8.58	10.5	6.50
2011/12	41127.9	3.88	31534.7	8.58	6.8	7.41

Sources:- Annual Reports of EBL and various Financial statistics published by NRB.

Table 4-1 depicts data of EBL consisting of amount deposited interest rate on deposit and interest rate on lending from year 2007/08 to 2011/12. This table also presents inflation and risk-free rate for same fiscal years. To show the relationship between variables various correlation coefficients are presented in table 4-2.

* Interest rate on deposit is taken as the average of the rates on various types of deposits which have been shown in Appendix A.

** Interest rate on lending is taken as the average of quoted rate for various sectors and is shown in Appendix A.

Table 4-2
Correlation analysis (EBL)

Varaibles	Coefficient or Correlation	Coefficient determination	t-statistics	Table value	Remarks
r_{ab}	0.917879	0.842501	4.005852	3.182	Significant
r_{bd}	0.991054	0.982188	12.8614	3.182	Significant
r_{cd}	0.884411	0.782182	3.282123	3.182	Significant
r_{be}	0.178909	0.032009	0.314953	3.182	Insignificant
r_{bf}	0.933752	0.871893	4.518479	3.182	Significant
r_{de}	0.25104	0.063021	0.449187	3.182	Insignificant
r_{df}	0.94365	0.890476	4.938604	3.182	Significant
Multiple Correlation Coefficient	$R_{b.ad} = 0.8681$	Coefficient of Multiple Determination			$R^2_{b.ad} = 0.7536$
	$R_{d.bc} = 0.4451$				$R^2_{d.bc} = 0.1981$
	$R_{b.ef} = 0.7411$				$R^2_{b.ef} = 0.5492$
	$R_{d.ef} = 0.5822$				$R^2_{d.ef} = 0.3390$

Figure No. 4-1
Relationship between rates of EBL
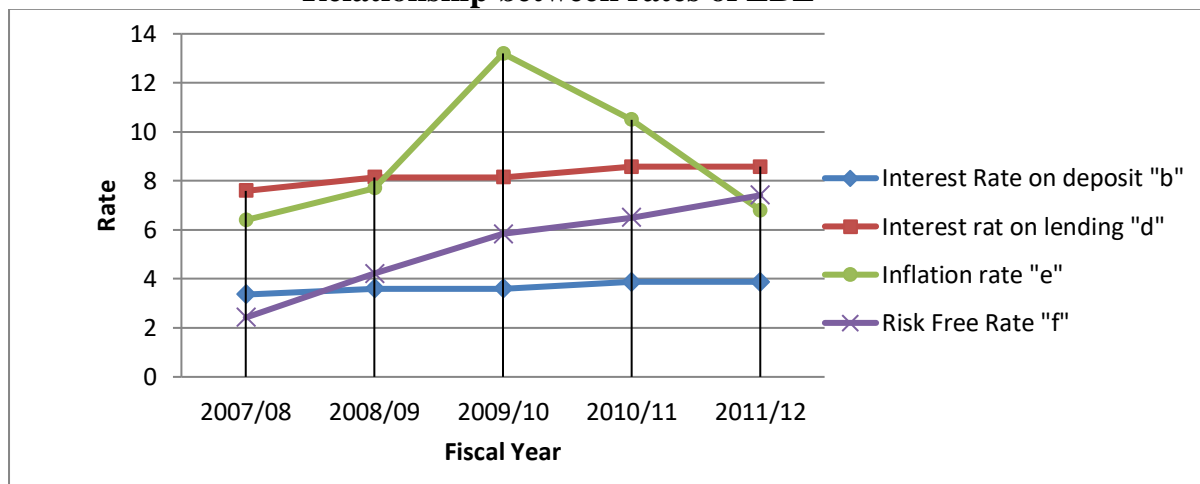
Deposit amount and interest rate on deposit of EBL are positively correlated (r_{ab}= 0.917879). The coefficient is statically significant because calculated t-value is greater than table value (4.005>3.182). This means that interest rate on deposit is significantly affected by the deposited amount. In the same way amount loaned and interest rate on loan are positively correlated (r_{cd} = 0.884411) and it is statically significant because calculated t- value is greater than table value (3.2821>3.182) . This means that there is a significant relation between interest rate on lending and lending amount of the total variation in

amount loaned. 78.21 % is the effect of interest rate on lending shown by the coefficient of determination.

Interest rate on deposit and lending art positively correlated (r_{bd} = 0.991054). The coefficient of correlation is statically significant because calculated t-value is significantly greater than the table value at 5% level of significance for 3 degree of freedom (12.861>3.182) . This means that two rates are correlated. 98.21% of total variation in interest rate on lending is the effect of interest rate on deposit as shown by the coefficient of determination, $r^2{}_{bd}$.

The relationship of inflation with interest rate on deposit and lending are both positive (r_{be}= 0.178909 and r_{de} =0.25104). The correlation coefficient between interest rate in deposit and inflation is insignificant because calculated t-value is significantly smaller which means that there does not exist any significant relation with these variables.

The another important factor affecting the interest rate charged and offered by the commercial bank is risk free rate on 91 days Treasury Bills rate. The relationship of risk free rate with interest rate on deposit and lending are positive (r_{bf} = 0.9433752 and r_{df} = 0.94365) . This shows that an increment in risk free rate brings increment in the interest rate on deposit and lending and vice-versa. But correlation coefficient between risk free rate and interest on deposit is statically significant (4.5184>3.182). Similarly interest rate on lending and the risk free rate are insignificantly correlated. This shows that there exists significant relationship between these variables which has been explained by coefficient of determination $r^2{}_{df}$.

Combined effect of independent variables at once on dependent variable has been analyzed through multiple correlations. The coefficient of multiple determination assuming interest rate on deposit as dependent and interest rate on lending and amount deposited as independent $R^2{}_{b.ad,}$ is 0.7536 which means

that 75.36% of total variation in dependent variable is the effect of other two independent variables .

Similarly, the coefficient of multiple determinations assuming interest rate on deposit as dependent factor and inflation and risk free rate as independent variables, $R^2_{b.ef}$ is 0.5492 which means that 54.92% of total variation in dependent variables has been explained by two independent variables.

The coefficient of determination assuming interest rate on lending as dependent and amount loaned and interest rate on deposit as independent variables, $R^2_{d.bc}$ is 0.1981 which shows that 19.81% of total variation is dependent variables is explained by two independent variables . Similarly, the coefficient of multiple determination taking interest rate as independent and inflation and risk free rate as independent variables $R^2_{d.ef}$ is 0.3390 which means that two independent variables are responsible to the total variation in dependent variable by 33.90%.

4.2.2. Nepal Investment Bank Limited (NIBL)

Table 4-3
Amount of deposit and lending, interest rate on deposit and lending of NIBL, inflation and risk free rate

Fiscal Year	Deposit Amount (Rs. in million) "a"	Interest Rate on deposit "b"	Loan Amount (Rs. in million) "c"	Interest rate on lending "d"	Inflation rate "e"	Risk Free Rate "f"
2007/08	24488.9	2.64	17482	9.08	6.4	2.42
2008/09	23976.3	3.6	26996.7	8.15	7.7	4.22
2009/10	46697.9	3.09	36241.2	8.55	13.2	5.83
2010/11	50094.7	3.1	40689.6	8.55	10.5	6.5
2011/12	50138.1	3.1	41665.2	8.55	6.8	7.41

Sources : Annual Report of NIBL and various Financial statistics published by NRB

Table 4-3 shows that the amount deposit collected, interest rate on such deposits amount loaned and interest rate on loan of NIBL for five years from

2007/08 to 2011/12. Inflation rate and Risk free rate for the same period has also been presented. Simple and multiple correlation coefficients of determination and t- values are presented in table 4-4.

Table 4-4
Correlation analysis (NIBL)

Variable	coefficient or correlation	coefficient determination	t- statistics	Table value	Remarks
r_{ab}	0.58813	0.345896	1.25954	3.182	Insignificant
r_{bd}	-0.84822	0.71948	2.77381	3.182	Insignificant
r_{cd}	-0.028317	0.00802	0.04907	3.182	Insignificant
r_{be}	0.27741	0.076956	0.50012	3.182	Insignificant
r_{bf}	0.57462	0.330188	1.21609	3.182	Insignificant
r_{de}	-0.72358	0.523568	1.81571	3.182	Insignificant
r_{df}	-0.91603	0.83911	3.9555	3.182	Significant
Multiple Correlation Coefficient	$R_{b.ad} = 0.9664$	Coefficient of Multiple Determination			$R^2_{b.ad} = 0.9339$
	$R_{d.bc} = 1.061$				$R^2_{d.bc} = 2.5921$
	$R_{b.ef} = 0.8219$				$R^2_{b.ef} = 0.6755$
	$R_{d.ef} = 0.9527$				$R^2_{d.ef} = 0.9076$

Figure 4-2
Relationship between rates of NIBL

50
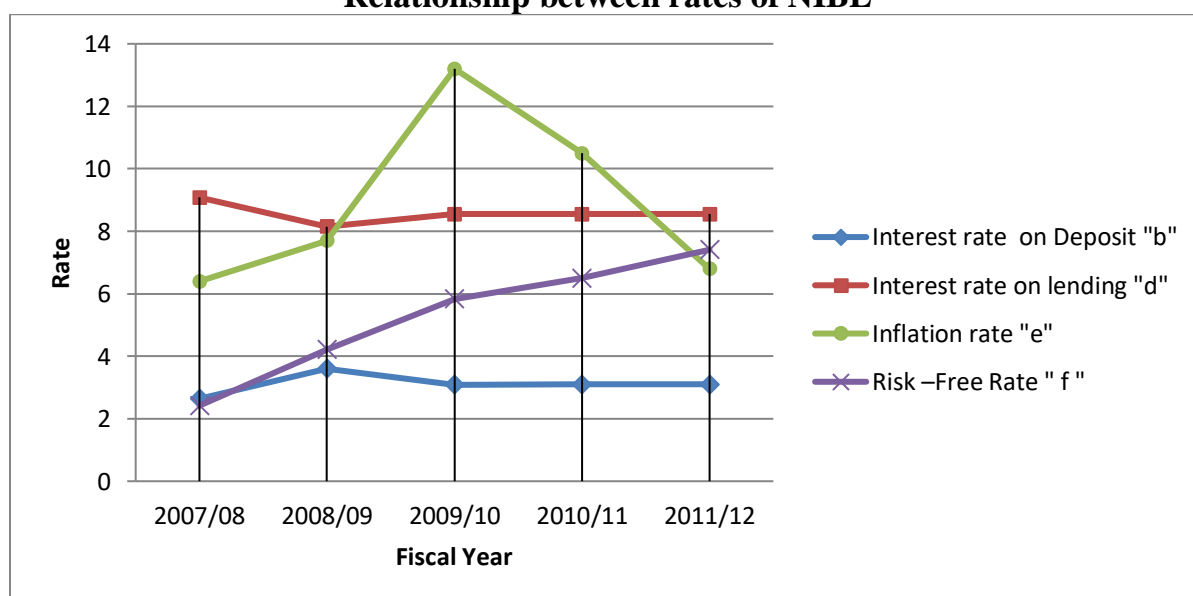
From above table it can be known that deposit amount and interest rate on deposit are positively correlated (r_{ab}= 0.58813) which shows that when amount deposited increases, interest rate on deposit will also increase and vice-versa. But the coefficient of correlation is statically insignificant because calculated t-value is smaller than tabulated value for 3d.f at 5% level of significance. Thus interest rate on deposit of NIBL is not affected by the amount of deposit collected.

The correlation coefficient between interest rate on lending and amount loaned is negative (r_{cd} =-0.028317) which shows that when interest rate on lending decrease the amount loaned will increase and vice- versa. The coefficient is statically insignificant as the calculated t- value, is smaller than table value . This means that Null hypothesis (Ho) is accepted which means that there is no significant difference between sample mean and population mean.

The correlation coefficient between interest rate on deposit and lending is negative (r_{bd} = -0.84822) .The coefficient is statically insignificant since calculated t- value is smaller than table value (2.77381<3.182).This means that both the rates are not significantly correlated and since in interest rate on deposit also brings change in interest rate on lending in the same direction. The coefficient of determination between both the rates is 0.71948 which means 71.94% variation in interest rate on lending has been explained.

The relationship of inflation with interest rate on deposits r_{be} is positive and with rate of lending. r_{de} is negative i.e. 0.27741 and -0.72358 respectively. But the correlation coefficient, r_{be} is statically insignificant since, calculated t- value is less than table value (0.50012<3.182 and 1.81571<3.182). Hence it can be said that interest rate on deposit and lending of NIBL is not influenced by inflation and there exists inverse relationship between these variables. At this point it can be said that general theories of interest rate contradict.

On the other hand the relationship of risk free rate on deposit rate is positive and lending rate is negative (r_{bf}= 0.57462 and r_{df}= -0.91603). This shows that an increment in risk free rate brings increments in the interest rate on deposit and decrease with increment in lending and vice-versa. But correlation coefficient between risk free rate and interest rate on deposit is statically insignificant because the calculated t-value is smaller than table value (1.2609<3.182). Similarly interest rate on ending and risk free rate are significantly correlated. This shows there exists significant relationship between these variables which has been explained by coefficient of determination, r^2_{df}.

Combined efforts of independent variables at once on dependent variable has been analyzed through multiple correlations. the coefficient of multiple determination assuming interest rate on deposited as dependent and interest rate on lending and amount deposited as independent,$R^2_{b.ad}$ is 0.9339 which means that 93.39% of total variation in dependent variable is the effect of other two independent variables.

The coefficient of determination assuming interest rate on lending as dependent and amount loaned and interest rate in deposit as independent variables, $R^2_{d.bc}$is 2.5921 which shows that 259.21% of total variation in dependent variables is explained by two independent variable. Similarly, the coefficient of multiple determinations taking interest rate on lending as independent and inflation and risk free rate as independent variables, $R^2_{d.ef}$ is 0.9076 which means that two independent variables are responsible to the total variation in dependent variable by 90.76%.

4.2.3. Nabil Bank Limited (Nabil)

Table 4-5
Amount of deposit and lending, interest rate on deposit and lending of Nabil, inflation and risk free rate

Fiscal Year	Deposit Amount (Rs. in million) "a"	Interest Rate on deposit "b"	Loan Amount (Rs. in million) "c"	Interest rate on lending "d"	Inflation rate "e"	Risk Free Rate "f"
2007/08	19097.7	3.36	14059.2	7.59	6.4	2.42
2008/09	23976.3	3.6	18339.1	8.15	7.7	4.22
2009/10	33323	3.6	23885	8.15	13.2	5.83
2010/11	46334.8	7.36	32902.8	11.4	10.5	6.5
2011/12	49691.6	7.36	38765.6	11.4	6.8	7.41

Source: Annual Reports of Nabil Various Financial statics Published by NRB.

Table 4-5 shows the amount deposit collected, interest rate on such deposits, amount loaned and interest on loan of Nabil for 5 Fiscal years from 2007/08 to 2011/12. Inflation rate and risk free rate for the same period has also been presented. Simple and multiple correlation coefficients of determination and t-value are presented in table 4-6 [1]

Table 4-6
Correlation analysis (Nabil)

Variables	Coefficient of Correlation	Coefficient Determination	t – Statistics	Table Value	Remarks
r_{ab}	0.932891	0.870286	4.486269	3.182	Significant
r_{bd}	0.99724	0.994488	23.26433	3.182	Significant
r_{cd}	0.944875	0.892789	4.998072	3.182	Significant
r_{bd}	-0.0588	0.003457	-0.10202	3.182	Insignificant
r_{bf}	0.799545	0.639272	2.305689	3.182	Significant
r_{de}	-0.01575	0.000248	-0.02728	3.182	Insignificant
r_{df}	0.834558	0.696487	2.623709	3.182	Insignificant
Multiple Correlation Coefficient	$R_{b.ad} = 0.9249$ $R_{d.bc} = 0.7865$ $R_{b.ef} = 0.9864$ $R_{d.ef} = 0.8588$		Coefficient of Multiple Determination		$R^2_{b.ad} = 0.8554$ $R^2_{d.bc} = 0.6186$ $R^2_{b.ef} = 0.9729$ $R^2_{d.ef} = 0.7375$

Calculated values of correlations have been shown in Appendix B

Figure 4-3
Relationship between rates of NABIL
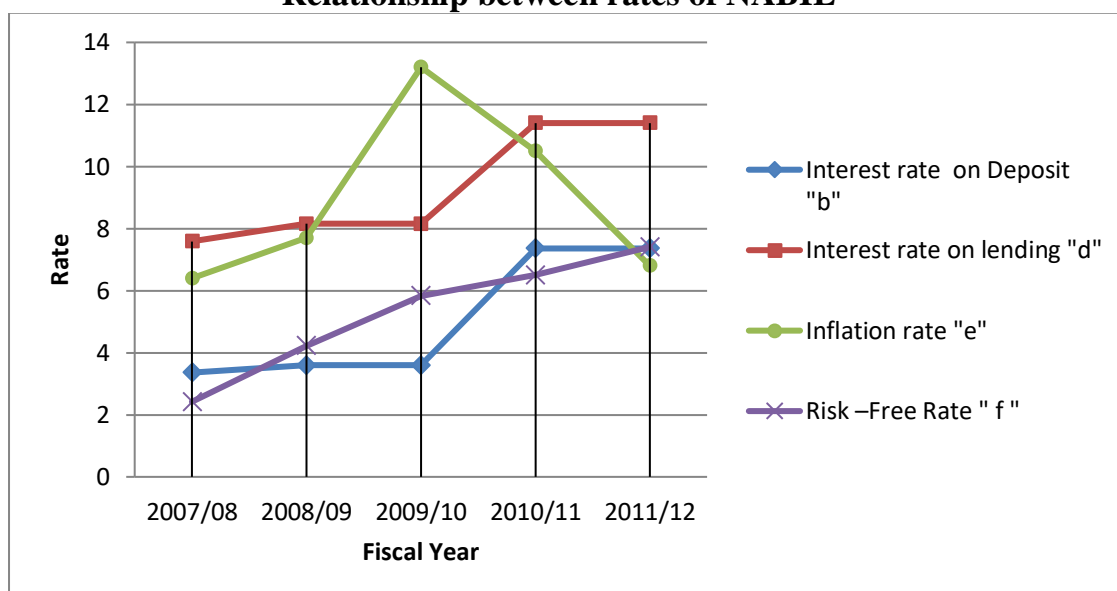
Deposit amount and interest rate on deposit are positively correlated (r_{ab} = 0.932891) which shows that when amount deposited increases, interest rate on deposit will also increases and vice-versa.

But the coefficient of correlation is statistically significant because calculated t - value is greater than table (4.4862> 3.182). This means that interest rate on deposit is significantly affected by the deposited amount. In the same way amount loaned and interest rate on loan are also positively correlated (r_{cd} = 0.944875) and it is statistically significant because calculated t-value is greater than table value (4.998> 3.182). This means that there is significant relation between interest rate on lending and lending amount. Of the total variation in amount loaned, 89.27% is the effect of interest rate on lending shown by coefficient of determination.

Interest rate on deposit and lending are negatively correlated (r_{bd} = 0.99724). The coefficient of correlation is statistically significant because calculated t - value is significantly greater than table value at 5% level of significance for 3 degree of freedom. This means that two rates are correlated and change in interest rate on deposit does affect interest rate on lending. 99.44% of total

variation in interest rate on lending is the effect of interest rate on deposit as shown by the coefficient of determination r^2_{bd}.

The relationship of inflation with interest rate on deposit r_{be}, and with interest rate on lending, r_{de} is -0.0588 and -0.01575 respectively. But the correlation coefficient, r_{be} and r_{de} are statistically significant since, calculate t - value is less than table value (0.10219< 3.182), (0.02728< 3.182). Hence, it can be said that interest rate on lending of Nabil isn't influence by inflation and there exists inverse relationship between the variables (interest rate on lending and inflation).

The relationship of risk free rate on deposit and lending rate is positive (r_{bf} = 0.799545 and r_{df} = 0.834558). Both the correlation coefficients of risk free rate on deposit is statistically insignificant because their calculated t - values is smaller than table value. Therefore, interest charged and offered by Nabil on deposit and lending are affected by the risk free rate.

To know the effect factors at once on interest rate, multiple correlation has been computed and presented at the lower part of table 4 - 6. The coefficient of multiple determination assuming interest rate on deposit as dependent and amount deposited and lending rate as independent R^2_{bad} is 0.8554 which means that 85.54% of total variation in dependent variable has been explained by two independent variables. On the other hand the coefficient of multiple determination assuming interest rate on lending as dependent and amount loaned and interest rate deposit as independent. $R^2_{d.bc}$ 0.6168 which means that effect of two independent variables on the total variation independent variable is 61.68%. Similarly the coefficient of multiple determination $R^2_{d.ef}$ of 0.7375 assuming interest on lending as dependent and inflation and risk free rate as independent means that 73.75% of total variation in dependent variables has been explained by two independent variables.

4.2.4. Laxmi Bank Limited (LBL)

Table 4-7

Amount of deposit and lending, interest rate on deposit and lending of LBL, inflation and risk free rate

Fiscal Year	Deposit Amount (Rs. in million) "a"	Interest Rate on deposit "b"	Loan Amount (Rs. in million) "c"	Interest rate on lending "d"	Inflation rate "e"	Risk Free Rate "f"
2007/08	7611.7	3.48	6527.5	9.37	6.4	2.42
2008/09	10917.2	4.36	9681	9.54	7.7	4.22
2009/10	16051.3	5.91	13315.6	10.45	13.2	5.83
2010/11	18082.9	7.93	14731.8	12.5	10.5	6.5
2011/12	18299.6	7.96	15262.7	12.5	6.8	7.41

Source : Annual reports of Laxmi Bank & various financial statistics published by NRB.

Table 4-7 shows the amount deposit collected, interest rate on such deposits. Amount loaned and interest on loan of Laxmi Bank for five year from 2007/08 to 2011/12. Inflation rate and risk free rate for the sample period has also been presented. Simple and multiple correlation coefficients, coefficients of determination and t - values are presented in table 4 - 8.

Table 4-8
Correlation analysis (LBL)

Variables	Coefficient of Correlation	Coefficient Determination	t – Statistics	Table Value	Remarks
r_{ab}	0.969272	0.939489	6.82459	3.182	Significant
r_{bd}	0.98255	0.965405	9.149473	3.182	Significant
r_{cd}	0.895984	0.802787	3.494466	3.182	Significant
r_{be}	0.292551	0.085586	0.529881	3.182	Insignificant
r_{bf}	0.957857	0.917489	5.775552	3.182	significant
r_{de}	0.153475	0.023554	0.269005	3.182	Insignificant
r_{df}	0.896463	0.803646	3.503971	3.182	Significant
Multiple Correlation Coefficient	$R_{b.ad} = 0.9913$ $R_{d.bc} = 0.9976$ $R_{b.ef} = 0.9639$ $R_{d.ef} = 0.9405$	Coefficient of Multiple Determination			$R^2_{b.ad} = 0.9982$ $R^2_{d.bc} = 0.9952$ $R^2_{b.ef} = 0.9293$ $R^2_{d.ef} = 0.8846$

Figure 4-4
Relationship between rates of LBL
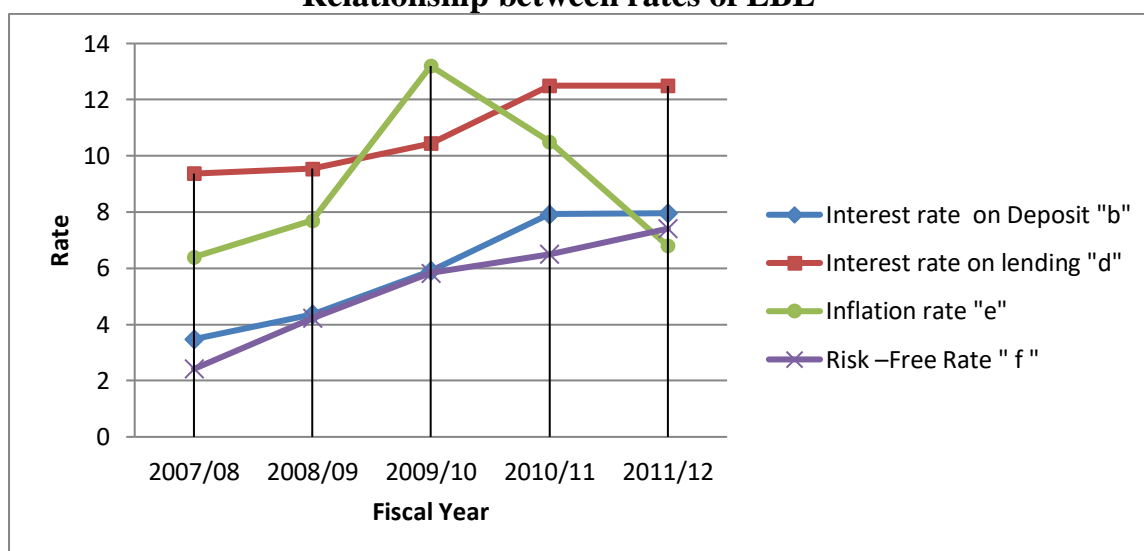
Correlation coefficient between amount deposited and interest rate on deposit are positively correlated ($r_{ab} = 0.969272$) the positive relationship shows that when amount deposit increases i.e. the supply of fund, interest rate (return on deposit) on such deposit decrease and vice-versa. The coefficient of correlation is statistically significant because calculated t-value is greater than tabulated value for 3 d.f. at 5% level of significant. Thus, interest rate on deposit of LBL is affected by the amount of deposit collected.

The correlation coefficient between interest rate on lending and amount loaned is positive ($r_{cd} = 0.895984$) which shows that when interest rate on lending decreases the amount loaned will also decrease and vice-versa. The coefficient is statistically significant as the calculated t - value, is greater than table value, 3.182. The coefficient of correlation between deposit and lending is positive ($r_{bd} = 0.98255$). The coefficient is statistically significant since calculated t-value is greater than table value. This means that both rates are significantly correlated.

The relationship of inflation with interest rate on deposit. r_{be}, and with interest rate on lending, r_{de}, is positive i.e 0.292551and 0.153475 respectively. The correlation coefficient, r_{be} and r_{de} are both statistically insignificant since, calculated t-values are smaller than table value . Hence it can be said that interest rate on lending of LBL is not influenced by inflation and there exists relationship between these variables.

The interest rate on 91 days TB is known as risk free rate. The relationship of risk free rate on deposit rate and lending rate is positive ($r_{bf} = 0.957857$and $r_{df} = 0.896463$). The correlation coefficient between risk free rate and interest rate on deposit is statistically significant because calculated t-value is greatet than table value. Hence, the interest rate on deposit of LBL is affected by risk free rate. The correlation coefficient between interest rate on lending and risk free rate. r_{df}, is statistically significant as the calculated t-value is greater than table value. Therefore interest charged by LBL on lending is affected by the risk free rate.

To examine the combined effect of independent variables on interest rate on lending, the multiple correlations have been computed. The coefficient of multiple determination assuming interest rate on deposit as dependent and amount deposited and lending rate as independent, $R^2_{b.ad}$, is 0.9982, which means that 99.82% of total variation in dependent variable has been explained by two independent variables.

On the other hand the coefficient of multiple determination assuming interest rate on lending as dependent and amount loaned and interest rate deposit as independent, $R^2_{d.bc}$, 0.9952 which means that effect of two independent variables on the total variation in dependent variable is 99.52%. Similarly, the multiple correlation coefficient between interest rate on lending, inflation rate and risk free rate, assuming interest rate on lending $R^2_{d.ef}$ is 0.8846 which means that 88.46% of total variation in dependent variable is the effect of other two independent variables and remaining is the effect other factors.

4.2.5. Kumari Bank limited (KBL)

Table 4-9
Amount of deposit and lending, interest rate on deposit and lending of KBL, inflation and risk free rate

Fiscal Year	Deposit Amount (Rs. in million) "a"	Interest Rate on deposit "b"	Loan Amount (Rs. in million) "c"	Interest rate on lending "d"	Inflation rate "e"	Risk Free Rate "f"
2007/08	10560	3.00	9011	9.02	6.4	2.42
2008/09	12774.3	3.66	11335.1	9.37	7.7	4.22
2009/10	15710.9	4.17	14593.4	9.69	13.2	5.83
2010/11	17408.5	7.1	14875.1	13.2	10.5	6.5
2011/12	16986.3	7.1	14898.4	13.2	6.8	7.41

Source : Annual reports of KBL & various financial statistics published by NRB.

Table 4-9 shows the amount deposit collected, Interest rate on such deposits, amount loaned and interest on loan of KBL for five fiscal years from 2007/08 to 2011/12. Inflation rate risk free rate for the sample period has also been presented. Simple and multiple correlation coefficients, coefficient of determination and t- value are presented in table 4-10.

Table 4-10
Correlation analysis (KBL)

Variables	coefficient of correlation	coefficient Determination	t-statistics	Table value	Remarks
r_{ab}	0.893498	0.798338	3.446114	3.182	Significant
r_{bd}	0.994827	0.989681	16.96202	3.182	Significant
r_{cd}	0.745526	0.555808	1.937427	3.182	Insignificant
r_{be}	0.088281	0.007794	0.153502	3.182	Insignificant
r_{bf}	0.887	0.78677	3.326957	3.182	significant
r_{de}	0.007525	0.0000566	0.013034	3.182	Insignificant
r_{df}	0.838789	0.703567	2.668318	3.182	Insignificant
Multiple Correlation Coefficient	$R_{b.ad}=0.9299$ $R_{d.bc}=0.9921$ $R_{b.ef}=0.9957$ $R_{d.ef}=0.9668$	Coefficient of Multiple Determination			$R^2_{b.ad}=0.8647$ $R^2_{d.bc}=0.9843$ $R^2_{b.ef}=0.9914$ $R^2_{d.ef}=0.9347$

Figure 4-5
Relationship between rates of KBL
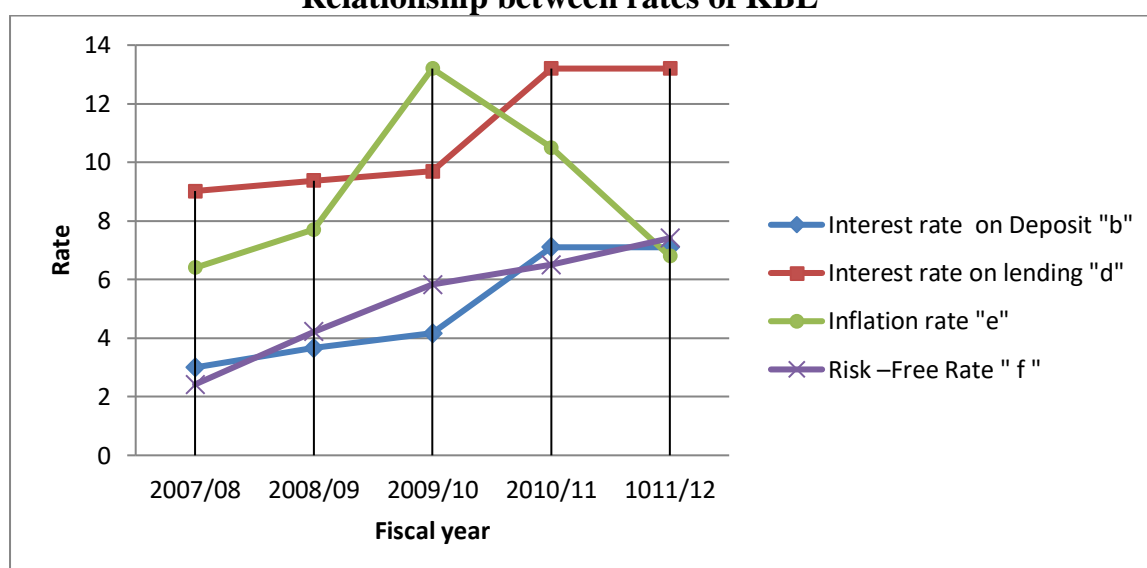
The coefficient correlation between deposit amount and interest rate on deposit are positively correlated (r_{ab}=0.893498). The positive relationship shows that when amount deposited increases i.e. supply of fund, interest rate (return on deposit) on such deposit also increase and vice-versa. The coefficient of correlation is statistically significant because calculated t- values is greater than tabulated value for 3d.f at 5% level of significance . Thus, interest rate on deposit of KBL is   affected by the amount of deposit collected. The correlation

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coefficient between interest rate on lending and amount loaned is also positive (r_{cd}= 0.745526) which shows that when interest rate on lending decreases the amount loaned will decrease and vice-versa. The coefficient is statically insignificant as the calculated t- value 1.9374, is smaller than table value 3.182 .This means that the amount loaned and interest rate on lending are not affected.

The correlation coefficient between interest rate on deposit and lending is positive (r_{bd}=0.994827) . The coefficient is statically significant since the calculated t- value is greater than table value (16.961>3.182). This means that both the rates are significantly correlated. The coefficient of determination between both the rates is 0.989681 which means been explained by interest rate on deposit.

The relationship of inflation with interest rate on deposit ,r_{be} and within interest rate on lending , r_{de} are 0.088281and 0.007525respectively. But the correlation coefficient r_{be} and r_{de} are statistically insignificantly since , calculated t- value is less than table value. Hence it can be said that interest rate on lending of KBL isn't influenced by inflation and there exists inverse relationship between the variables.

The relationship of risk- free rate on deposit rate and lending rate is positive (r_{bf}=0.887and r_{df} =0.838789). The relationship of risk free on deposit and risk free rate on lending are statistically significant and insignificant respectively. The correlation coefficient between interest rate on lending and inflation rate r_{de} is statistically insignificantly as the calculated t- value is smaller than table value. The risk free interest rate charged by KBL on lending is not affected by the risk free rate.

The coefficient of multiple determinations assuming interest rate on deposit as independent and amount deposited ad lending rate as dependent, $R^2_{b.ad}$ is 0.8647 which means that 86.47% explained by two independent variables.

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On the other hand the coefficient of multiple determination assuming interest rate on lending as dependent and amount loaned and interest rate deposit as independent, $R^2_{d.bc}$, O.9843, which means that effect of two independent variables on the total variation in dependent variables is 98.43% . Similarly, the coefficient of multiple determination, $R^2_{d.ef}$ of 0.9347 assuming interest on lending as dependent and inflation and risk free rate as independent means that 93.47% of total variation in dependent variable has been explained by two independent variables.

Table 4-11
Deposit amount of sample commercial bank

Rs. is Million

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
EBL	19097.7	23976.3	33323	36932.3	41127.9
NIBL	24488.9	23976.3	46697.9	50094.7	50138.1
NABIL	19097.7	23976.3	33323	46334.8	49691.6
LBL	7611.7	10917.2	16051.3	18082.9	18299.6
KBL	10560	12774.3	15710.9	17408.5	16986.3

The above table shows the list of the deposited amount of 5 commercial banks. The deposits of sample organization are seen in increasing trend. The size of deposit amount of NIBL bank is always high in the year 2007/08, 2008/09, 2009/10, 2010/11 and 2011/12 which is shown in above Table 4-11. The size of deposit of NIBL is the highest among the sample organization while KBL has smallest size of deposit. It has also been presented in Figure.

Table 4-12
Amount of loan distributed by sample commercial banks

Rs in million

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
EBL	14059.2	18339.1	23885	28129.7	31534.7
NIBL	17482	26996.7	36241.2	40689.6	41665.2
NABIL	14059.2	18339.1	23885	32902.8	38765.6
LBL	6527.5	9681	13315.6	14731.8	15262.7
KBL	9011	11335.1	14593.4	14875.1	14898.4

From the above table 4-12 shows the amount of loaned by different sample Commercial Bank. The amount loaned is found in increasing trend of almost all the sample organization. In the year 2011/12 Nepal Investment Bank Limited (NIBL) has highest loan amount shown in the table – 14. The size of LBL has lowest loan amount. But in the fiscal year 2011/12 the KBL has lowest loan amount. It has also been presented in figure.

Table 4-13
Interest rates on deposit of sample commercial banks (in percent)

Fiscal year	2007/08	2008/09	2009/10	2010/11	2011/12
EBL	3.36	3.6	3.6	3.88	3.88
NIBL	2.64	3.6	3.09	3.1	3.1
NABIL	3.36	3.6	3.6	7.36	7.36
LBL	3.48	4.36	5.91	7.93	7.96
KBL	3	3.66	4.17	7.1	7.1

The above table 4-13 shows the interest rate n deposit of all sample organization. The interest rate on deposit of all sample organization in increasing trend. Among the sample organizations, LBL has the highest rate of interest rate i.e. 3.48% in FY 2007/08 and NIBL has least interest rate in FY 2007/08 i.e. 2.64% the interest rate on deposit of NABIL and LBL is found to be more fluctuating.

Table 4-14
Interest rates on lending of sample commercial banks (in percent)

Fiscal Year	2007/08	2008/09	2009/10	2010/11	2011/12
EBL	7.59	8.15	8.15	8.58	8.58
NIBL	9.08	8.15	8.55	8.55	8.55
NABIL	7.59	8.15	8.15	11.4	11.4
LBL	9.37	9.54	10.45	12.5	12.5
KBL	9.02	9.37	9.69	13.2	13.2

The above table 4-14 depicts the interest rate on lending different sample commercial banking sector from FY 2007/08 to 2011/12. According to the table the interest rate on lending are seen to be in increasing trend as the increment in interest rate on deposit brings the change in interest rate on lending in the same direction. In the FY 2007/08 the interest rate on lending of LBL is highest i.e. 9.37% that of NIBL is at least 9.08%. Similarly FY 2008/09 also LBL rate is highest and EBL, NIBL, NABIL rate is least but in FY 2009/10 LBL rate is highest & EBL and Nabil rate is least. But in FY 2010/11 and 2011/12 KBL rate is highest & NIBL rate is least. The interest rate on NIBL is less volatile where as NABIL, LBL and KBL are more volatile. The interest rate on lending of NIBL are greatly decreased from 9.08 to 8.15 and then increase to 8.55.

4.3. Qualitative analysis (Questionnaire)

There are various other qualitative factors that affect interest rates of Nepalese Financial Institutions rather than responding demand, supply, inflation & risk-free rate. A questionnaire (qualitative analysis tool) was made including the factors considered to be affecting the interest rate of Nepalese Commercial Bank. Opinions and experiences of various related persons from various financial institutions have been collected through questionnaire and direct interview which are presented as below.

4.3.1. Maturity period and interest rate

Theoretically interest rate is affected by the maturity period of loan. The longer the maturity period higher will be the risk (i.e. failure to repay to loan) and hence higher will be the risk – premium added to prime interest rate. This principal is not significant in Nepalese context. From the questionnaires and direct interviews, we found that most of the organizations do not consider maturity period of loan but few institutions are aware consider maturity. Generally, institutions do not prove long-term rather they renew frequently according to the borrowers' creditworthiness in terms of size of their business or project, cash flow capacity and pattern nature of loan, goodwill and trustworthiness of borrowers etc. therefore rate for other category is the higher than prime. Institutions do not quote their interest rate on lending according to maturity period rather they quote separate rate for different sectors but few organizations quote their rate according to maturity. They change higher interest for longer-maturity-loan.

4.3.2. Competition and interest rate

Competition is the most important factor among the various factors affecting interest rate of commercial bank of Nepal competition occupies a major place for the development of financial institutions within the financial system of Nepal. Interest rate charged and offered by Nepalese Commercial Bank Compete within their group. Generally, interest rate on agriculture loan is smaller than industrial loan. But the interest rates of Commercial Bank are highly competitive as they are targeted to specific customers group.

4.3.3. Sector wise difference/ risk factor

Commercial Bank of Nepal also provide loan to different sector and for different purpose. Quoted interest rate on loan differs according to risk nesses

of the sector. Following table shows quoted interest rate of Everest bank limited.

Table 4-15
Interest rate structure of EBL

Sectors	% p.a.(prime)	% p.a.(others)
Hire Purchase	7.5	9
Housing	8	9
Term Loan Industry	8.5	9
Trading	9	10
Working Capital	-	-
Loan against FDR	(+1)	(+1)
Loan against acceptable	7	8

Source: Financial documents EBL

Above table shows that quoted interest rate differs according to the loan for different purpose and sectors. However while interviewing respondents of various institutions it has been found that quoted interest rate may not be applicable in practice. Lending institutions may provide loans at slightly different rate from quoted rate. While charging the interest rate, lender considers the trustworthiness of customer, cash flow power volume of loan etc. Hence lower quoted rate may be fixed through negotiation. NRB has also given permission and spread to be maintained has been removed, For example, interest rate on hire purchase is 7.5% & that on housing is 8 % but in reality & borrower may get Hire purchase loan at less than Housing loan. Hence we can say that sector wise riskiness in fixing interest rate on lending of Nepalese commercial bank is less.

4.3.4. Political instability and violence

Political instability and violence has become phenomenal in Nepal. Our main concern here is whether the violence and instability directly affect interest rate of Nepalese Commercial Bank or not. From questionnaire and interview with

respondent, we found that the instability directly affect interest rate of Nepalese Commercial bank or not. From questionnaire and interview with respondent, we found that the instability and violence is directly affecting the interest rate charged and offered by the institutions. Most respondents said that interest rate is directly affected. According to them, instability and violence is affecting their operations. Frequently organized strikes, bandas reduce the working hours of the institutions and the added operating cost burden (especially for a fixed price). According to respondent the interest rate is affected by the actives of political parties and violence. Such activities dampen the overall economy that is why business growth rate decreases and lending opportunities are curtailed. This results is decreased demand of loadable markets are in decreasing trend. This may be because of slackness in economic growth. Similarly, frequently changing governments are also affecting overall operation of financial institutions including interest rate, through of different government and governor of NRB regarding financial system of the country.

Violence also is reducing the investments opportunities of individuals. People are afraid to invest due to the lack of safety and security. With a fear that their return from investment may be uncertain, people deposit money at bank. Analysis of deposit trend in recent years in Nepalese financial market shows so, hence, supply of loanable fund in financial institutions is increasing and return on such fund to depositors (interest rate on deposit) is decreasing. Therefore political instability and violence, in the experience of commercial Bank, have been directly influencing interest. Therefore, question was asked, "Does political instability and violence in our country influence interest rate charged and offered by your institutions?" Following responses was found for this question:

Table 4-16
Impact of political instability and violence

S.N.	Responses	No of respondents	Percentage
1	Directly influencing	11	55
2	Normally influencing	4	20
3	Affecting to some extent	2	10
4	Not directly influencing	3	15
5	Not influencing at all	0	0
	TOTAL	20	100%

Source: Primary Data

Figure 4-6
Impact of political instability and violence
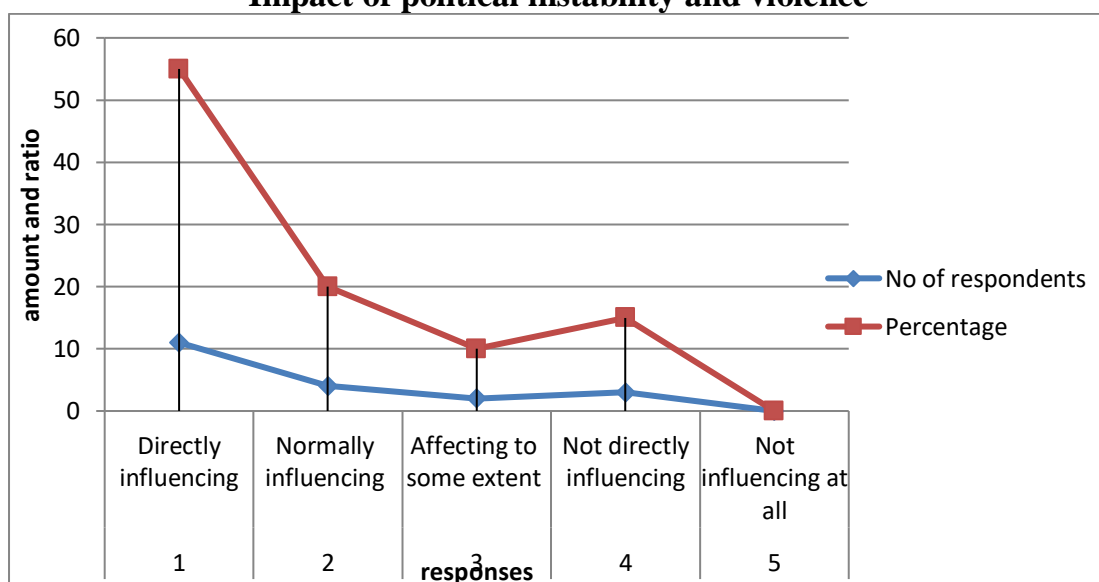
4.3.5. Open border with India and interest rate

Nepal has a log range of open border with India known as Das Gaza. Any economic activity in India directly affects Nepalese economy. More than 60% of total foreign trade (export and import) of Nepal is with India. Therefore, question was asked," Does open boarder with India affect interest rate on borrowing and lending?" following responses was found for this question:

Table 4-17
Impact of open border with India

S.N.	Responses	No of respondents	Percentage
1	Highly influencing	10	50
2	Normally influencing	5	25
3	Affecting to some extent	3	15
4	Not directly influencing	2	10
5	Not influencing at all	0	0
	Total	20	100

Source: Primary Data

Figure 4-7
Impact of open border with India
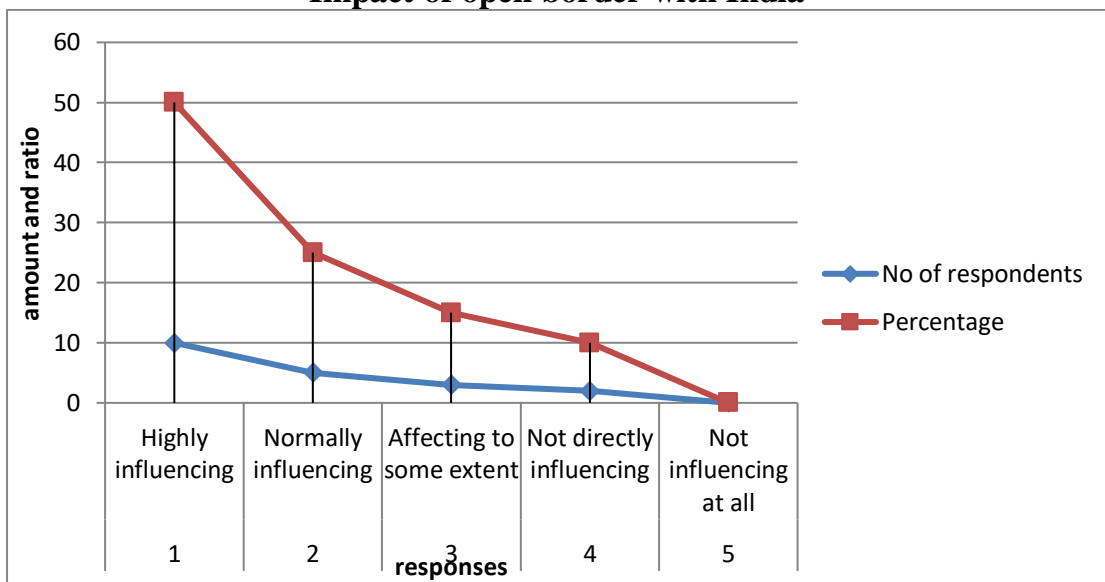
From the analysis of above open boarder with India does not directly affect the interest rate charged and offered by Nepalese Commercial Bank. Near the border area, some agents from Indian financial institutions collect deposit from Nepalese customers but it is not significant to reduce the loadable fund in Nepalese Banking sector. In long-run open border with India influences the whole Economy of Nepal, which also includes financial sector (i.e. indirect impact).

4.3.6. Seasonal impact

Nepal being the hilly country and probable victim of most natural calamities suffers from disasters like landslides and roads get blocked even for a week or month in rainy season. Trading and manufacturing business needs to keep more inventories for their regular operation in the situation of road block. Our institution was that businesses borrow more in the beginning of the rainy season to keep more inventories which increases the demand of loan and interest rate on lending increases. But in reality our belief came false. No single organization from sample organizations has been experiencing such impact on interest. It is so because out of total lending of institution only small portion is occupied by working capital loan. Therefore, we can conclude that there is any seasonal impact on interest rate charged and offered by Nepalese financial institution.

4.3.7. NRB and interest rate

Central bank has a sole authority in affecting the level of interest rates by controlling the money supply and credit creation of Commercial Bank through monetary and fiscal policy. Central Bank of Nepal. Nepal Rastra Bank (NRB) has the authority to fix the rate of bank and other financial institutions. But now due to liberal economic policy Commercial Bank are free to fix their rate charged and offered. However various other activities, policy measures and directives issued by NRB influence the interest rate directly or indirectly in Nepalese financial market. Among these various measures, some are:

a) Cash reserve ratio

b) Refinance facility

c) Bank rate

d) Buying and selling of foreign exchange

e) Open market operation

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The financial institution must put certain percentage of their deposit in NRB and certain percentage in their own vault. This statutory reserve is called cash reserve ratio (CRR). NRB gives instructions from time to time from Commercial Bank specifying the CRR to by maintain by them similarly NRB provides refinance facilities to the lending institutions in necessity at certain rate to increase the liquid fund. Another monitory instruments used by central bank to influence money supply is Bank Rate. Buying and selling of foreign exchange is another monetary measure that NRB uses to adjust the liquidity. NRB reduces the market liquidity by selling foreign currency and increase liquidity from buying foreign currency from market. A primary tool to influence money supply (liquidity) is the open market operation of NRB.

4.3.7.1. NRB's directives and interest rate

Besides taking various monetary measures, NRB also issued directives to commercial bank and other financial institutions regarding their actives and policies. Among various directives issued some of them which affect rate charged and offered by Nepalese financial institutions are mentioned here.

Single borrower limit is one of the directives issued by NRB that affect interest rate indirectly. As per the directives, commercial banks, development bank, and finance companies can provide loan to signal borrower (i.e. an individual or an organization or a firm or a company or members of signal family) up to 25% of their core capital for fund based loan. But this limit for non-fund based loan 50% of core capital. However, loan on security of government bond/NRB bond/ fixed deposit receipt is not restricted by this vision. Slight difference is made in the directives issued to saving and credit co-operatives. They can provide loan to signal borrower up to 10% if borrower is in second time up to 20% of their core capital if borrower is borrowing in third time and or more. Similarly, co-operatives can provide loan to their member up to 80% of the project cost 20% must be the borrower's equity. Similar restrictions reduce the amount loaned (demand of loan) which may influence the interest rate on

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lending. Similarly reduced loan-advanced also reduces the deposit requirement and reduction in the interest on deposit also occurs. Limitation regarding fund collection i.e. deposit collection has also been made in directives issued. According to the directive, commercial bank can collect deposits from public not more than 15 times of their core capital. Development bank and finance companies are forbidden to accept the fixed deposit of less than 3 months. Development banks can collect saving deposit up to 20% of total financial resources whereas finance companies can collect saving deposit up to 2.5 times of their core capital. Finance companies and co-operatives can collect financial resources (deposit, borrowing, and debenture) up to 10 times of their core capital. Such type of limitations reduces the source of fund (fund collection) for the institutions which reduces the liquidity in institution and impact may be the higher interest rate on lending because of low supply of loanable fund.

NRB also issued directives directly to influence interest rates in financial market. A directive issued in 2000 had specified that the commercial banks could offer interest rates more than published rate by 50 basis point on the basis of negotiation with customer for the deposit up to Rs. 200 million and 100 basis point for the deposit of more than Rs. 200 million over the published lending rate for all type of loan banks could make adjustment up to 50 basis point on the basis of negotiation with the customers, Weighted average interest rate spread must not exceed was 5%, but the restriction is already removed. Now banks and other financial institution are free to fix their interest rate they are not allowed to charge interest on flat basis. Hence, instruction and directives issued by NRB in different time periods affect the interest rate level in Nepalese financial markets.

4.3.7.2. Commercial financial institutions experience

When a question was asked "Does NRB directives influence the interest rate charged and offered by your institution?" Respondent's answer to this question is shown in the table and figure below:

Table 4-18
Financial institutions experience

S.N.	Responses	No respondents	Percentage
1	Directly influencing	4	20
2	Influencing somewhat	12	60
3	Indirectly influencing	2	10
4	Not at all affecting	2	10
	Total	20	100

Source: Primary Data

Figure 4-8
Financial institutions experience
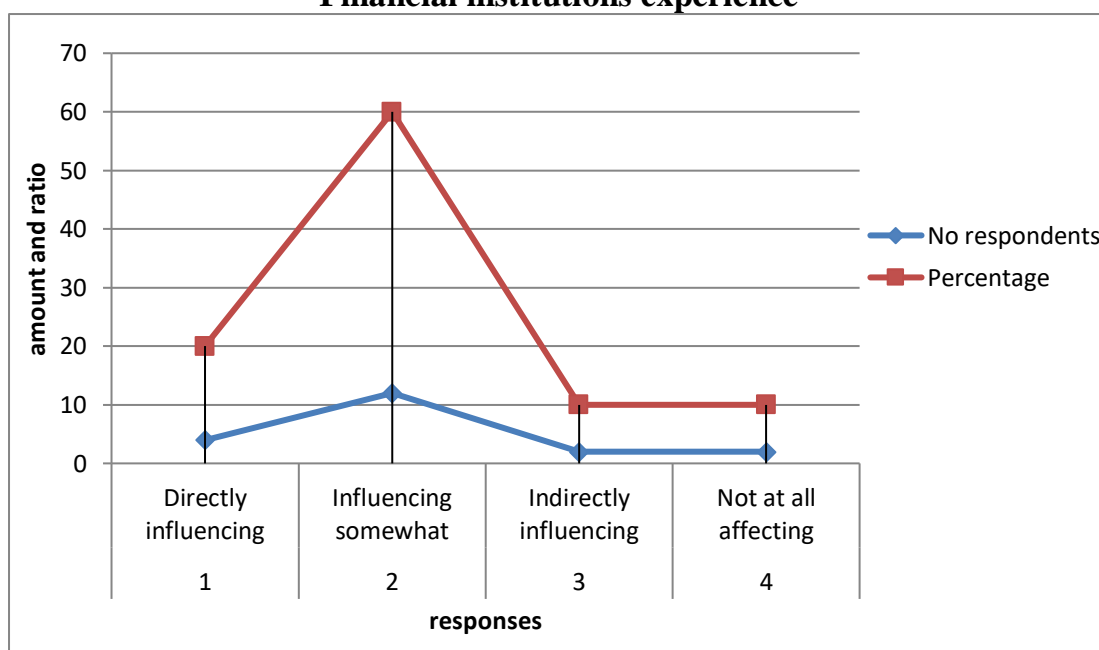
4.3.8. Other factors that affect interest rates of Nepalese commercial bank

There are numerous factors that are considered to be affecting the interest rate charged and offered by Commercial Bank of Nepal. There is lack of the investment opportunities to public to and increasing crime and robbery in Nepal, people are depositing their money into commercial bank and other financial institutions. Increasing trend of deposit shows so. Therefore, liquidity in financial institutions (supply loanable fund) is increasing. Increasing supply of fund is giving downward pressure on interest rate on deposit. Similarly, foreign employments to Nepalese people are increasing in recent years.

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Nepalese employees in aboard, remit their remuneration through money transfers or finance companies. Similarly Nepal gets many grants, loans, from other countries which also help to increase the liquidity in Nepalese financial market which is giving the downward pressure on interest rate on deposit.

Interest rate charged by institutional lenders varies borrowers to borrowers because it is affected by borrowers' specific factors. While approving the loan lenders evaluate the performance of the borrowing company, volume of business, reputation and goodwill of the borrower's collateral base etc. If the performance of borrowing company is satisfactory to the lender, interest rate for such borrower will be lower. The borrowing company having good reputation and high goodwill can get loan at lower rate. Similarly the volume of business of borrower also affects the interest rate on lending. Generally, high volume business operates at lower cost compared to small business due to cost synergy effect. Thus they earn more profit and able to repay loan. On the other hand, larger business require large amount of loan. Lending cost (or service cost) to lender will be less for large amount loan rather than maintaining various accounts for many loans of Lower amount. Borrowers who borrow regularly from same organizations gets the loan at lower rate because his/her trustworthiness towards institutions increase and institutions also treat such customers as loyal customer. Considering all such factor, institution categorized their customer in two categories viz: prime and other. The prime customer are charged lower rate of interest rate as compared to other customers.

Interest rate of Nepalese Commercial Bank is also affected by broad economic factors. National and international economy, business cycle to large extent is responsible for determining the interest rate of commercial Bank. Nepalese economy has been slowing down in recent years. Economic growth rate is very slow due to various factors like political instability, conflict, terrorists attacks etc. thus business are closing down rather than growing. Business persons are

hesitating in investing in productive sector because their return is uncertain. In this situation demand of loanable fund is decreasing. The effect of this reflected in decreasing interest rate on lending. Similar impact can be seen in deposit rate. Reduced lending opportunities have been reducing the deposit requirement which is reflecting in interest rate on deposit.

4.4. Major findings

❖ The liquidity positioning is one of the important factors to determine interest rate. The interest rate is in declining trend as in increase deposit balance showing negative relation of interest rate with the increase in liquidity position. The decrease in interest rate in lending over the years with increase in lending amount might be over liquidity.

❖ The correlation coefficient between interest rate on deposit and lending are found moderate negative and highly negative indicating that whatever may be deposit accepted or amount loan, they are inversely related with the interest rate.

❖ The relation between the two interest rate on deposit and lending ranges from 0.725 to 0.994 which means that the interest pattern in savings and borrowings both moves in the same direction.

❖ Interest rate on both deposit and lending has found to move in the opposite direction with the inflation rate which contradicts with the general principal. The reasons might be saving patterns and lack of investment opportunities due to political instability, lack of security, etc.

❖ Risk free rate taken as foundation of interest is found to be positively related with the market rate which supports or general principal of scaling up the interest from risk free rate as the premium is charged on risk free rate according to the special characteristics of individual assets.

- ❖ Interest rate charged and offered by Nepalese Commercial Bank is shaped by the competition among Commercial Bank to a large extent as known by the direct interviews with the concerned persons of the financial institution.

- ❖ Negotiation between customers and financial institution may make the quoted rate according to the sector differ.

- ❖ Political instability, violence, open boarder with India are responsible for economic slackness which ultimately affects interest rate through influencing demand and supply forces.

- ❖ Various policies and directives (Fiscal and Monetary) are also the responsible factors for determining the interest rate charged and offered by the Nepalese Commercial Bank.

CHAPTER FIVE

5. SUMMARY, CONCLUSION & RECOMMENDATIONS

This chapter is the last part of the study which is the most important chapter for the research because this chapter extracts all the previously discussed chapters. This chapter comprises summary conclusion and recommendations. Summary parts include revision of all four chapters. Conclusion part contains the summary of the results from the research and eventually, in recommendations part suggestions or recommendations are made based on the results and experiences of the thesis. Recommendations are made to the concern authorities and further researchers to improve or solve the problems on the basis of findings.

5.1. Summary

Nepal is a small country sandwiched between two economically powerful countries China and India. Its pace of economic development is still in its infant stage. Rich natural resource are lying under the earth due to lack of technical knowhow and financing. As the economic development of the country depend upon efficient transformations of saving from the hand of surplus unit into deficit unit in a productive ways. This transformation takes largely through the intermediation of financial institutions. Financial institutions are business organizations that act as immobilizers and depositors of savings and as suppliers of credit and finance. Commercial banks collect the remittance to generate the interest and commissions. Interest is the payment made for the use of money and interest rate is the amount of interest paid per unit of time expressed as a percentage of the amount borrowed. What are the responsible factors to the determinations of the interest rate of Nepalese commercial banks are the main objectives of the study.

First chapter is followed by theoretical review of different views of interest and theories determining interest rate. Interest rate has been reviewed in this chapter, which offers insights into the functioning of the financial system. The classical theory of interest emphasizes saving and investment demand as interest rate determining factor, while the liquidity preference theory points to the demand and supply of cash balances. Loanable fund theory view interest rate as determined by the total demand for and supply of credit while the rational expectation theory emphasizes the role played by public expectation regarding interest rate, economy and the impact of the information's on the movement of the interest rate to the new equilibrium. According to the Fishers effect if expectation inflation rate raises the nominal interest rate on a financial assets must also rise by exactly the same amount, point for point. The yield curve or term structure of interest rate express the relationship between the annual rate of return on a financial company and its term to maturity when all the other factors are held constant. Regardless of which theory is valid yield curve can play a key role in management of financial companies, which borrows a substantial portions their funds are the sort end of the maturity spectrum and lend heavily at longer maturity the price of securities and its yield are inversely related. We have examined four different methods of calculating effective interest rate in chapter two. Interest rate is also effected by economic growth budget deficit, servicing cost exchange rate risk etc. even the study on this topics is not available some thesis and independent studies relating to some aspect of the study have been reviewed in this chapter.

The factors affecting interest rate charged and offered by Nepalese commercial banks are analyzed using statistical tools mention in chapter three. Out of which the total commercial banks only five are taken as sample. Primary data are collected using questionnaire interview and secondary data collected from various publications, websites, and annual reports of respective organizations. Collected data are presented in the tabular and graphics forms and are analyzed

using various statistical tools like mean, correlation coefficient, t-statistics and coefficient of determinations in chapter four.

5.2. Conclusions

From the analysis of relevant data of sample commercial banks under study using various statistical tools following conclusions have been drawn out which also has been expressed in tabular form in "Appendix C".

- When the correlation coefficient between the interest rate on deposit and amount of deposit (r_{ab}) is analyzed, it is found that all the sample banks are positive. Here the correlation coefficient of EBL NABIL, LBL, KBL are statistically significant. This matches the theory of interest as there is positive relationship between there variables measuring that higher interest rate attract more deposit. Hence the positive correlation shows that when suppler increase price (interest rate) also increases also the positive relationship shows that the saving is increasing even if the rate of such deposit increases.

- The amount of the loan is the factor affecting interest rate on lending. The relation between these factors has been analyzed using correlation coefficient (r_{cd}) the correlation coefficient between amount of loan and interest rate on lending of NIBL bank is found negative. The contradict relationship of lending of found with interest rate of the commercial bank might be due to the several factors like unsecured investment opportunities, saving pattern of individual household etc.

- The relationship between interest rate on deposit and lending (r_{bd}) for all sample banks are highly positive except NIBL. Among sample banks, these coefficients are statistically significant for four banks. It means both rates are dependent to each other. The insignificant correlation for one bank contradicts with general theory.

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- The relationship between interest rate on deposit and inflation rate (rbe) is negative, which is -0.0588 for NABIL. The correlation coefficient for all sample banks is statistically insignificant. Theoretically there should be positive correlation between these two variables. This shows that the Fishers effect is not perfectly functioning in Nepalese financial market. Even increase in inflationary rate individual is willing to save more and more fund causing the lower in market interest rate.

- The correlation between interest rate on lending and inflation rate (rde) for all sample banks is negative for NIBL and NABIL. All of them are statistically insignificant. Nepalese financial market is affected by inflation to some extent. It may be due to the higher liquidity position cause be either Nepalese individual saving pattern or by lack of investment opportunities.

- Correlation coefficient between interest rate on deposit and risk free rate (rbf) of selected sample banks is highly positive. The insignificant relationship means that the nominal interest rate on deposit is not significantly affected by risk free rate of interest.

- The relation between interest rate and lending with risk free rate is highly positive for all sample banks. The correlation coefficient is statistically insignificant for some and significant for other sample banks, which means that the interest rate on lending is somewhat affected by risk free rate.

- Competition among the commercial banks is most significant factor to determine interest rate charged and offered by Nepalese commercial banks. Each bank has targeted specific group of customers.

- Maturity period of loan seems not important factor to effect interest rate on lending but interest rate on deposit is affected by the maturity period. Generally institutions do not prove long term loan rather they renew frequently according to the borrower's credit worthiness.

- In spite of different interest rate quoted by commercial banks for different sector loan, it is not so significant in determining interest rate, as the rate may be higher or lower than quoted through the negotiation.

- Political instability and violence in a country has great and significant impact on amount of deposit lending as well as interest charged and offered by the Nepalese commercial banks. From the questionnaire and the direct interview it is concluded that frequently changing government affecting the overall operation of commercial banks including interest rate. Similarly, violence is also reducing investment opportunities.

- Open border with India is not important factor to affect the interest rate charged and offered by Nepalese commercial banks.

- The deposit amount of all sample banks is in increasing order though the interest rate on deposit is in decreasing trend. This is due to lack of investment opportunities, because the high supply of saving deposit reduce the cost of borrowing.

- The interest rate on lending is decreased by more percentage point in comparison to deposit interest rate. Commercial banks are willing to lend even in lower rate due to over liquidity.

- Seasonal impact has nothing to do with the interest rate charged and offered by Nepalese commercial banks.

- Various regulatory and promotional roles played through various monetary measures and directives issued by NRB from time to time affect the interest rate to a large extent. CRR, refinance rate, bank rate, buying and selling of foreign currencies and treasuries are some of the measures use by NRB to influence interest rate.

- Performance of the borrowing company, collateral based goodwill and reputation of the company, loyalty, size of business, volume of loan bargaining power etc are some of the specific factors influencing interest rate on lending. Besides, it reduction on lending opportunities due to terrorism, conflict, insecurity etc, according to the respondent are some long term economic factors that affect interest rate. The study shows that there is over liquidity with commercial banks, which is shown by increasing trend of deposit.

5.3. Recommendations

Financial market the major part of which is occupied by financial institutions is growing with the snails speed. Its existing operational problems, fragile legal framework and unnecessary political interventions and control of NRB and government are responsible factors for its under development. The role of financial institutions should be efficient toward transformations of fund between savers and users form nook and corner for the productive use of funds. Capital and investment is essential as it is considered as the key sources of any organization for good financial system. For the purpose of proper decision making in the field of determining interest rate is very crucial. It is possible only by proper decision making of interest. So, all financial institutions are suggested to set proper and practical interest rate policy.

Based on the analysis, interpretations and conclusions the following recommendations can be made which would be helpful in near future for the commercials banks, researchers and academicians.

- NRB, the information house for public and other concern parties, has authority to control and stimulate the financial system. Financial information is the strong power. Therefore, NRB is suggested to provide and improve its mechanism in information dissemination activities so that all the concern parties can make correct decision at the right time and at the right place. Further, more NRB directives and policies issued in different time are fragile and contradict sometime in it. Therefore, NRB is suggested to develop stable legal framework to formulate solid policies.

- There is inconsistency in payment and charge of interest rate. This may create misconception about the organizations regarding its financial positions and profit. So commercial banks are suggested to fix concessional rates on lending so that it can increase investment opportunities and promote industrial sectors.

- The concern person of the organization under study hesitates to co-operate the researcher in providing necessary financial data and information. So, the concern parties are suggested to co-operate with further researchers. Furthermore, institutions are suggested to include their interest rate structure in their annual report. Government and NRB should aim at promulgating suitable policies to enhance the development of economy and motivates financial intermediaries in canalizing the idle fund in productive sectors.

- Commercial banks are authorized to accept deposit under several schemes and to mobilize the funds in wide range of productive sectors like agriculture, industry, trade and commerce. So, such organizations should performing carrying role of providing specialized service to their clients, introduce new schemes, offering higher rate of interest which may solve the problem of over liquidity.

- Commercial banks are suggested to consider inflation rate while quoting the interest rate on deposit. So that the depositors real rate of return comes in positive. Because the negative rate of return hurts the deposit holders.

- There should be fair competition among the financial institutions aiming at providing quality service, but in the name of competition the financial institutions are suggested not to exploit the customers. Similarly, the clients are suggested to be aware about the fact that the effective interest rate differ with the quoted interest rate.

- The increasing trend of deposit that pressure down the interest rate shows that the financial institutions are facing over liquidity problems due to insecurity, lack of investment opportunities and political instability. Commercial banks are suggested to manage the over liquidity through the applications of various techniques of liquidity management.

- The other aspects other than discussed in this study are suggested to be searched by the other researchers.

The economic activities are slacking down due to the political activities prevailing in the country for which the government has to provide security and develop infrastructures. Investment opportunities are curtailed and every financial company is facing over liquidity problem. To boost up the economy the stabile policy, sustainable peace in the country is the present need. So the government should give the solid outlet to violence faced by the county for the last decade through proper arms management, peace talks under the keen monitoring
of UN.

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Ref: A sincere request to fill the questionnaire

It gives me a pleasure to inform you that I am carrying out a research entitled "Factors influencing interest rate on Nepalese commercial bank" The real objective behind conducting this research work is to explore and identify the key factors affecting interest rate of Nepalese commercial bank. The other objective of the study is to find out the interrelation between these factors with the interest rate. Therefore you are solicited to share your valuable and thoughtful experience by filling the enclosed questionnaire.

Thank you for your valuable contribution,

Sincerely,

Researcher

Rolina Shrestha

Patan Multiple Campus

Questionnaire relating to the study

Name: _____

Occupation: _____

Organization: _____

Date of establishment: _____

Address: _____

1. How far does the involvement of commercial banks in consumer financing affect interest rate charged and provided by this institute?

   a) Highly affecting (   )   b) Normally affecting (   )

   c)affecting to some extent (   )   d)not affecting at all (   )

2. Does interest rate differ according to maturity period of loan (time preference)?

   a) Yes (   )   b) No (   )

3. Does NRB directives influence interest rate charged and afford by interest rate ?

   a) Directly influencing (   )   b) influencing somewhat (   )

   c) Indirectly influencing (   )   d) Not at all (   )

4. Does competition among the market participants put any influence on interest rate on lending and borrowing of this institute?

a) yes (   )   b)No (   )

5. How far the open market operation of NRB is affecting interest rate charged and provided by these institutions?

a) Highly affecting (   )   b) Normally affecting (   )

c) Affecting to some extent (   )   d) Not affecting at all (   )

6. Does open border with India affect the interest rate on borrowing and lending?

a) Highly affecting (   )   b) Normally affecting (   )

c) Affecting to some extent (   )   d) Not affecting at all (   )

7. Is there any seasonal impact on interest rate charged and provided by your organization?

a) Yes (   )   b) No (   )

8. Do political instability and violence of influence interest rate charged and offered by your institution?

a) Directly influencing (   )   b) Normally influencing (   )

c) Affecting to some extent (   )   d) Not directly influencing Not at all (   )

e) Not influencing at all (   )

9. How far do the activities of local money lenders affect the interest rate of your organization?

a) Highly affecting (   )   b) Normally affecting (   )

c) Affecting to some extent (   )   d) Not affecting at all (   )

10. Do finance companies being smaller in terms of equity capital affect their interest rate?

a) Highly affecting (   )   b) Normally affecting (   )

c) Affecting to some extent (   )   d) Not affecting at all (   )

11. The country's situation is improving. Does it bring positive impact in deposit?

   a) Yes (   )   b) No (   )

12. What is the impact of income tax rule of Nepal in the interest rate charged and offered by

   this institution?

   a) Positive impact (   )   b) Negative impact (   )

   c) No impact at all (   )

13. What other factors other than mentioned above you think affect the interest rate?

   a) _____

   b) _____

   c) _____

   d) _____

14) What attracts you to deposit your savings in a particular bank?

   a) interest rate (   )   b) security (   )

   c) reputation of the bank (   )

15) In your view who should fix the interest rate ?

   a) central bank (   )   b) individual bank (   )