

A Study on Interest Rates of Commercial Banks



Submitted by:

MONIKA SHRESTHA
PADMA KANYA CAMPUS
T.U. Registration No. 5-1-37-72-99
Campus Roll No. 9 / 062- 063
Exam Roll No. 4053(2nd Year)/062-063

Submitted to:

Office of the Dean
Faculty of Management
Tribhuvan University

*In a partial fulfillment of the requirements for the degree of
Master of Business Studies (M.B.S)*

kirtipur, Kathmandu, Nepal

December, 2011

RECOMMENDATION

This is to certify that the thesis:

Submitted by:

MONIKA SHRESTHA

Entitled

A STUDY ON INTEREST RATES OF COMMERCIAL BANKS.

has been prepared as approved by this Department in the prescribed format of Faculty of Management. This thesis is forwarded for examination.

.....
.....

**Prof. Dr. Manohar Krishna Shrestha
Shrestha**

Thesis Supervisor

Lecturer MS Neera

Thesis Supervisor

.....

Lecturer MS Neera Shrestha

Coordinator MBS Programme

Date :

VIVA – VOCE SHEET

We have conducted the viva-voce examination of the thesis presented by

MONIKA SHRESTHA

Entitled

A STUDY ON INTEREST RATES OF COMMERCIAL BANKS

and found the thesis to be the original work of the student written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for the Degree of Master of Business Studies (M.B.S)

Viva-Voce Committee:

Member (Thesis Supervisor)

Member (Thesis Supervisor)

Member (External Expert)

Member (Research Thesis Proposal Committee)

Member (Co-Ordinator, MBS program)

Date: -

DECLARATION

I hereby declare that the work reported in this thesis entitled “**A STUDY ON INTEREST RATES OF COMMERCIAL BANKS**” Submitted to Padmakanya Multiple College is my original work. It is done in the form of partial fulfillment of the requirements for the Degree of Master of Business Studies (M.B.S) under the supervision and guidance of **Prof. Dr.Manohar Krishna Shrestha** and **Lecturer MS Neera Shrestha**

MONIKA SHRESTHA

(Researcher)

Roll No. 4053(2nd Year)/062-063

Date: -

ACKNOWLEDGEMENT

This research has been undertaken to study the Interest rates of commercial banks in Nepal under partial fulfillment of the requirement of MBS course under Tribhuvan University of Nepal. This Thesis has not come in shape without the contribution of many individuals and institutions. I take this opportunity to acknowledge those contributing branch. This Thesis has been aimed to analyze the factor affects, the interest rate provided by commercials bank of Nepal.

First, I would like to acknowledge the deepest gratitude to my Thesis supervisors Prof.

Dr. Manohar Krishna Shrestha and Co-ordinator of MBS program, Lecturer Ms Neera Shrestha, without whose valuable guidance and cooperation this Thesis work would not have come in this form.

Any accomplishment entitles the effort of many people,in this regard, I express sincere thanks to MBS department of Padma Kanya College, the then co-ordinator of MBS progrmamme, Associate Prof..Manik Ratna Tamrakar ,who supported as well as inspired me to complete this Thesis. I also want to thank all five commercial banks for their valuable resources provided by these banks.

It gives me intense pleasure to acknowledge Mrs Ashima Sharma, Miss Bijaya Adhikari for their valuable support in many respects. Also I am indebted to my family, specially to my sisters, Mrs. Bineets Shrestha and Miss Naina Shrestha, who continued to support me throughout research work.

At last, regardless of the source, I wish to express my gratitude to those people who have contributed to this work, even though anonymously.

Date: December 2011

Monika Shrestha

Researcher

TABLE OF CONTENTS

RECOMMENDATION

VIVA-VOCE SHEET

DECLARATION

ACKNOWLEDGEMENT

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

CHAPTER-1: INTRODUCTION	1-9
1.1 Background of The study	1
1.1.1 Interest Rate	2
1. 2 Brief History of Interest rate in Nepal	3
1. 3 Focus of the study	5
1.4 Statement of the problem	5
1.5 Objectives of the study	6
1.6 Significance\ Importance of the study	7
1.7 Limitation of the study	8
1.8 Organization of the study	8
CHAPTER-2: REVIEW OF LITERATURE	10-45
2.1Introduction	10
2.2 Theoretical Review	10
2.2.1Meaning of Interest rate	10
2.2.2 Factors incorporate in Interest	12

2.2.3 Theories of Interest Rate	12
2.2.4 Interest rate movements and its relevance	30
2.2.5 Economic Factors that affects interest rates	31
2.2.6. Risk and cost factors affecting interest rate	35
2.3 Concept of commercial banks	39
2.4 Review of relevant studies	41
2.5 Research Gap	45

CHAPTER-3: RESEARCH METHODOLOGY **46-52**

3.1 Research Design	46
3.2 Population and sample	46
3.3 Nature and sources of data	48
3.4 Data Processing Procedure	48
3.4.1 Financial analysis	48
3.4.2 Statistical Analysis or Quantitative Analysis	49

CHAPTER-4: DATA PRESENTATION AND ANALYSIS **53-83**

4.1 Financial Analysis of commercial bank	53
4.1.1 Net Interest Margin	53
4.1.2 Interest Spread	54
4.1.3 Interest Income	55
4.1.4 Interest Expense	56
4.1.5 Interest Earning Assets	58
4.1.6 Interest Paying Liabilities	59
4.2 Trend Analysis	60
4.3 Statistical Analysis	66
4.3.1 Coefficient of correlation Analysis Pearson	66
4.3.2 Simple and Multiple Regression analysis	73
4.4 Qualitative Analysis	77
4.5 Major Finding of the study	80

CHAPTER-5: SUMMARY CONCLUSION AND	84-87
5.1 Summary	84
5.2 conclusion	85
5.3Recommendation	86

BIBIOGRAPHY

APPENDIX

LIST OF TABLES

Table No.	Table Heading	Pages
4.1	Net Interest Margin	53
4.2	Interest Spread	54
4.3	Interest Income	55
4.4	Interest Expense	57
4.5	Interest Earning Assets	58
4.6	Interest Paying Liabilities	59
4.7	Return on Assets	61
4.8	Return on Equity	62
4.9	Non Performing Loan /Total Loan	64
4.10	Credit to Deposit	65
4.11	Coefficient of Correlation between Net Interest Margin and Return on Assets	67
4.12	Coefficient of Correlation between Net interest Margin and Return on Equity	68
4.13	Coefficient of Correlation between Interest Spread and non performing loan to total loan.	70
4.14	Coefficient of Correlation between Interest Spread and Credit to Deposit ratio.	72
4.15	Regression equation between II and IEA	74
4.16	Regression equation between IS, NPL/TL and C/D ratio	75
4.17	Political Instability and Violence	78
4.18	NRB and Interest rate	79

Figure No	Figure Topic	Pages
2.1	The substitution effect relating saving and Interest Rate	15
2.2	The investment demanding schedule	16
2.3	The equilibrium Interest Rate in classical Theory of Interest rate	17
2.4	The total demand for money	19
2.5	The supply of money in liquidity preference Theory	20
2.6	The equilibrium Rate of interest in the liquidity preference theory	20
2.7	The demand of loanable fund	22
2.8	The supply of loanable fund	24
2.9	The equilibrium Rate of interest in the loanable funds Theory	25
2.10	The expected demand for supply of loanable funds under the rational Exception Theory	26
4.1	Net Interest Margin	53
4.2	Interest Spread	55
4.3	Interest Income	56
4.4	Interest Expense	57
4.5	Interest Earning Assets	59
4.6	Interest Paying Liabilities	60
4.3	Return on Assets	61
4.4	Return On Equity	63
4.5	Non Performing Loan /Total Loan	65
4.6	Credit to Deposit	66

ABBREVIATION

NRB	= Nepal Rastra Bank
II	= Interest income
IE	= Interest Expense
IEA	= Interest Earning Assets
IPA	= Interest paying Liabilities
BOK	= Bank of Kathmandu
NIBL	= Nepal Investment bank
NABIL	= Nabil Bank Ltd
NSBI	= Nepal SBI bank ltd
ROA	= Return on Assets
ROE	= Return on Equity
C/D	= Credit to Deposit Ratio
NPL/TL	= Non performing loan to Total laon
P.Er	= Profitable Error

CHAPTER 1

INTRODUCTION

Background of study

Nepal is a landlocked underdeveloped country in south Asia having a democratic government. It is a developing country, sandwiched between two giant nation India and China, with their direct and indirect influence in its economic sector. Due to decade long conflicts and political instability the country has failed to experience the boom in manufacturing sector, therefore, the economic sector of the country is hugely depend upon the financial sector. The speedy development of any country in this modern era hugely depends on the financial activity of the country. In context of Nepal banks and other financial institution has played a pivotal role in an economic prosperity of the country. Prosperity and development of every nation depends upon the manner how did financial market has played a effective role in the transformation of funds from savers to users. Financial market has now become an integrating factor in creating the linkage between the various sectors of an economy.

Interest rate has played a very significant role in development of financial market, governing as a driving factor in an open market. Interest rate is one of the indispensable tools that determine the diversion of unutilized financial resource from savers to the productive sector of the country to shape the economy of the country. It plays a dominant role in borrowing and lending .Interest rate is the price mechanism in the economic sector that allocate saving between borrower and lender. Simply, interest rate can be defined as a price that borrower must pay to secure scarce loanable funds from lender for an agreed time period.

To tackle the slow economic growth the government has put emphasis on the economic liberalization on financial sector through various acts and regulation. Moreover government role is proving pivotal to the growth of financial institution and financial market. In 1980's government introduced financial sector reforms which facilitated the establishment of commercial banks, joint ventured with international banks. This reform opens the door for

establishment of number of joint venture banks, among these Nepal Arab Bank currently known as NABIL Bank was established first. The primary motive of the government for this reform was to bring the modern technologies, management, and foreign capital in banking industries.

The new directives and enforcement of the umbrella act has brought all financial institution including banks, finance companies, and other financial institution to be operated, supervised, and monitored by the same act. Financial development of the country hugely depends upon the effective mobilization of the available internal resources, for this financial institutional use various policy instruments, among them interest rate structure is the most important one.

1.1.1 Interest Rate

Interest rate is the price of credit. It is the main determinant factor in the fund based activities of financial institution. An appropriate interest rate structure greatly affects the collection of deposits, mobilization of saving and profit position of any financial institution which in turn affects the economic upliftment of the whole country.

In the simple language, interest is rent paid for the use of money. Financial institutions, as financial intermediaries, collect funds from savers in the form of deposits and provide it to business sector in the form of loan. This institution pays interest to the depositors for the money borrowed from and charge interest from the borrower for money lend to them. The cost of borrowing money, measured in rupee per year borrowed, is the interest rate. When we examine how money affects the economic activities, we will focus in the interest rates, which are often called the price of money. The interest rate, price of money, plays a crucial role in the allocation of the scarce resources and in the decision making of consumer regarding business. For example, increase in the interest rate provides additional incentive to individual thereby motivating them to postpone current consumption thereby accumulating fund resource for investment. Interest rate sends price signals to borrower lender and savers. Higher interest rate generally brings forth a great volume of saving and stimulates the lending of fund. Lower rate of interest on the other hand, tend to reduce the volume of borrowing and capital investment. However, demand and supply of fund are prominent factors that determine the interest rate. The interest rate generally express as the ratio: the cost of borrowing divided by the amount of money actually borrowed, on an annual percentage basis. Interest rate and its level depend upon number of factors: the behavior of the yield

curve, composition of the maturity structure, sensitivity of the change in inflation rate, default risk etc.

1. 2 Brief History of Interest rate in Nepal

In context of Nepal, the central bank used to be a sole and whole institution authorized to determine the interest rate as per NRB act for a number of years. There was full discretionary power to central bank to determine the interest rate structure of banks and financial institution.

Although, the level of interest rate provided by the financial institution were earlier determine and regulated by the central bank namely Nepal Rastra Bank, after 1965, the central bank gradually began to liberalize the fixation of interest on a phase wise according to need of the market. On 16 November 1984 government had provided autonomy in offering the interest rate on saving and time deposits to the extent of 1.5 percent and 1percents points respectively above the prevailing rates. On May 29th 1986 NRB issued direction to the commercial bank and give them partial freedom in fixing the interest rate on deposits and loans. However, the central bank also imposed limitation on the interest rate amounts on different loans provided for the productive and fully deprived sectors. The NRB has highlighted the interest rate for saving deposits; it had fixed that the interest rate on deposits for less than one year should not be less than the rate of general saving deposits, minimum of 12% interest rate was fixed on one year deposits. The financial institutions were given freedom to fix lending rate subject to a minimum of 15% for the priority sector.

On August 31st 1989, commercial banks and financial institutions were granted autonomous freedom in determining their own deposits and lending rates. However, again on August 22nd, 1992, NRB issued some directives to the banks and asked them to clearly spell out the interest rate on deposits of at least up to one year, not to create the range of percentage in interest rates on the credits for some purpose and also to stop fixing the interest rate on flat basis.

In additions to this, NRB also instructed the bank and financial institution to limit their interest rates on deposits and credits at 6% within the December 1993. A further instruction to the banks regarding interest rate was issued in 2002 and interest rate spread required to be maintain by bank and financial institution also removed.

At present there is complete freedom to have competitive interest rate with hope of maintaining efficiency in financial system as important part of government's financial liberalization policy. However, considering the needs of the country, the central bank, NRB took a flexible approach in making some adjustments in the interest rates by putting control over it. NRB has been serious in directing commercial banks to maintain satisfactory interest rate spread in two ways like increasing the interest rate on deposits or decreasing the interest rate on loan. NRB has strictly restricted banks to maintain high spread rate by providing lower interest rate on deposits varying 2-4 percent and charging higher interest rate on loans from 6-15 percent. On the other hand growing economic liberalization, financial globalization and open market policy also plays a decisive role in determining interest rate.

1.2 Focus of the study

Business enterprises require tremendous amount of capital funds for smooth operation and regulation of business. Short-term, intermediate term and long term capital funds are essential for growth and expansion of organizational activities. Commercial banks are currently viewed as a catalyst in the process of efficient transformation of idle saving into productive investment. The focus of this study is to examine the influencers of interest rate on Nepalese financial sector considering commercial banks as sample organization. Interest rate is believed to be one of the prominent factors in the growth of financial institution and economic system. This study also attempts to analyze the methods adopted and factors considered by various commercial banks in determining the interest rate. The study also concentrates on whether the theories of interest rates propounded by various economist best fit in context of Nepalese economy.

1.4 Statement of the problem

Interest rate has direct relationship with economic growth and development of the country. According to economic theory (other thing remains constant), low interest rate induces high investment and the high investment leads to high production, high employment, more income and ultimate development of the economic sector.

Although the various theories have been propounded regarding the interest rate, it is believed to be time bound mechanism. Despite the decade long experience of open market policy after restoration of democracy, the country has failed to gain maturity in the economic sector. Although financial institutions are allowed to determine the interest rates on their own term; it is yet to discover what factor plays a prominent role in determining interest rates. Hence, it is important to know whether interest rates are determined by market forces or it is just a matter of managerial discretion.

This study is all set to explore:

-) Does the interest rate adopted by market follow the existing theories, if not what are the possible causes for such effects?

More specifically this study is an attempt to answer following question

-) What is the impact of profitability position of organization over interest rate charged by commercial banking sectors?
-) What are the major qualitative factors that shape the interest rates of commercial banks of Nepal?
-) Is the interest rate charged by and offered by commercial banking sector affected by market position of commercial bank?

1.5 Objectives of the study

The main objective of the study is to identify the influencing factors of interest rate charged and offer by Nepalese Commercial Bank through thorough examination of the relationship between influencing factors and interest rate.

The other objective of this study may be as follows:-

-) To find out factor affecting interest rate
-) To determine the relationship between the profitability and interest rate on deposits and lending.
-) To identify the effect of deposit and lending over interest rate.
-) To explore the problem and suggest for further improvements on the basis of finding of the study.

1.6 Significance\ Importance of the study

Development of banking sector is the crucial step in any economy; however, the growth of banking sectors depends upon its effectiveness in mobilization of accumulated funds. The important tool that determines the effective mobilization of reserved fund is the interest rates provided by the bank. Interest rate is not only important for financial sectors but also for individual depositors and lenders.

Profitability of any commercial bank directly and indirectly depends upon the difference between interest income and interest expense which directly determine by the interest rate provided by the bank. Besides, default risk, political risk, uncertainty, demand and supply, inflation etc. are the other factors that directly or indirectly influence the interest rate. Interest rate can also be considered as an important tool to measure the running position of economy.

Lots of study so far has been conducted to determine the role of different factors in assignment of interest rate in the market. Separately some studies have also been conducted to study the structure of interest rates. This study no doubt will have importance to all parties involved in the financial sector; this study will provide literature to further researchers in this area. This study is assumed to be helpful to analyze the financial behavior of the market regarding interest rate.

1.7 Limitation of the Study

This study is attempts to identify the effect of different factors on an interest rates provided by commercial banks in Nepal. Due to the various difficulties, this study will be accompanied by some limitations. Basic limitations of this study can be dragged out as follows:-

-) The major portion of analysis and interpretation will be based on the available secondary data and information. So, the consistency of findings and conclusions will be strictly based on the reliability of the secondary data and information.
-) This study will be concentrated on the banking sector, which is just a part of total financial market. So, the conclusion cannot be generalized on the total market.
-) This study will only deal with selected commercial banks.
-) This study will carry out only the period of five consecutive fiscal years.
-) The main objective of this study is to partial fulfillment for the MBS Degree in Management, so it won't be a comprehensive study. Only few major events have been taken into consideration for impact of different event on the interest rates.
-) Due to lack of proper information disclosure practice, the study may not draw on actual result.

1.8 Organization of the study

The first chapter deals with introduction. This includes background of the study, introduction of interest rate, brief history of interest rate in Nepal, focus of the study, statement of problem, significance of the study, objectives of the study, limitation of the study, and organization of the study.

Second chapter deals with the review of available literature .It consist of review of the books, articles, journals, reports, and other relevant research studies conducted both by Nepalese scholars.

Third chapter deals with research methodology employed in the studies. It includes population and sample, sources of data; data gathering procedure, analytical tools etc.

The fourth chapter is the important chapter and deals with the analysis and evaluation of data with the help of analytical tools and interpret the results obtain through this tools.

The final chapter covers the summary of the study, the main conclusion that flows from the study and offers some recommendation as well as some suggestions for further improvement.

CHAPTER- 2

REVIEW OF LITERATURE

2.1 Introduction

The next step is to develop concepts and idea 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 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 conclusion and deficiencies can be known and further research can be concluded.

Review of literature is the way to discover what other research in the related topic or our problem has been uncovered, i:e review of literature means a survey of existing volume of similar related topics. Therefore, review of literature helps to avoid conducting research which has already been definitely answered.

2.2 Theoretical Review

2.2.1 Meaning of Interest rate

Interest rate can be defined as the price that burrower must pay to lender to secure scarce loan able funds for an agreed-upon time period. In short term it is the price of credit. Generally, interest rate is expressed as the ratio of two quantities: the money paid as cost of burrowing divided by the amount of money actually burrowed; it is usually expressed on an annual percentage basis. Interest rate has been consider as the influencing factor while determining the market potentiality, as it sends price signals to the burrower, lenders, and investors. For example, higher interest rates generally bring forth a greater volume of saving and stimulate the lending of funds and on the other hand lower interest rate tends to dampen the flow of saving and reduces the volume of borrowing and capital investment. Although the neo-classical economists had defined it as a price paid for using scarce lone able funds, the

modern economist had made an effort to avoid those divergent and controversial views about the nature of interest and thus explained it in terms of productivity, saving liquidity preference and money.

a .Gross and Net Interest

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

b .Pure Interest

The interest, what is left with the lenders, after deducting the reward for risk taking, management and inconvenience from gross interest is called pure interest.

c. The Nominal Rate of Interest

The nominal interest rate is the rate actually quoted in the market. It is the promised

Rupees payment for the amount borrowed. It is the number of monetary units to be paid per unit borrowed. In other words it is the observable market interest rate on loan.

d. The Real Rate of interest

The real rate of interest rate is the rate of interest after adjusting for inflation. In countries where inflation is expected to be high, interest rate also will be high, because investors want to compensate for the decline in the value of their money. In other words the real rate is the concept that measures the return after adjusting for inflation. Therefore the difference between the nominal interest rate and the expected inflation interest rate is the real return to a saver after adjusting for the reduced purchasing power over the time period of concern.

2.2.2 Factors incorporate in interest

a. Rewards for risk taking

The lender exposes him or her to risk when he or she lends money thus the gross interest always includes the reward for risk taking. Greater the risk element higher will be the rate of gross interest.

b. Reward for inconvenience

When a lender lends money, he or she forgoes present consumption of fund that he or she had lent for the duration of the loan. He/She will have to undergo through the inconvenience thus the interest rate also includes the reward for such inconvenience.

c. Reward for management

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

2.2.3 Theories of Interest Rate

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

2.2.3.1 Classical Theory of Interest Rates

One of the oldest theories concerning the determination of pure or risk free interest rate is the classical theory of interest rates, developed during the eighteenth and nineteenth centuries by a number of British economists and elaborated by Irving Fisher (1930) and others more recently. The classical theory argues that the rates of interest are determined by two forces:

- a. The supply of saving derived from households.
- b. The demand for investments capital, mainly from the business sector.

a) Saving by households

Modern industrialized economics believe that most saving in the market is carried out by individuals and families. For these households, saving is simply abstinence from current consumption. Current savings therefore are equal to the difference between current income and current expenditures.

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

An income level probably is the major factor in while deciding about saving. Interest rates also play an important role in saving decision: Interest rates affect an individual's choice between current consumption and saving for future consumption. The classical theory of interest assumes that individuals have a definite time preference for current over future consumption. It is assumed that, a rational individual will always prefer current enjoyment of goods and services over future enjoyment. Therefore, the only way to encourage an individual or family to consume less now and save more is to offer a higher rate of interest on current savings; if more were saved in the current period, a higher rate of return will be for future consumption. For example, if the current rate of interest is 10% and a household save Rs 100 instead of spending it on current consumption, it will be able to consume Rs 110 in goods and services a year from now.

The classical theory considers the payment of interest as a reward for waiting –the postponement of current consumption in favor of greater future consumption spending–encouraging more individuals to substitute current saving for some quality of future consumption. Therefore it is called the Substitution Effect calls for a positive relationship between interest rates and the volume of savings. Higher interest rates bring forth a greater volume of current savings.

b) Saving by Business form

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

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

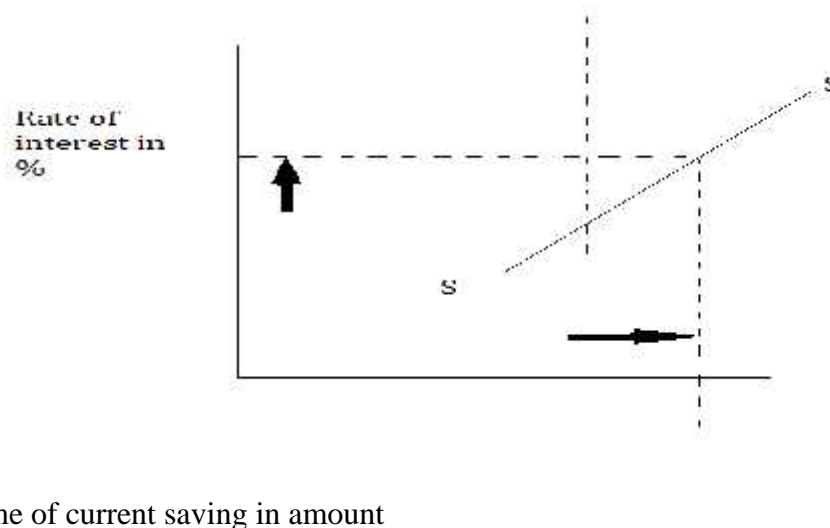
Although the principal of business saving is to gain extra profits, interest rates play a pivotal role in the decision making ‘what proportion of current operating costs and long-term investment expenditures should be financed internally and what proportion externally’. Higher interest rates in the money markets and capital markets typically encourage firms to use internally generated funds more heavily in financing projects. Conversely, lower interest rates encourage greater use of external funds from the money and capital markets.

Saving by Government

Governments also save, though less frequently than households and businesses. In fact, most government saving (i.e. a budget surplus) appears to be unintended saving that arises when

government receipts unexpectedly exceeded the actual amount of expenditures. Income flows in the economy (out of which government tax revenues arise) and the pacing of government spending programs are the dominant factors affecting government savings.

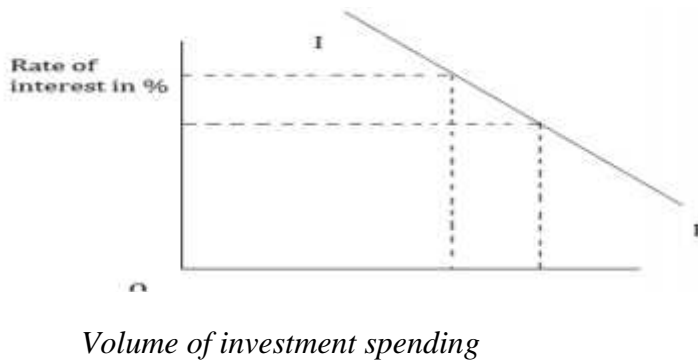
Fig no 2.1 The substitution effect relating saving and interest rates



The Demand for investment funds

The saving made by business firms, government and households are prominent determinants of interest rate but they are only one side of determinants, the decision in investment spending made by government, business firms, and in some cases by households also determine the rate of interest rate. Business requires huge amount of funds each year to purchase equipment, machinery and inventories and to support construction of new buildings and other physical facilities. The majority of business expenditure for these consists of what economists call replacement investment. But according to the classical approach, interest rates and invest able fund have inverse relationship. At low rate of interest more investment project becomes economically viable. On the other hand, if the rate of interest rises to high level fewer investment projects will be pursued and fewer will be required from the financial market as in figure no. 2-2

Fig no. 2-2 the Investment Demand Schedule

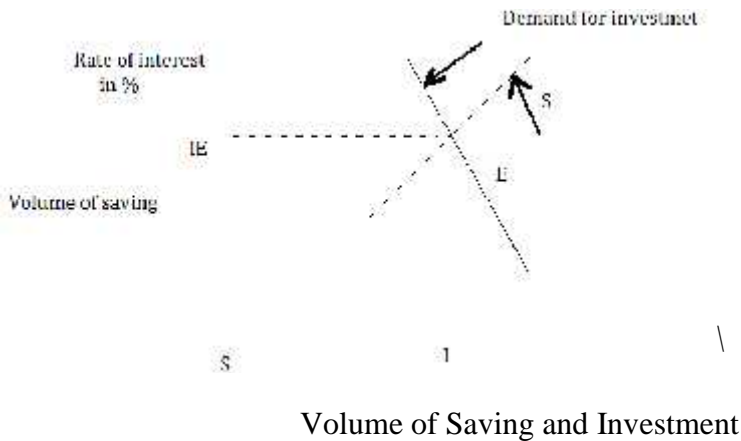


The Equilibrium Rate of Interest in the Classical Theory of Interest

According to classical economists, interest rates in financial markets were determined by the interplay of the supply of saving and the demand for investment. Specifically, the equilibrium rate of interest is determined at the point where the quantity of savings supplied to the market is exactly equal to the quantity of funds demanded for the investment. To support this let's consider in the figure no. 2-3, this occurs at point E where the equilibrium quantity of capital fund traded in the financial market is QE.

The market interest rate always strives to meet an equilibrium level. However, supply and demand forces change so fast that interest rates rarely have an opportunity to settle in at a specific equilibrium level. At any given time, the rate is probably above or below its equilibrium level but moving towards equilibrium. If the market rate is temporarily above equilibrium, the volume of saving exceeds the demand for investment capital, creating an exceeding supply of savings. Savers will force to offer their funds at a lower and lower rate until the market interest rate approaches equilibrium. Similarly, if the market rate is temporarily below equilibrium, investment demands exceed the quality of saving available. Business firm will bid up interest rate until it approaches the level at which the quantity saved equals to quantity of funds for investment purpose.

Fig No 2-3, The equilibrium interest rate in classical Theory of interest rate



2.2.3.2 Liquidity Preference of Cash Balance Theory of Interest Rates

During the 1930s, British economist John Maynard Keynes developed a short-term theory for an interest rate in which he believes was more relevant for policy makers to explain near-term changes in interest rates. This theory is known as the liquidity preferences theory of interest rates.

a. The Demand of Liquidity

Business firms and individuals prefer to hold money for carrying out daily transaction and for contingent cash needs in future, even though money's yields is usually low or even none existing. Investors in the mixed income securities, such as government bonds, frequently desire to hold money or cash balances as a haven against declining asset prices. Interest rates therefore are the price that must be paid to induce money holders to surrender their preference for liquidity. Unless the government explains the money supply, interest rate will rise.

In the theory of liquidity preference, only two outlets for investors' funds are considered, bonds and money \cash balances. Money provides perfect liquidity. Bonds pay interest but cannot be spend until converted into cash. If interest rates raise the market value of bonds, paying a fixed rate of interest, falls, letting investors to suffer a huge capital loss on converting the bond into cash. On the other hand, decline in the interest rate results, higher bond price: the bond holder will experience a capital gain if his/her bonds are sold for cash.

b. Motives for holding Money

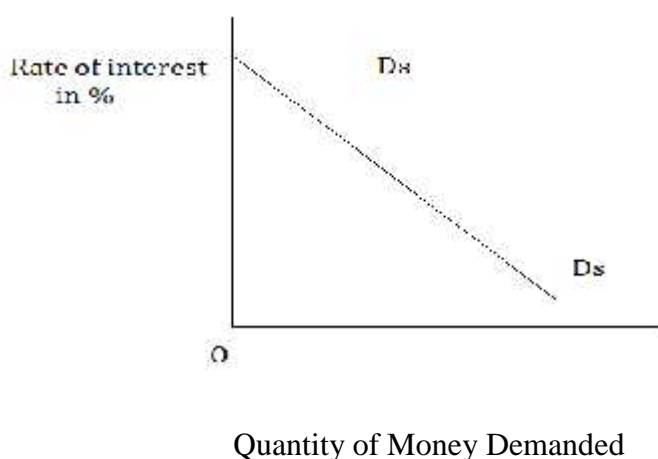
Public demands money for 3 different purposes: The first one is transaction motive in which money is hold to purchase goods and services, the second motive of money holding is for precautionary measure because future is uncertain and we cannot predict exactly what expenses or investments opportunity will arise in the future, the third is in fact for a speculative motive that stems from uncertainly about the future prices of bonds.

c. Total demand for Money

The total demand for money or cash balances in the economy is simple the sum of the money hold in three different motives: transactions, precautionary and speculative. The principal determinant of transactions and precautionary demand is income and interest rates. The money demands are fixed at certain level of national income.

In the figure 2-4, D_s are the aggregate demands for the money

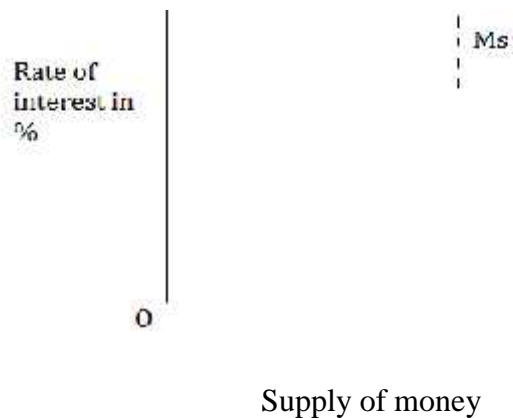
Fig no 2-4, The Total Demand for money



d. The supply of money

Another major factor that determines interest rates in liquidity preference theory is the supply of money. In the modern economy, the money supply is controlled or at least closely regulated by government. Because the government decisions, concerning the size of the money supply, presumably are guided by the public welfare, not by level of interest. Supply of money M_s is shown in the Figure 2-5 below.

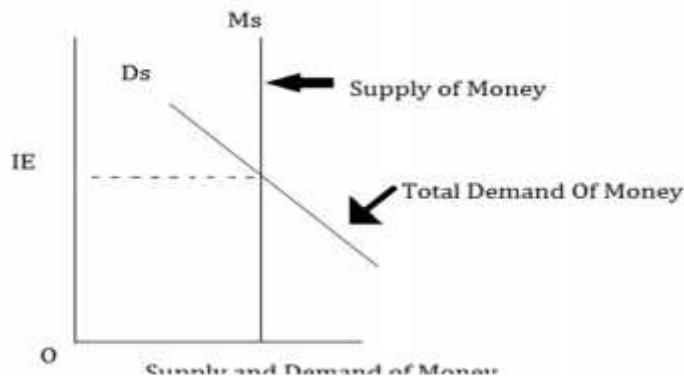
Figure No.2-5 The supply of money in liquidity preference Theory



The Equilibrium Rate of Interest in Liquidity preference Theory

The interplay of the total demand and the supply of money or cash balances determine the equilibrium rate of interest in the short run. In the figure below IE is the point where the quantity of money supplied. The equilibrium rate of interest is shown in the following figure 2-6.

Figure no.2-6 The Equilibrium rate of interest in the liquidity preference Theory



Quantity of money demanded and supplied

2.2.3.3. The Loan able Funds Theory of Interest

The loanable theory is the most popular interest rate theory among practitioners. It argues that the risk free interest rate is determined by the interplay of two forces: the demand for and supply of credit (loanable funds).

The demand for loanable funds consists of credit demands from domestic business, consumers, the government, and also borrowing in the domestic market by foreigners. The supply of loanable funds stems from two sources domestic saving and new money,

A) The Demand for loan able Funds

a. Consumer household Demand For loanable funds

Domestic consumer demands loanable funds to purchase a wide range of goods and services on credit. Recent research has indicated that consumers are not particularly responsive towards the rate of interest when they seek credit but focus instead principally on the non-price terms of loan, such as the down payment, maturity, and the size of installment payments.

b. Domestic Business Demand for loan able funds

The demand for credit for domestic business generally are more responsive to changes the rate of interest than in consumer borrowing. Most business credits are for investment purposes such as the purchase of inventories, new land and equipment. The quantity of loan able funds demanded by the business sector increases as the rate of interest falls.

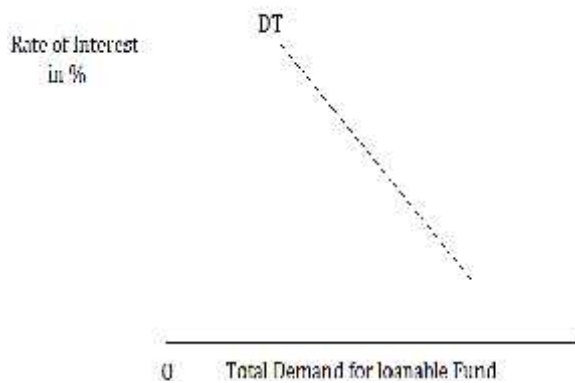
c. Government Demand for Loanable Funds

Central Government's demand for funds in the financial markets doesn't depend significantly on the level of interest rates, rather, Government decision on spending and borrowing depends upon its response to social needs and the public welfare, not on the rate of interest. Moreover in case of central government, it has the power to tax the public to create money to pay its debts. Government demands on the other hand, are slightly inelastic because many local governments are limited in their borrowing activities by legal interest rate ceiling. When open market rate rises above the ceiling, some state and local governments are prevented from offering their securities to the public.

d. Total Demand for Lonable Funds

The total demand for the loanable fund is the total sum of money demanded by the domestic consumer, business and government. These demand curves slopes downward and to the right with respect to the rate of interest. Higher rate of interest lead some business consumers and government to curtail their borrowing plans, lower rates bring forth more credit demand. The total demand for loanable fund is shown in the following figure 2-7 where DT is total demand.

Figure no 2-7, The demand for loanable funds



B) Supply of Loanable Funds

The major sources of supply of loanable funds are from two sources:

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

a. Domestic saving

Saving refers to the postponement of current consumption to gain more in future. This is the ultimate decision to sacrifice present consumption in order to have a larger quantity for consumption in the future. Individuals or households save money for varied reasons, there are few evidence to suggest that the quantity of loanable funds supplied through saving is clearly influenced by the level of the interest rate. A higher interest rate represents a greater reward to saver for sacrificing current consumption and thus might be expected to produce a higher quantity of saving for some individuals. In general case, the quantity of savings supplied by individuals is principally determined by the level of income than interest rate. Business saving refers to the net income after taxes, which in fact is strongly influenced by the level of interest rates. For governments, the volume of saving is defined as the differences between revenues and expenditures, such that savings exists when revenue exceed expenditures (a budget surplus).

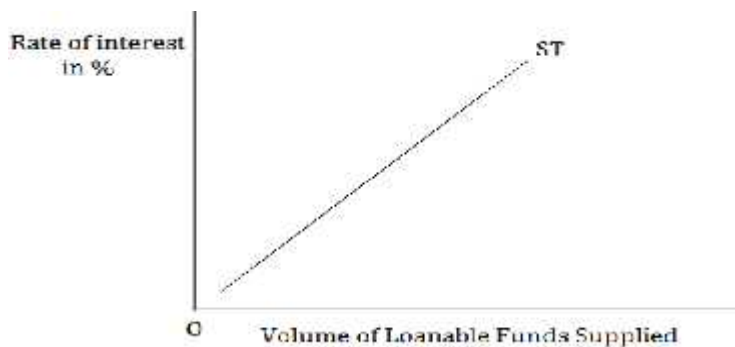
b. Criteria of New Money

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

c. Total Supply of Loanable Funds

The total supply of loanable funds comes from: domestic saving, foreign lending, dispersal of money, and credit created by the domestic banking system. In the following figure 2-8, the total Supply of loanable fund is given where S_t is total supply.

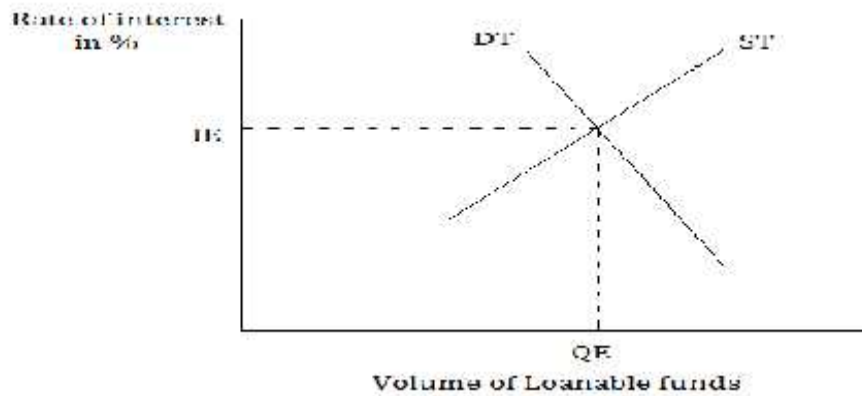
Figure No 2-8 The Supply of loanable Funds (Credit)



The Equilibrium Rate of Interest in the Loanable Funds Theory

The two forces of supply and demand for loanable funds determined not only the volume of lending and borrowing going on in the economy but also the rate of interest. The interest rate tends to be towards the equilibrium point at which the supply of loanable funds equals demand for loanable funds. This point of equilibrium shown in the following figure, 2-9 where IE is equilibrium rate of interest rate and QE is volume of loanable funds (credit).

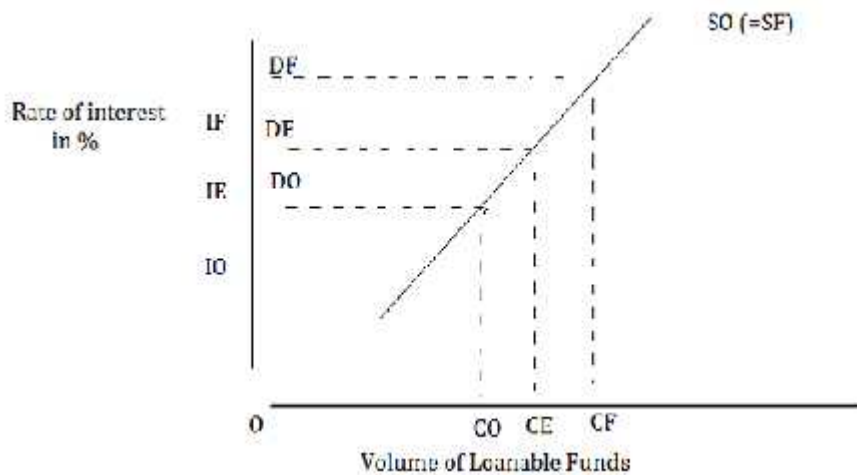
Figure No. 2-9 The Equilibrium Rate of Interest in Loanable Funds Theory



2.2.3.4 The Rational Expectation Theory

The Expectation Theory is new for the financial markets and institutions. This theory builds on a growing body of research evidence that the money and capital markets are highly efficient institutions in digesting new information affecting interest rates and security prices. This expectation theory assumes that business and individuals are rational agents who form expectation about the distribution of future asset prices and interest rates that do not differ significantly from optimal forecasts made from using all available information that the market place provides (Rose 8th edition). Rational agents attempt to make optimal use of the resources at their disposal to maximize their return. Moreover, a rational agent will tend to make unbiased forecasts of future asset prices, interest rates, and other variables.

Figure 2-10, The expected Demand for supply of Loanable Funds under the Rational Expectation Theory



Suppose in the above figure 2-10 SO and SF represents the actual supply and demand for loanable funds in the current period, while DF reflects the actual demand for loanable funds that will prevail in the next time. The supply of loanable funds is assumed to be the same in both time period (SO = SF).

Now imagine that during the current periods, the government makes an expected announcement of its increased need to borrow more money in future period F due to an unusually large budget deficit. The result is new expected demand for loanable fund curve DE, projected to prevail in the next periods F but as viewed borrower and lenders today in the time periods O in this case the equilibrium interest rates will not be IO, but rather IE, where the expected demand curve SO. The equilibrium quantity of loanable funds traded in the CE not CO. This is because, according to the rational expectation theory, borrower and lenders will act as rational agents, using all the information them posses to assets today. When the future price arrives, the equilibrium interest rate will rise to rate IF and moves upward because the demand for loanable funds as seen by market participants.

Term Structure of Interest rates

Interest rates within a country vary for different investment opportunities and for different maturity dates on similar investment opportunities. The term structure of interest rate is the schedule of interest rates existing on investment opportunities over time. It is the relationship between the rates of return on financial instruments and their maturity. This term structure may be presented by drawing a yield curve for all securities having the same credit quality. The yield curve only considers the relationship between the maturity or term of a loan or security and its yield at one movement in time. For example we cannot draw a yield curve for securities bearing different degree of credit risk or subjected to different tax laws because both risks and tax laws affect relative yields along with maturity.

2.2.3.5 Pure Expectation Theory

According to pure expectation theory, the term structure of interest rates is determined solely by expectations of future interest rate to understand how interest rate expectation may influence the yield curve, assuming that the annualized yields of short term and long term securities are similar that means yield curve is flat. Then investors begin to believe that interest rates will rise. They will respond by investing their funds mostly in short term so that they can soon reinvest their funds at higher yields after interest rates increases. When investors flood in the short term market and avoid the long term market, they may cause the yield curve to adjust. The large supply of funds in short term market will force annualized yields down, meanwhile, the reduced supply of long term yields up.

Even though the annualized short term yields become lower than annualized long term yields, investors in short term funds are satisfied because they expect interest rate to rise. They will make up for the lower short term yield when the short term securities mature, and they invest at a higher interest rate.

Assuming that the borrowers who plan to issue securities also expects interest rates to increase; they would prefer to lock in the present interest rate over a long period of time.

Thus, borrowers would generally prefer to issue long term securities rather than short term. This results in a relatively small demand for short term funds. Consequently, there is downward pressure on the yield of short term funds. There is also an increase in the demand of funds and the supply of funds in different maturity markets, which forces the original flat yield curve to pivot upward and become upward sloping.

The Liquidity Premium View on the Yield Curve

Security dealers who trade actively in the financial markets frequently argue that other factors besides interest rates, expectation also exert a significant impact on the character and shape of the yield curve. Liquidity premium is one of them. Long – term securities tend to have more volatile market prices than short term securities.

Therefore, the investors face greater risk of capital loss when buying long-term financial instruments. This greater risk of loss will be important to an investor who is risk averter. To overcome the risk of capital loss, investors must paid an extra return in the form of an interest rate (term) premium to encourage them to purchase long term financial instruments. This additional rate premium for giving up liquidity would tend to give yield curves a bias toward a positive slope. The liquidity premium view doesn't preclude the important role of interest rate expectations in influencing the shape of the yield curve. Rather, it argues that other factors, such as liquidity, play important roles as well.

Liquidity argument may help yield curves tend to flatten out at the longest maturities. There are obvious differences in liquidity between 1-year and 10-year bonds, but it is not clear that major differences in liquidity exists between a 19-year old bond and a 20-year bond. Therefore, size of the required liquidity premium may decrease for securities bearing longer maturities.

The Segmented- Markets or Hedging-Pressure Argument

A strong challenge to the expectation theory appeared in the 1950s and 1960's in the form of market segmentation argument or hedging-pressure theory of the term structure of interest rates. The underlying assumptions are that all securities are not perfect substitutes in the mind

of investors. Maturity preference exist among some investor groups, and these investors will not stay from their desired maturity unless deduced to do so by higher yields or their favorable terms on longer of shorter-term securities.

Why some investors prefer maturity of security to other? Market segmentation theorists had found the answers in a fundamental assumptions concerning investors behavior, especially the investment behavior of financial intermediaries, such as investment companies, pension funds, and banks. Some investors groups often act as a risk minimizes rather than profit maximizes as assume under the expectation hypothesis. They prefer to hedge against the risk of fluctuation in the prices and yields of securities by balancing the maturity structure of their liabilities. The portfolio strategy reduces the risks of fluctuating income and principle. The existence of maturity preferences among investors implies that the financial markets are not one large pool of loanable funds but rather are segmented into a series of submarket. Thus the market for securities of medium maturity attracts different investors groups than the market for longer-term securities. The segmented-markets or beginning pressure theory does not rule out the possible influence of expectation on shaping the term structure of interest rates, but it argues that other factors related to maturity-specific demand and supply forces are important.

2.2.3.6 Preferred Habitat Theory

The Preferred habitat theory of term structure accepts the expectation theory premise of substitution and the segmentation theory premises that substitution is risky for borrowers and savers. However, this theory is not rigid as either of them. Simply but preferred habitat accepts the motion of maturity substitution but only if the borrowers and savers are compensated with a more favorable interest rate .The additional return to the investor is known as liquidity premium. The preferred habitat theory recognizes the existence of liquidity premium built into the yields for bonds of certain maturities (Kenneth J.thygeron “financial markets and institutions: A Managerial approach {1992}). The theory argues that investors seek at their preferred habitat along the scale of versifying maturities of securities that matches their risk preferences, tax exposure, liquidity need regulatory requirements and planned holding period. Thus, according to the preferred habitat theory, factors other than expectations alone play a role in shaping the character of the yield curve. Proponents of preferred habitat theory argue that investors derive their expectations about future interest rates on the basis of historical experience. The recent trend of interest rates on the basis of

history suggests is a “normal“ range for rates. In the short-term, the majority of investors expect current interest rate tends to persists into future: thus, rising interest rates in recent rate tends to persist into the future; thus, rising interest rates in recent weeks often lead +to the expectation that rates will continue to rise in the near term. However, investors generally expect that given sufficient time interest rate will return to the historical average.

2.2.4 Interest Rate Movements and its Relevance

Interest rate movement affects the value of securities, and thereby affects the performance of all types of financial institutions. It is critical for managers of financial institution (including portfolio managers) to understand why interest rate changes, how their movements affects performance, and how to manage according to anticipate movements (Madhura, 2001).

Interest rate movement can affect the values of virtually all securities. They have direct influence on the market values of debt securities. They have a direct influence on the market values of debt securities such as money market securities, bond and mortgages. This is confirmed in the charters of financial market, when the main determinants of market value each securities stocks or currencies. Thus all participations in financial markets closely monitor interest rate movements. So they can restructure their positions in securities to benefit from any expected movements in interest rate. Interest rate movements also effect the value if most financial institutions. Interest rate movements also affect both the cost of funds to depositary institutions and the interest rate received on the same loans. In the addition, the market value (such as bonds) held by depositary institutions are affected as well. Thus mangers of financial institutions closely monitor interest rate movements so they can capitalize on favorable movements or rescue their institutions exposure to unfavorable movements.

2.2.5 Economic Factors that affects interest rates

Although it is useful to identify those who supply or demand loan able funds, it is also necessary to recognize the underlying economic forces that cause a change in the supply of or the demand for loan able funds and therefore influence interest rates.

2.2.5.1 Impact of Economics Growth on Interest rates

Assume that, because of more optimistic projection, most business increase their planned expenditure for expansion which translates into additional borrowing. The aggregate demand schedule may also shift outward (to the right). The supply of loan able funds schedule may also shift, but it is more difficult to know how it should shift, it is possible that the increased expansion by business could lead to more income for construction crew and others, who service the expansion. Thus the quantity of saving, and therefore loan able funds supplied at any possible interest rate could increase causing on the outward shift in the supply schedule. Yet, there is no assurance that the volume of saving will truly increase. Even if a shift were to occur, it would be likely to be of a smaller magnitude that the shift in the demand schedule.

As an example, we consider how a slowdown in the economy would affect the demand and supply schedule of loanable funds and equilibrium interest rate. The demand schedule would shift in ward (to the left), reflecting less demand for loanable funds at any possible interest rate. The supply schedule could be possibly shifted a little, but it is questionable which way it would shift .One could argue that a slow down should cause increased saving at any possible interest rate as house holds prepared for the possibility of being laid off. Yet, the gradual reduction in the labor income that occurs would likely to be minor relative to the shift in the demand schedule. Therefore, the equilibrium interest rate is expectation to decrease.

2.2.5.2 Impact of Inflation on Interest rates

One of the most serious problems confronting economics around the globe in the recent years is inflation. Inflation is defined as a rise in the average level of prices for all goods and services. Some prices of individual goods and services are always rising while others are declining. However, inflation occurs when there is an increase in some general index of price, such as the consumer price index or the board- based impact of Gross Projector Deflector, takes place.

There is positive correlation between inflation and interest rate in the market. Since the inflation reduces purchasing power of consumer (investors), they must be compensating for the decreased purchasing power. Therefore an inflation leads to increase in quoted market interest rate is known as inflation premium. The implicit Gross Productor Deflector is

sometimes referred to as the overall price index products: consumption, investment, government spending and export.

2.2.5.3 The Fisher Effect

A well –known economist Irving Fisher in 1966 has developed a relationship between nominal rates of interest and inflation. According to Fisher, if expected real interest rate is held fixed, changes in nominal rate will reflect shifting inflation premiums i.e. changes in the public's view on expected inflation. He argued that the expected real rate of return tends to stable over time because it depends upon the long- term factor like productivity of capital, volume of savings in economy etc. In the short term, the nominal interest rate is only influenced by the changes in the inflation premium. Therefore, rise in the expected inflation rate causes the same rise in the nominal interest rate.

2.2.5.4 The Harrods –Keynes Effect of Inflation

Fisher effect of inflation contradicts with the views developed by the British economist Sir Roy Harrods. Harrod's view is based on the Keynesian liquidity preference theory of interest. According to him, real rate is affected by the inflation but nominal rate is determined by the demand for and supply of money, the nominal rate must remain unchanged whatever may be the expectation lower the real interest rate.

There is less than one- to- one relation between changes in expected and nominal interest rates with the inflation caused wealth income and depreciation effect. That is, a rise in expected inflation reduces the real rate of return to lender and derives the nominal interest rates higher but rise in nominal rate is less than the increase in expected inflation. Nevertheless, according to the inflation caused income tax effect, if investors desire to protect (i.e. hold constant) his or her expected real after tax return, then nominal rate has to increase by a greater amount than any rise in the expected inflation rate because otherwise real tax return will decline when inflation increases.

2.2.5.5 Impact of Price Deflation

Deflation tends to force real interest rates higher even as nominal interest drop downward zero. These elevated real interest rates tend to slow investment spending and decrease development of new jobs. Real economic output will decline as factors come to produce less and business profit falls. At last same time lenders gain at an expense of borrowing because the formers purchasing power rises, and business trying to borrow money have to struggle to raise the capital they require to grow and put people back to work.

The price deflation can result lower output of goods and services, but forces real interest rates upward. However, business and the financial system are much better positioned today to deal with moderate deflation, in part because of the development of so many risks management tools (such as financial futures contracts, swaps and option).

2.2.5.6 Impact of Money Supply on Interest rates

The central bank can affect the supply of loanable funds by increasing or reducing the total amount of deposit held by commercial banks of their depositary institutions. When the central bank increases the money supply, it implies downward pressure in interest rate. However, if the central bank's action affects inflationary expectation this would also increases the demand for loanable funds which could offset the effect of the increase in the supply of funds. If central bank reduces the money supply it reduces the supply of loanable funds. Assuming no change in demand, this action places upward pressure on interest rates.

2.2.5.7 Impact of Budget Deficit on Interest rates

When the government enacts fiscal policies that results in more expenditures than tax revenue, the budget deficit is increased. How an increase in the government deficit would affect the interest rates, assuming no other changes in habits by consumers and confirms in habits by consumers and firms occur a higher government deficit increases the quantity of loanable funds demanded at any point prevailing interest rate, causing an outward shift in the demand schedule. Assuming no offsets increase in the supply schedule, interest will rise. Given a certain amount of loanable funds supplied to the market (through savings), excessive government demand for these funds, tend to "crowd out" the private demand of funds. The

government may be willing to pay whatever is necessary to borrow these funds, while the private sector may not. This impact is known as the “crowding-out effect”.

The supply schedule might shift a counterargument outward, if the government creates more funds than collects from the public (this is what causes the deficit in the first place). If this were to occur, the deficit might not necessarily place upward pressure on interest rates. Much research has investigated this issue (in U.S.A) and, in general has shown that higher deficits place upward pressure on interest rates. The increase in public debt refers to an increase in the government’s demand for loanable funds. However, other factors can offset this increased demand for loanable funds by the government and not always result in higher interests rates.

2.2.6. Risk and cost factors affecting interest rate

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

2.2.6.1 Marketability

One of the most important considerations for an investor is whether a market exists for those assets he or she would like to acquire. This is the question of marketability and financial instruments traded around the world vary widely in terms of ease and speed with which they can be converted into cash. Marketability is positively relates to the size(total sales or total assets) and reputation of the institution issuing the securities and to the number of similar securities outstanding. Not surprisingly, stocks and bonds issued in large blocks by the largest corporations and governmental units tend to find acceptance more readily in the global financial markets, and a consistent market price can be established. In fact, there is a negative relationship between marketability and yield. More marketable assets generally carry lower expected return than less marketable assets, other things being constant. Purchase of assets

that can be sold in the secondary market only with difficulty must be compensated for this inconvenience by a higher promised rate of return.

2.2.6.2 Liquidity

A desirable quality of assets that are to be part of a precautionary reserve is liquidity. Liquidity refers to the conversion of assets into cash. The quality of assets should be sold quickly with little risk of loss and possessing a relatively stable price over time. A liquid financial asset is readily marketable. An asset is liquid if it can be turned into cash quickly without loss. A marketable asset is not liquid if it cannot immediately convert into cash, rather has to wait to sell, and involves an expected loss. Marketability is closely related to another feature of financial assets that influences their interest rate yield: their degree of liquidity. A liquid financial asset is readily marketable. In addition, its price tends to be stable over time and it is reversible, meeting the holder of the little risk of loss. Because the liquidity feature of financial assets tends to lower their risk, liquid assets carry lower interest rates than illiquid assets.

2.2.6.3 Default risk

Another important factor causing interest rate to differ one from another is the degree of default risk carried by individual securities. Investor's securities face many different kinds of risk, but one of the most important is default risk that borrower will not make all promised payments at the agreed upon times. All securities except government securities are subject to varying degree of default risk. The yield on a risky securities is positively related to the risk of borrower default as perceived by investors' yield in risky security.

The higher the default risk associated with a risky security, the higher default risk premium on that security and greater the required rate of return (yield) that must be attached to the security as demanded by investors in the market place. And if risk-free rate of return remains unchanged, the security's risky yield must rise and the price must decline.

2.2.6.4 Taxability

The returns earned by the investors on financial assets are generally affected by the taxes imposed by government. The income from most securities –interest or dividends and capital

gains –is subjected to taxation at the stipulated rate. This tax treatment reduces the investors' real income.

2.2.6.5 Prepayment risk

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

2.2.6.6 Servicing cost

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

2.2.6.7 Exchange Rate Risk

As today's financial market have become more global, there has been significant growth in the borrowing and investing in foreign denominated financial claims. A U.S company established for manufacturing purpose in Nepal might be inclined to issue shares and or bond denomination in Nepalese rupees rather than in U.S dollars. Investors also get opportunity to investments involved in foreign exchange rate. The risk related with this is the rate of

exchange between the domestic currency and foreign denominated currency that will change with varied reason. The primary risk for the borrower is that the value of the currency borrowed rises in relation to the domestic currency. This results in unexpected costs on the international loans, since the loan would have to be repaid in the foreign currency that has risen in value relative to the domestic. This potential change in currency value reflected in computing the cost of borrowing.

2.2.6.8 Effect of open market operations in 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 loan able funds. The primary tools are open, market operation. Through open market operation the central bank in purchases or sells securities. These are primarily treasury securities. When central bank purchases the securities it adds to supply of loan able 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 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 interests rates offered on deposits because they have more than adequate funds to conduct existing operations.

As bank deposits rate decline household with available funds may search for alternative investment for 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 or other debt securities as well. The reductions on yields on debt securities lower the cost of borrowing for the issuer of new debt securities. This can encourage potential borrowers to borrow and make expenditures that they might not have made if interest rate were higher.

If open market operation is used to reduce the bank fund by selling the treasury securities by increasing the level of discount rate and by increasing the reserved requirement, the opposite effect occurs. Banks have different funds and fewer of them have excess funds thus, there is upward pressure in the interest rate 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 in the investment. The action of the central bank also affects the level of aggregate employment and inflation. The central bank tends to faster stimulative open market policies when the economy has slack resources and employment and restrictive policies during period of low employment and raising inflation.

2.3 Concept of Commercial Banks.

The term “bank” signifies that place where we kept our money for safe keeping as well as for earning some interest or the place where we borrow money as loan. Principally bank collected money from depositors and lends money as financial intermediaries.

Banks refers to an institution, which performs the activities related with money and credit. Banks have been traditionally regarded as merely the purveyor of money. But today they are not merely purveyor of money but creator or manufacturer of money in an economic system. Macleod, in his book “ Theory of Credit” has defined the bank not only as an institution, that borrows and lend money but also the institution for creating Credit.

2.4.1 Evolution history of commercial bank in Nepal

In Nepal, although the monetary history dates back to 1st generation (Lichhavi dynasty), the banking history is comparatively very short. The development of organized banking has started in Nepal only from around the starting of 20th century of Bikram Sambat, Nepal Bank Limited, established in B.S. 1994 with authorized capital of Rs. 1 crore and paid up capital of Rs. 8 lacs 42 thousand is the first organized bank established in Nepal (NRB, 2045). Although during the Prime Minister-ship of Rana Prime Minister Ranadwip Singh an office called “Tejarath Adda” was established for granting loans to government officials and also to general public against the security of gold, silver and other valuables, it could not be

considered as Bank in real sense as it did not collect deposit. Later after establishment of Nepal Bank, the functions of “Tejarth Adda” were limited up to providing loans to government officials only (NRB Report, 2045:12)

Banking development in Nepal found another breakthrough after the establishment of Nepal Rastra Bank, the Central bank of Nepal in 2013 B.S. (NRB, 2045:14). This has helped organizing the monetary system in the country before which the dual currency system (Indian and Nepalese currency) was prevailing in the system. Larger sector of economy was not monetized. In the course of organized development of banking sector, second commercial bank, Rastriya Banijya Bank was established in 2022 B.S. at the state ownership (NRB Report, 2045:160. later on, in FY 2039/40, the policy for allowing establishment of foreign joint venture banks was taken in the aim of having fair competition and skill development in banking sector, which had added a new dimension in development of banking in Nepal. Accordingly Nepal Arab bank ltd. (presently renamed as Nabil Bank) has been established as the joint venture bank in Nepal in 2014 B.S. (NRB Report, 2045:17).

Afterward, various commercial banks were opened with foreign joint venture under private sectors in Nepal which has contributed a lot to bring the commercial bank at present day position.

2.4 Review of Relevant Studies

2.4.1 Review from Independent studies in Nepal

Very few researches, regarding interest rate, had been carried out in Nepal. In other words only handful research had been carried out so far. However, two such studies, conducted decades before have been found in the central library, Kirtipur.

Brief review is presented here:

In 1982, Hom Mourti studied on the “Demand for money and the General Rate of Interest.” His hypothesis then, the demand for money, was explained by real income price level and rate of interest rate was defined as the weighted average of all commercial bank’s deposit

rates. The focus of study was more on the demand for money and less on interest rate. Therefore, only related aspects are reviewed here. The conclusion of his study related to this study is:

-) Estimated demand, function, suggests that there is some abnormal pattern in the use of money in Nepal since the price elasticity has been found greater than one. However, the rate of interest rate and the level of real income have their usual implications.
-) The deposits rates are statistically significant. The result implies that the case balances ratio does not response the change in real income but responds change in prices and interest rates.
-) Demand for money has direct relation with real income with elasticity of 8.33 and inverse relation with price level and the rate of interest with elasticity 1.5 and 0.66 respectively.
-) The estimated coefficient of interest rate is negative and significant. This implies on inverse relationship between the demand of money and the general rate of interest. This further implies that wealth holders are sensitive to change in interest's rate.

Another study conducted by Dr. Raghav Dev Pant in 1983 in the title of “Interest Rate Policy of Nepal.” Concluded that.

-) Change in interest rate will increase time deposits through the route of balance payments but the magnitude of effect will depend upon interest elasticity of money and demand function. The real rate of interest rate has expected to influence money demand or the velocity of money, however coefficient is too small to be statistically significant.
-) Nepal had adopted a high but flexible interest rate policy from April 1975. the changes in interest rate in April 1975 have generated three effect:
 -) Time deposits increase at a higher rate for a year or two an increase the resource base of commercial banks. The change in deposits rate is expected to have diverted to the resource from ruler to urban area.
 -) The demands for credits actually declined or rose only at a moldered rate due

partly to failure of commercial bank to diversify its lending operation in nontraditional area but, more importantly on slow growth in demand for investment from the private sector.

-) The profit of commercial banks deteriorated sharply due to lack of any comprehensive credit plan to use the accumulated resources in form the of deposits liabilities.
-) Introduction of that an interest receipts has imposed unnecessary additional cost of commercial banks.
-) The authorities have failed to distinguish between policy instruments and policy goals the interest rates have been used as both policy instruments and policy instruments and policy.
-) Basic theoretical postulates of a real money strategy do not apply in Nepal. Money supply in Nepal is exogenously determined and as advocated by real money theorists, it cannot be used to attain internal objective, for ex-change in real income or domestic rate of inflation. An excess supply of money over money demanded is fully reflected in Nepal's balance of payments position with India.

2.4.2 Review of dissertations

Very few thesis relating to interest rate can be found on topic interest rate of commercial bank which reflects that only few researches so far has been done in topic interest rate related to commercial banks. Nevertheless, some studies that has been conducted as the partial Fulfillment of M.B.S programe under these topic hare reviewed here.

Bhusal Yam lal carried out a sudy entitled “ an analysis of causes of inflation in Nepal” im Nepal in 1995 As partial fulfillment for MBS program. His main objectives were,

-) To identify the relation of inflation with other various factors such as growth rate, income level, costof holding money.
-) To determine the relationship between inflation rate of Nepal and India.
-) To identify the effect of budget deficiton inflation rate.

His major finding highlights the positive relationship between inflation rates with other factors considers. He found that inflation rate of India had directly or indirectly influences the inflation rate of Nepal.

Kishore khatri chhetri in 1980 had conducted a study titled “ interest rate the structure and its relation with deposits inflation and credit in nepal. The data and other necessary information were collected by using secondary as well as primary sources. In this research he has carried out some objectives, finding and recommendations.

His objectives were ;

-) To identify the relationship between interest rate and deposits.
-) To identify the effect of inflation on interest rates.
-) To determine the effect of interest rate on credit flow.

His finding are were

-) Deposits of commercial banks depends upon numerous factors despite interest and inflation rate.
-) The upward movement in the interest rates increases the volume of deposits.
-) The relationship between credit flow and loan rates was found negative. If the loan rate of interest rate concessional there is possibility of raising investment and thus the volume of credit.

Guru Prasad Neupane (1999) carried a study entitled “money, interest rate and some financial development in Nepal. Mr Neupane is in the view that interest rate is one of the most important devices for resource mobilization and interest rate plays and interest rate plays a major role in the financial development of Nepal. His study find out that institutional interest rates were lower comparing to other interest rates.this had caused imbalances between credit demanded and supplied .this fact has deprived proper dispersal of credit. On other hand, commercial banks are provideng credit facilities only for trade and commercial purposes. Finally he makes the conclusion that to mobilize the resources and divert them in to productive sectors.

Another study conducted by Santosh Poudel (2008) upon the title of “ Factors influenciing interest rate of Nepal Nepalese commercial banks”, has its objectives;

-) To find out the relationship between liquidity position and interest rate charged and offered by commercial banks.
-) Impact of inflation on interest rate of commercial banks.
-) To identify other quantitative factors that impacts the interest rate.

His major findings were as follows

-) There exist negative correlation between liquidity position and interest rates of commercial banks.
-) Interest rate charged by commercial banks is highly affected by competition between commercial banks.
-) Various policies and directives by Nepal Rastra bank are also responsible factors determining the interest rate charged and offered by commercial banks.

2.5 Research Gap

Most of the research studies conducted prior to this study are basically done to identify the relationship between interest rate of commercial bank with other factors specially liquidity position and Inflation rate. Studies so far conducted have considered different sample banks at a time and in different time period. The financial and empirical analysis done considering successful banks as sample bank had revealed the higher degree of consistency in the result produced.

This research shall be new and is different from other studies in the respect of time period, sample bank considered and the attempt to identify the relationship between interest rate and profitability of the commercial banks. Basically this research has been done to identify the effect of profit motives of commercial banks on interest rate and to identify the relationship between financial indicators and interest rate of commercial banks.

CHAPTER -3

Research Methodology

This chapter describes the methodology employed in this study. Research methodology is the Systematic method of finding solution to a problem i.e. through sampling, recording, analyzing, interpretation and reporting of information about various facts or a phenomenon under study. In this study research methodology describes the method and process applied in the entire aspect of the study.

3.1 Research Design

The research design is the conceptual structure within which research is conducted. It constitutes the blueprint 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 implication to the final analysis of data.

Research design is the plan and structure of investigation so conceived as to obtain answer to research question. The plan is overall scheme or program of the research to identify the probable factor that directly and indirectly affect the interest rate offer and received by the bank.

3.2 Population and sample

As this research aims to identify the probable interest rate offer and receive by commercial bank, 31 commercial which has been licensed by Nepal Rastra Bank has been considered as total population out of which five commercial banks has been selected as the sample bank for this study which covers the 16 % of total population. The sample banks has been selected on the basis of similarity in the interest rate provided by the bank and according to market position of the banks. The list of NRB listened commercial bank has given below,

S.no	Name	Operation date(A.D)	Head Office
1	Nepal Bank Ltd.	11/15/1937	Kathmandu
2	Rastriya Banijya Bank Ltd.	1/23/1966	Kathmandu

3	Agriculture Development Bank Ltd.	1/2/1968	Kathmandu
4	Nabil Bank Ltd.	7/16/1984	Kathmandu
5	Nepal Investment Bank Ltd.	2/27/1986	Kathmandu
6	Standard Chartered Bank Nepal Ltd..	1/30/1987	Kathmandu
7	Himalayan Bank Ltd.	1/18/1993	Kathmandu
8	Nepal SBI Bank Ltd.	7/7/1993	Kathmandu
9	Nepal Bangladesh Bank Ltd.	6/5/1994	Kathmandu
10	Everest Bank Ltd.	10/18/1994	Kathmandu
11	Bank of Kathmandu Ltd.	3/12/1995	Kathmandu
12	Nepal Credit and Commerce Bank Ltd.	10/14/1996	Siddharthanagar, Rupandehi
13	Lumbini Bank Ltd.	7/17/1998	Narayangadh, Chitawan
14	Nepal Industrial & Commercial Bank Ltd.	7/21/1998	Biaratnagar, Morang
15	Machhapuchhre Bank Ltd.	10/3/2000	Pokhara, Kaski
16	Kumari Bank Ltd.	4/3/2001	Kathmandu
17	Laxmi Bank Ltd.	4/3/2002	Birgunj, Parsa
18	Siddhartha Bank Ltd.	12/24/2002	Kathmandu
19	Global Bank Ltd.	1/2/2007	Birgunj, Parsa
20	Citizens Bank International Ltd.	6/21/2007	Kathmandu
21	Prime Commercial Bank Ltd	9/24/2007	Kathmandu
22	Sunrise Bank Ltd.	10/12/2007	Kathmandu
23	Bank of Asia Nepal Ltd.	10/12/2007	Kathmandu
24	DCBL Bank Ltd.	5/25/2008	Kamaladi, Kathmandu
25	NMB Bank Ltd.	6/5/2008	Babarmahal, Kathmandu
26	Kist Bank Ltd.	5/7/2009	Anamnagar, Kathmandu
27	Janata Bank Nepal Ltd.	4/5/2010	New Baneshwor, Kathmandu
28	Mega Bank Nepal Ltd.	7/23/2010	Kantipath, Kathmandu
29	Commerz & Trust Bank Nepal Ltd.	9/20/2010	Kamaladi, Kathmandu
	Civil Bank Ltd.	2010/11/26	Kamaladi, Kathmandu
31	Century Commercial Bank Ltd.	2011/03/10	Putalisadak, Kathmandu

From the total population of commercial banks following banks has been selected for the study are as follows:

1. Nabil bank
2. Nepal investment bank
3. Himalayan bank
4. Bank of Katmandu
5. Nepal SBI bank

3.3 Nature and sources of data

The required data is collected from both primary and secondary sources. The secondary data is collected from published annual reports, financial statements, data from respective companies, Nepal Rastra Bank including websites of respective commercial banks whereas Primary data has been collected through questionnaire and direct interviews with respondents.

3.4 Data Processing Procedure

Data collected from primary and secondary sources were analyzed through various statistical and financial tools using various available softwares. The methods of analysis employed are described as follows:

3.4.1 Financial Analysis

Interest rate provided by any bank depends upon its profitability. There are various measures to measure the interest rate. Among them Net Interest margin and Interest Spread are important tools that determines the profitability of the banks,

$$\text{Net Interest Margin} = \frac{\text{Net Interest Income}}{\text{Interest Earning Assets}}$$

$$\text{Net Interest Margin} = \frac{\text{Interest Income} - \text{Interest Expense}}{\text{Interest Earning Assets}}$$

Now,

$$\text{Interest Spread} = \frac{\text{Interest Income}}{\text{Interest earning assets}} - \frac{\text{Interest Expense}}{\text{Interest paying liabilities}}$$

Where,

$$\text{Interest income} = \text{Interest income from security} + \text{Interest Income from loan}$$

$$\text{Interest Expense} = \text{Interest Paid on Time deposits} + \text{Interest paid on Debt}$$

$$\text{Interest Earning Assets} = \text{Loan and advances} + \text{Investments}$$

$$\text{Interest paying Liabilities} = \text{Deposits} + \text{Borrowing}$$

3.4.2 Statistical Analysis or Quantitative Analysis

3.4.1.1 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 with each other if change in the value of one variables appear to be related or linked with the change in the value of others variables.

Correlation may be negative or positive ranging from -1 to +1.

The simple Correlation (r) is calculated y using following formula

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

3.4.1.2 Coefficient of Determination

The square of simple correlation 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 proportions of total variation in the dependent variables which is explained by the variation in the independent variables.

$$\text{Coefficient of Determination} = (r^2)$$

3.4.1.3 Probable error;

Probable error of the Correlation coefficient denoted by P.E is the measure of testing the reliability of the calculated value of r. If r be the calculated value of r from sample of n pair of observation, then P.E is defined by,

$$P.E = 0.675 \frac{1-r^2}{\sqrt{n}}$$

I. If $r < 6 P.E$, there is no significant correlation between two variables.

II. If $r > 6 P.E$ There is significant correlation between two variables.

3.4.1.3 Simple and Multiple Regression Analysis

Regression analysis means the estimation or prediction of the unknown value of one variable from the value of known variables. It is the mathematical measure of average relationship between two or more variables in terms of the original units of the data. In regression analysis, there are usually two or more than two types of variables, the variable whose value is influenced or is to be predicted is called dependent variable and the variable which influences the value or used for prediction is called independent variable.

Simple Regression Equation

$$X = a + bY$$

Where, X is dependent variable

Y is Independent variable

a and b are constants

Multiple Regression Analysis,

$$X_1 = a + b_1X_2 + b_2X_3$$

Where, X_1 is dependent variable

X_2 is Independent variable

X_3 is Independent variable

a , b_1 and b_2 are regression constants.

3.5 Qualitative Analysis

There are various other qualitative factors that affect interest rates of Nepalese Financial institution rather than responding to theoretical factors. A questionnaire is made including the factors considers 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 interviews.

CHAPTER-4

Data Presentation and Analysis

This part is core part of any research study. This chapter implies the presentation and analysis of data collected from various secondary sources. This chapter is the main body of the study which includes detailed presentation, analysis and interpretation of data relating to the interest rate of commercial banks. The chapter has been divided into main section. The first section of the chapter includes the presentation and analysis of data while second section includes major finding of the study.

4.1 Financial Analysis of Commercial Bank

This analysis has been done to identify the position of commercial bank on the basis of different factors which could help to identify the factors relating to interest rate provided and charged by commercial banks as well as the profitability position of the bank and profitability of the bank which later can be related to interest rates.

4.1.1 Net Interest Margin

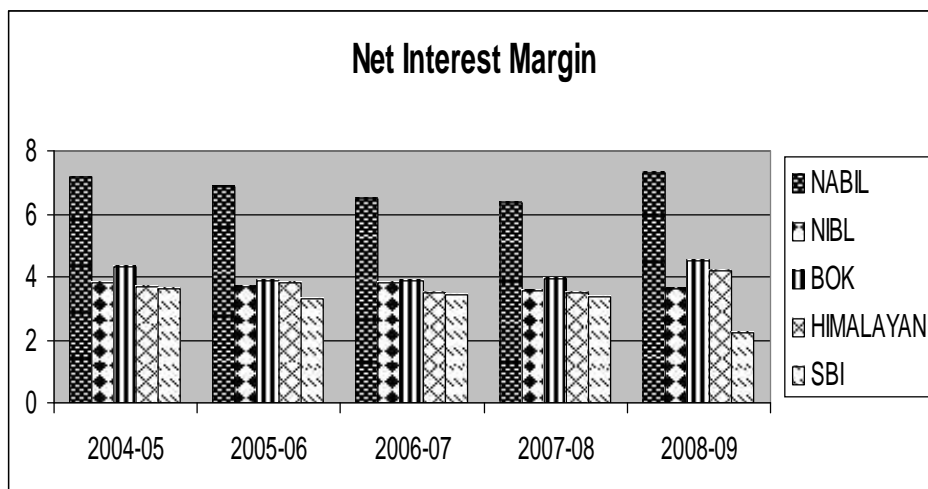
Net Interest Margin (NIM), measures the profitability of any commercial banks. It actually is a difference between Interest income and Interest expense divided by Interest earning assets. Higher the difference between interest earning and interest expense greater will be the value of NIM. Net interest margin reflects the difference between interest provided by the bank and interest received by the bank. Net interest margin of all commercial bank is given in table below,

Table 4.1

Net interest Margin

BANKS	2004-05	2005-06	2006-07	2007-08	2008-09
ALL	4.513	4.3156	4.2176	4.1332	4.3724
NABIL	7.195	6.858	6.483	6.32	7.28
NIBL	3.785	3.7094	3.78	3.549	3.622
BOK	4.295	3.855	3.872	3.935	4.5
HIMALAYAN	3.664	3.829	3.498	3.471	4.21
NSBI	3.626	3.327	3.455	3.391	2.25

Table 4.1 shows the Net Interest margin of the sampled commercial banks. Table shows the NIM of different bank over different time period ,along with average NIM of all sampled banks. Average NIM of all banks throughout the study period shows the constant trend of around 4%., however NABIL bank shows the highest net interest margin of around 7% among all individual bank. After NABIL, BOK shows the higher Net interest margin of around 4%. All remaining three banks NIBL, Himalayan and SBI banks shows the Net Interest margin with an average of around 3%. The chart representation of NIM of banks are shown below,



4.1.2 Interest Spread

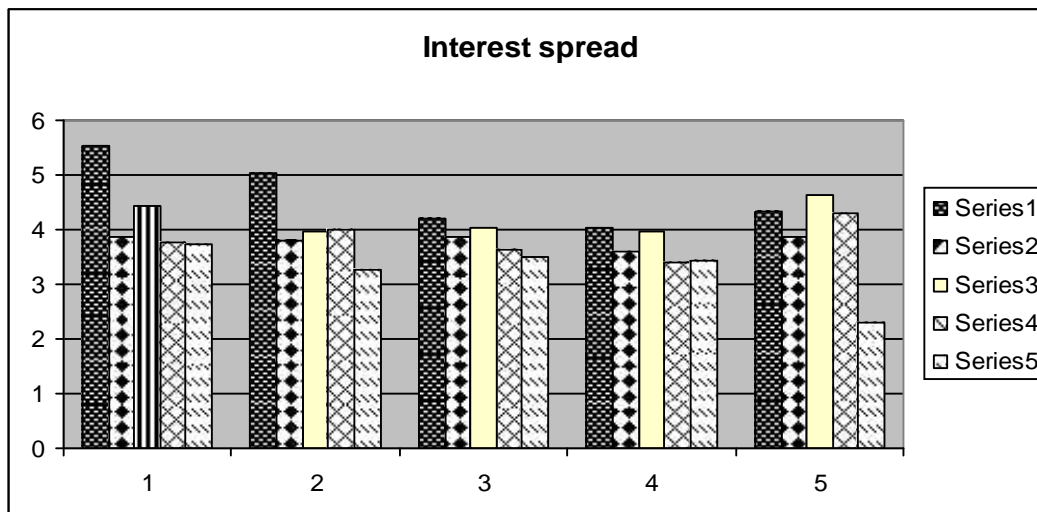
Interest spread is one of the common tool used to measure the profitability of commercial bank. Interest spread is difference between average rate of return on interest earning assets and average rate of interest paid on interest paying liabilities. Below is the interest spread provided by the commercial banks.

Table 4.2

Interest Spread

Banks	2004-05	2005-06	2006-07	2007-08	2008-09
ALL	4.2652	4.01	3.838	3.67	3.8866
NABIL	5.527	5.028	4.189	4.041	4.32
NIBL	3.879	3.786	3.862	3.598	3.878
BOK	4.43	3.96	4.023	3.98	4.63
HIMALAYAN	3.77	3.9934	3.6267	3.399	4.295
NSBI	3.72	3.28	3.49	3.418	2.31

Table 4.2 shows that the average IS of all commercial banks were around 4 % at earlier study period which decreased over time. At earlier study period Nabil bank had the highest spread which is followed by BOK holding second position among selected commercial banks. Remaining other banks had the average IS of around 3% which decreased over year which might have been resulted due to neck to neck competition between commercial banks and other mushrooming financial institutions. The chart representation of Interest Spread of banks are shown below,



4.1.3 Interest Income

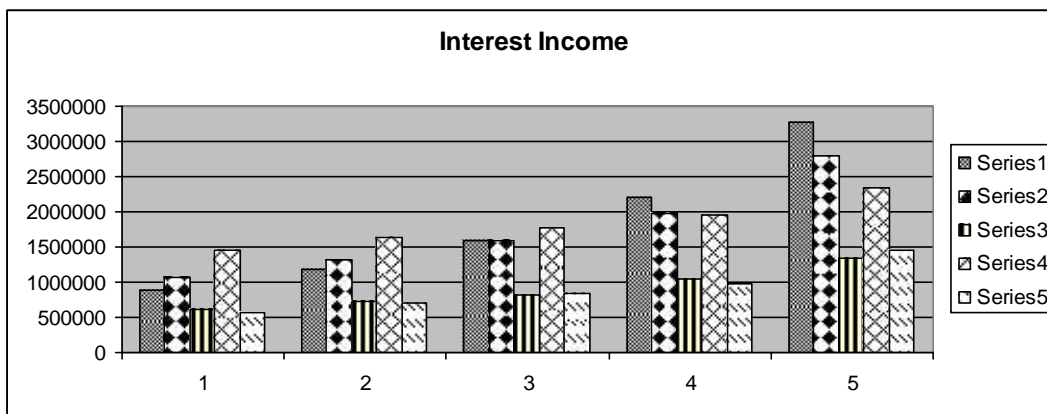
Interest income is income generated by commercial banks through interest earning assets. Interest earned from loan and advances and interest earned through investments. Interest income earned by commercial banks hugely influences the profitability ratios and which in turn determines the market position of commercial banks. Interest income of all commercial banks are given below,

Table 4.3

Interest Income

BANKS	2004-05	2005-06	2006-07	2007-08	2008-09
NABIL	1068747	1309999	1587759	1978696	2798486
NIBL	886800	1172742	1584987	2194275	3267941
BOK	607096	718121	819004	1034158	1347755
Himalayan	1446468	1626474	1775582	1963647	2342198
NSBI	578372	708719	831117	970513	1460446

From table 4.3 we can say that the Interest earning of commercial bank is considerably competitive . Among 5 commercial banks NABIL and Himalayan bank shows the highest interest income in earlier studied period followed by NIBL , Bok anf NSBI respectively. Interest income of all commercial banks surge over time among which NIBL has hold the higher share which truly reflects the increasing interest rate imposed by banks on loan and advances and investment and as well as increased Interest earning Assets. After NIBL, interest income of NSBI and NABIL banks increase with leaps and bounds within 5 years of study period, Himalayan bank and Bok also follow the same suite. The chart representation of Interest Income of banks are shown below,



4.1.4 Interest Expense

Interest Expense is interest paid by the bank for its liabilities including deposits and borrowing. Interest expense is directly affected by the interest rate offered by the bank Higher interest expense posted by the bank reflects that the commercial banks has been providing higher interest Rate in the market which also expose the risk factor involved. Total interest expense of commercial banks are given below,

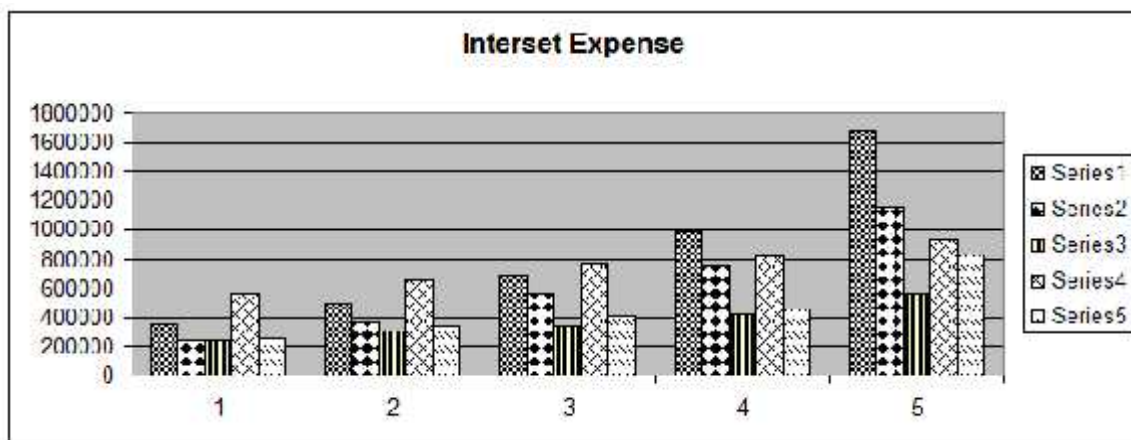
Table 4.4

Interest Expense

BANKS	2004-05	2005-06	2006-07	2007-08	2008-09
NABIL	243544	357161	555710	758436	1153280
NIBL	354549	490974	685530	992158	1686973

BOK	241,639	308,156	339,181	417,543	563,113
Himalayan	561964	648842	767411	823745	934778
NSBI	258430	334770	412262	454918	824700

Higher the interest rate provided by the bank higher will be the interest expense, higher the interest paying liabilities of the bank higher will be the interest expense. From table 4.4 we can say that among five selected commercial bank Himalayan bank had the highest interest expense followed by NIBL in earlier studied period however over time interest expense of NIBL increase tremendously in comparison with other commercial banks. Other commercial banks also show the comparable increment in interest expense among which BOK has the least interest expense. However increasing Interest expense of all commercial banks over time, can be attributed to highest interest rate offered by commercial banks and increase in interest paying liabilities. The chart representation of Interest Expense of banks are shown below,



4.1.5 Interest Earning Assets

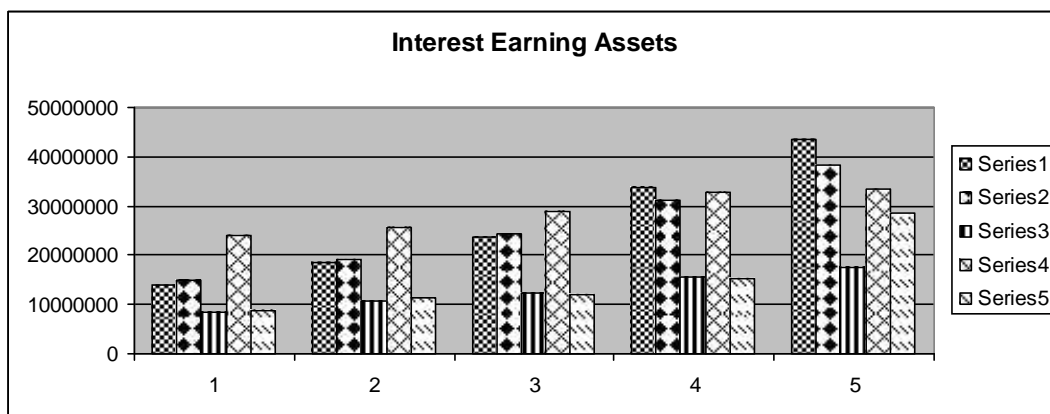
Interests earning Assets of any commercial bank can be calculated as the sum loan and advances issued and investment done .Higher Interest earning assets reflects the market position of any commercial bank which directly affect the profitability of commercial bank. Interest earning assets of commercial banks are given below,

Table 4.5

Interest Earning Assets

	2004-05	2005-06	2006-07	2007-08	2008-09
NIBL	14060245	18379077	23792108	33870676	43641019
NABIL	14853403	19101076	24491090	31304824	38416312
BOK	8510832	10633795	12391762	15666705	17430896
Himalayan	24135051	25531590	28820982	32837697	33503846
NSBI	8821559	11237511	12119904	15202585	28417930

Table 4.5 represents the Interest earning assets of 5 commercial banks. Among 5 commercial banks Himalayan bank had the highest share of interest earning assets In earlier studied period Himalayan bank had hold highest Interest earning assets which increased over time but comparatively less that other banks. NIBL banks have shown considerable increment in interest earning assets over time which is followed by NABIL and NSBI. Bok also shows the increment in interest earning assets but comparatively less than NIBL, NABIL and NSBI. The chart representation of Interest earning assets of banks are shown below,



4.1.6 Interest Paying Liabilities

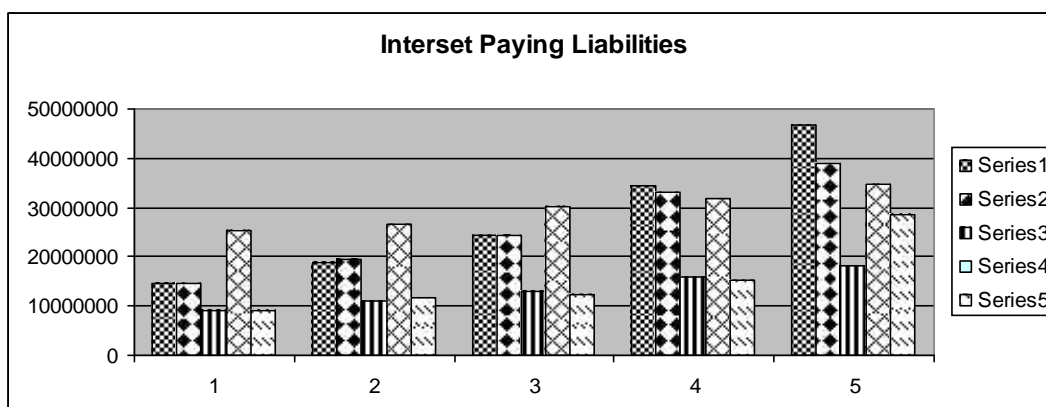
Interest paying liabilities of any commercial bank is considered as the sum of deposits collected by the bank and borrowing received by the bank. Interest paying liabilities is the fund for which banks has to pay for its use, below is the list of interest paying liabilities of commercial banks,

Table 4.6

Interest Paying Liabilities

	2004-05	2005-06	2006-07	2007-08	2008-09
NABIL	14603671	19520601	24224858	33275047	39029561
NIBL	14604574	18927306	24488856	34451726	46736900
BOK	8948748	11038539	13118928	15933738	18183980
Himalayan	25320060	26635476	30284386	31925967	34681345
NSBI	9124403	11614469	12260651	15342875	28684687

From table 4.6 we can say that Interest paying liabilities of all commercial banks increased over studied period. NIBL bank had tremendous growth in volume of interest paying liabilities and has occupied the highest position. NIBL banks has been followed by NABIL and NSBI with increase in interest paying liabilities over studies period. Interest paying liabilities of BOK had also increased over time but comparatively less than other sample commercial banks. Although the Himalayan bank had the highest interest paying liabilities in the earlier studied period , it had failed to maintain the position over time. The chart representation of Interest Paying Liabilities of banks are shown below,



4.2 Trend Analysis of financial indicators that directly influence interst raete

Before comparing two variables it will be fruitful to analyze the trend of other variables that directly and indirectly influence the independent variables.

4.2.1 Trend Analysis of Return on Assets

Return on assets is one of the major financial indicator that has been used by banks and individuals to measure the profitability and the position of the bank. Return on assets a basic measure of bank profitability that corrects for the size of the bank is the return on assets (*ROA*), which divides the net income of the bank by the amount of its assets. *ROA* is a useful measure of how well a bank is doing because it indicates how well a bank's assets are being used to generate profits.

Table 4.7

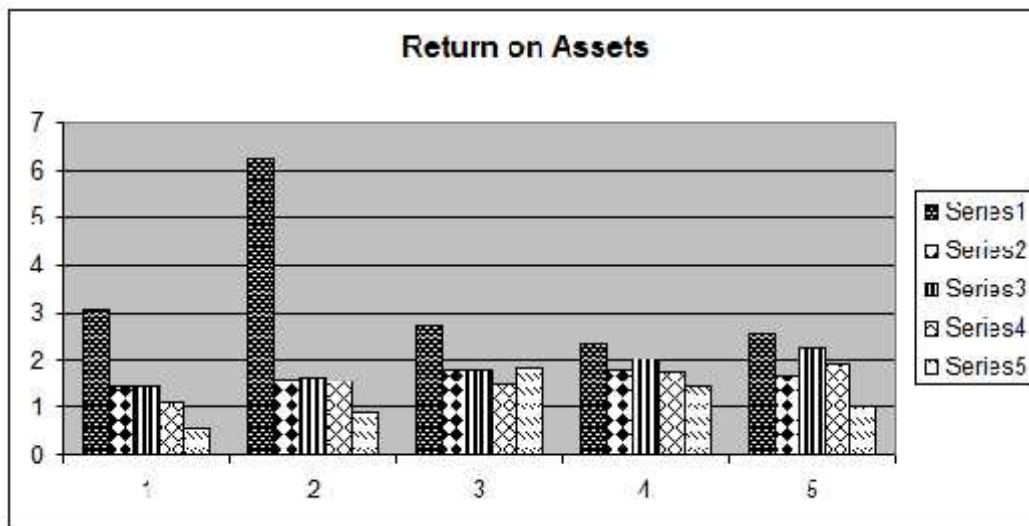
Trend value of Return on assets over studied period

	2004-05	2005-06	2006-07	2007-08	2008-09
ALL	1.512	2.388	1.922	1.866	1.882
NABIL	3.06	6.23	2.72	2.32	2.55
NIBL	1.42	1.61	1.79	1.77	1.68
BOK	1.42	1.65	1.8	2.04	2.25

HIMALAYAN	1.11	1.55	1.47	1.76	1.91
NSBI	0.55	0.9	1.83	1.44	1.02

Return on Assets of all commercial banks show the increasing trend over studied period which directly reflects that the net profit of all commercial banks increase over time that could have been resulted due to increase in interest income or decrease in interest expense. Increase in ROA represents the well being position of the bank which can be concluded that bank is utilizing its assets to generate profit.

Trend chart of Return on assets over studied period



4.1.4 Trend Analysis of Return on Equity

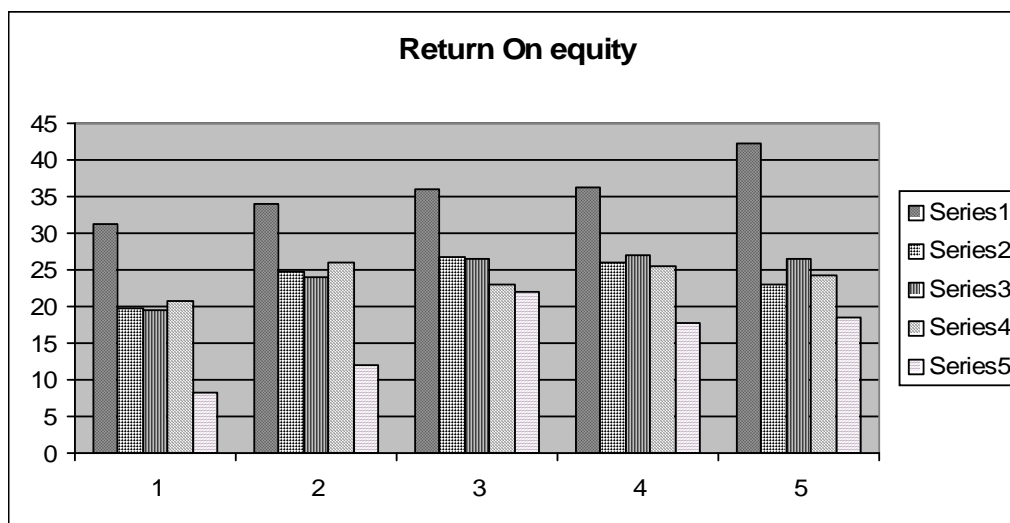
Return on equity is one of the major financial indicator that reflects the bank profitability. It is actually return on the equity invested by the investor in other words it represents how much the bank is earning on their equity investment. Return on equity of Banks are given below,

Table 4.8**Trend value of Return on Equity**

	2004-05	2005-06	2006-07	2007-08	2008-09
ALL	19.876	24.38	26.776	26.43	26.914
NABIL	31.28	33.88	35.9	36.3	42.3
NIBL	19.67	24.77	26.68	25.93	23.05
BOK	19.04	24.1	26.38	26.9	26.51
HIMALAYAN	20.08	25.9	22.91	25.38	24.13
NSBI	8.23	12.04	22.01	17.64	18.58

The table 4.4 shows that, among five commercial bank NABIL takes the credit of providing highest return to its investors of around 35 % on average of the five years that with an increasing trend. NIBL also shows its return on equity in increasing trend except in 2008-2009 . The decrease in return on equity of any commercial bank can be attributed to the increase in share capital. Return on equity of BOK shows the considerable increment from the year 2004-05 to 2005-06, which remains in increasing trend throughout the study period. ROE of Himalayan banks remains around 20% , which shows increment from year 2004-05 to 2005-06, but decline next year. The ROE increase from year 2007-08 but again decrease in 2008-09. Return on equity of SBI bank was in least in the year 2004-05, which shows the increasing trend over years. The chart representation of return on equity of commercial banks are shown below,

Trend chart of Return on equity



4.1.7 Trent Analysis of Non Performing Loan to Total Loan

Nonperforming loan or NPL, are loans that are no longer producing income for the bank that owns them. Banks often report their ratio of nonperforming loans to total loans as a measure of the quality of their outstanding loans. A smaller NPL ratio indicates smaller losses for the bank, while a larger (or increasing) NPL ratio can mean larger losses for the bank as it writes off bad loans. High NPL result from high interest rates on lending, high NPL itself contributes to high interest rates. List of nonperforming loan of all sample commercial banks are given in below table,

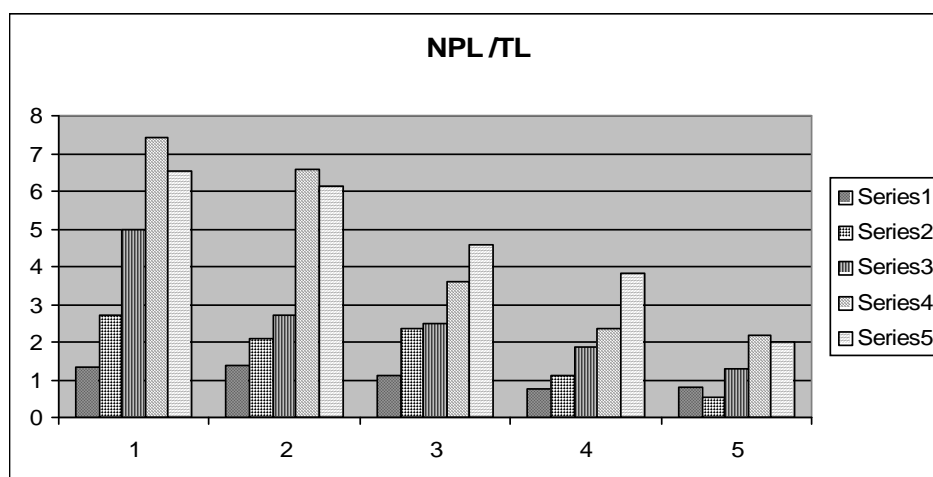
Table 4.9

rend chart of Non Performing Loan to Total Loan

	2004-05	2005-06	2006-07	2007-08	2008-09
ALL	4.596	3.78	2.83	1.982	1.358
NABIL	1.32	1.38	1.12	0.74	0.8
NIBL	2.69	2.07	2.37	1.12	0.54
BOK	4.99	2.72	2.51	1.86	1.27
HIMALAYAN	7.44	6.6	3.61	2.36	2.16
NSBI	6.54	6.13	4.56	3.83	2.02

The table 4.5 shows that the NPL/TL of average of all banks is around 3% which is quite higher , Among all banks NABIL has lowest NPL/TL which is around 1 % ,which is in decreasing trend over the studied period which reflects improving status of NABIL bank. NIBL has higher NPL/TL than NABIL bank which is around 2 % in the year 2004-05, the ratio decreasing with year which reaches to 0.54 % in the year 2008-09. NPL/TL of Bok was highest in the year 2004-05 that was around 5%, which decrease over years. Himalayan bank has the highest NPL/TL ratio in the period 2004-05 at around 7% ,the ratio keeps decreasing over years. Like other banks SBI bank also has its NPL/TL ration in decreasing trend. The chart representation of Non Performing loan to total loan of commercial banks are shown below,

Trend chart of NPL/TL



4.1.8 Trend analysis of Credit to Deposit ratio

Credit-deposit ratio is the proportion of loan-assets created by banks from the deposits received. The higher the ratio of C/D, the higher the loan-assets created from deposits. Some experts contend that a high credit-deposit ratio could lead to a rise in interest rates. Below is the C/D ratio of sampled commercial banks.

Table 4.10

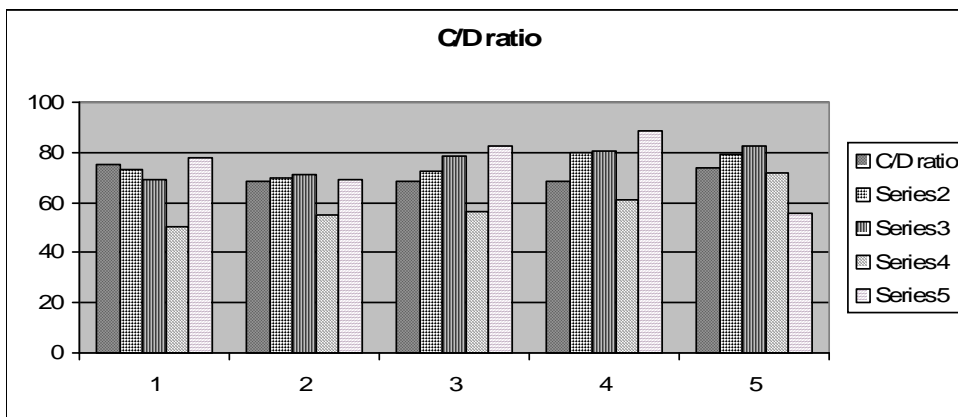
Trend value of Credit to Deposit ratio

	2004-05	2005-06	2006-07	2007-08	2008-09
ALL	63.318	66.854	71.634	75.63	72.54
NABIL	75.05	68.63	68.13	68.18	73.87
NIBL	73.33	69.83	72.56	79.91	78.86
BOK	68.87	71.42	78.25	80.51	82.65
HIMALAYAN	50.07	55.27	56.57	61.23	71.49
NSBI	77.87	69.32	82.66	88.32	55.84

The table reveals that the average C/D ratio of all banks throughout the study period was in a safe limit. The NABIL bank has maximum C/D ratio 75.05 in the fiscal year 2004/05 which

decrease over the year for 3 consecutive year but increases again in the year 2008/09. In the fiscal year 2004/05 NIBL had C/D ratio of 73.33% which decrease on second consecutive year but later remains in increasing trend throughout the study period and reach the maximum C/D ratio of the bank 78.86% .The C/D ratio of the BOK is in increasing trend throughout the study period which was 68.87 % in fiscal year 2004-05 but it reach up to 82.65% by the fiscal year 2008-09. Himalayan bank had least ratio in the fiscal year I.e. 50.07 % among the all studied banks in the fiscal year 2004-05 which also was in increasing trend and reach up to 71.49%. The C/D ratio of SBI bank is in fluctuating trend and had least C/D ratio in the fiscal year 2008-09.

Trend chart of C/D Ratio of commercial banks



4.3 Statistical Analysis

4.2.1 Coefficient of correlation Analysis Pearson

In this heading Karl Pearson coefficient of correlation (Direct Method) is used to find out the relationship between two dependent and independent variables. This method is used to find out the effect of independent variable over dependent variable.

Table 4.11**Coefficient of Correlation between Net Interest Margin and Return on Assets**

BANKS	Evaluation Criteria			
	R	r ²	P.Er	6P.Er
ALL	-0.40238	0.1619	0.25281	1.51685
NABIL	0.131311	0.1717	0.2964	1.7784
NIBL	0.472936	0.2236	0.23419	1.40514
BOK	0.276994	0.0767	0.27850	1.6711
HIMALAYA N	0.1457031	0.02122	0.2952	1.7712
NSBI	0.059760	0.003782	0.3015384	1.80918

Table 4.7 shows that the value of R, r , P.Er and 6P.Er between independent variable NIM and independent variables ROA of average of all banks and individual sampled banks for the study period of 2003-04 , 2008 -09. From the table it has been found that the correlation coefficient between NIM and ROA of average of all banks is -0.40238,i.e the correlation between two variable is –ve. By considering the value of coefficient of determination (r), i.e. 0.1619, it can be said that the variation between dependent variable ROA and independent variable NIM is only 16.19 % .Similarly the value of r which is lower that the value of 6 P.Er, it can be said that there is no significant correlation between NIM and ROA of average of all banks.

While comparing the data of individual banks with average of all banks , the Nabil banks shows the positive correlation between independent variable NIM and dependent variable ROA by the value of 0.13103 , while considering its value of coefficient of determination, 0.1717, it can be said that there is total 17.17% variation between two variables. Considering the value of NIBL, it shows the highest positive correlation between NIM and ROA, with

variation of 22.36 %. Since the value of r is greater than the value of $6P.Er$ it can be said that there is significant relation between NIM and ROA of NIBL bank. BOK also shows the positive correlation between NIM and ROA with variation of just 7.67 %. Since the value of $6P.Er$ is lower than the value of r it can be said that there is significant relationship between NIM and ROA. Himalayan bank also shows the positive correlation of 0.14570 between NIM and ROA, with variation of only 2.122 %.

Since value of r is also greater than $6P.Er$, there show the relationship between NIM and ROA. While considering the correlation of NIM and ROA of SBI bank, it shows the positive but least among the all banks. Comparing the Value of r and $6P.Er$ it can be said that there is no significant correlation between NIM and ROA of NSBI bank.

Table 4.12

Coefficient of Correlation between Net Interest Margin and Return on Equity

BANKS	Evaluation criteria			
	R	r²	P.Er	6P.Er
ALL	-0.018785	0.035287	0.291	1.746
NABIL	0.135164	0.01826	0.296	1.776
NIBL	-0.317048	0.10052	0.272	1.6279
BOK	-0.249934	0.06247	0.2828	1.6968
HIMALAYAN	0.448976	0.20157	0.241	1.4450
NSBI	-0.365156	0.13334	0.262	1.5685

The table 4.8 shows the value of R, r , P.Er and 6P.Er between independent variable NIM and independent variables ROE of average of all banks and individual sampled banks for the study period of 2003-04 , 2008 -09. The coefficient of correlation measures the relationship between two variables. The objective of computing correlation between these two variables is to justify whether ROE is significantly correlated with NIM of the bank or not. From the table it has been found that the correlation coefficient between NIM and ROE of average of all banks is -0.018785, i.e the correlation between two variable shows the negative relation. By considering, the value of coefficient of determination (r), i.e. 0.035287, it can be said that the variation between dependent variable ROE and independent variable NIM is only 3.528 %. Similarly the value of r which is lower than the value of 6 P.Er, shows that there is no significant correlation between NIM and ROE of average of all banks.

While comparing the data of individual banks with average of all banks , the Nabil banks shows the positive correlation between independent variable NIM and dependent variable ROE by the value of 0.135164, comparing its value of coefficient of determination i.e. ,0.01826, it can be said that there is total 1.826% variation between these two variables. Since the value of r is lower than the value of 6P.Er, it can be said that there is no significant relationship between NIM and ROE of NABIL bank. While considering the value of NIBL, it shows the negative correlation between NIM and ROE, with the value of -0.317048 and with total of 1.05% variation. Since the value of r of NIBL is smaller than value of 6PE.r it can be said that there is no significant relation between NIM and ROE. BOK also shows the negative correlation between NIM and ROE with variation of just 6.24 %. Since the value of 6PE.r is greater than the value of r it can be said that there is no significant relationship between NIM and ROE. Along with NABIL bank Himalayan bank also shows the positive correlation of 0.448976 between NIM and ROE , with variation of only 24.57 % .Since value of r of Himalayan bank is smaller than 6P.Er ,it can be said that there is no significant relationship between NIM and ROE. While considering the correlation of NIM and ROE of NSBI bank, it is negative with the value of -0.3652 with variation of 13.3 %. Comparing the Value of r and 6P.Er it can be said that there is no significant correlation between NIM and ROE of SBI bank.

Table 4.13**Coefficient of Correlation between Interest Spread and Nonperforming loan to total loan.**

BANKS	Evaluation criteria			
	R	r²	P.Er	6P.Er
ALL	0.817687	0.668612	0.1482	0.8892
NABIL	0.815087	0.6643668	0.10124	0.6074
NIBL	0.32825082	0.1077486	0.269143	1.61484
BOK	0.072692	0.005275	0.30054	1.800326
HIMALAYAN	0.528493	0.279304	0.21739	1.304368
NSBI	0.4741766	0.2248434	0.3466057	2.0799

The coefficient of correlation between the Non performing loan to total loan and interest spread measures the degree of relationship between them. Here, non performing loan to total loan is taken as dependent variable where as Interest spread is taken as dependent variable. The main purpose of calculating 'r' is to justify whether the ratio of nonperforming loan to total loan has any role in interest spread provided by the bank.

From table 4.9 it has been found that, the value of R, r , P.Er and 6P.Er between independent variable interest spread and dependent variables non performing loan to total loan of average of all banks and individual sampled banks for the study period of 2003-04 , 2008 -09. From the table it has been found that the correlation coefficient between IS and NPL/TL of average of all banks is 0.817687, i.e the correlation between two variable is the positive. The value of coefficient of determination (r) is 0.6686, which state that 66.86% of the variation of the dependent has been explained by independent variable. Similarly considering the value of (r) 0.8176 and comparing it with 6P.Er 0.8892, the value of r which is slightly less than the value

of 6p.Er represents no significant correlation between IS and NPL/TL of average of all banks.

While comparing the data of individual banks with average of all banks, the Nabil banks shows the positive correlation between independent variable NPL/TL and dependent variable IS by the value of 0.815087, comparing its value of coefficient of determination i.e., 0.66436, it can be said that there is total of 66.43% variation between these two variables. Since the value of $r(0.8150)$ is greater than the value of 6P.Er(0.6074), it can be said that there is significant relationship between NPL/TL and IS of NABIL bank. While considering the value of NIBL, it also shows the positive correlation between NPL/TL and IS, with the value of 0.32825 and with total of 10.77% variation. Since the value of $r(0.32825)$ of NIBL is smaller than value of 6P.Er it can be said that there is no significant relation between NPL/TL and IS. BOK also has positive correlation between NPL/TL and IS with variation of just 5.275%. Since the value of 6P.Er(1.80) is greater than the value of $r(0.0726)$ it can be said that there is no significant relationship between NPL/TL and IS. As other sampled bank Himalayan bank also shows the positive correlation of 0.52849 between NPL/TL and IS, The coefficient of determination $r^2(0.2793)$, reveals that there is variation of 27.93%. The value of $r(0.5284)$ of Himalayan bank is smaller than 6P.Er, it can be said that there is no significant relationship between NPL/TL and IS. While considering the correlation of NPL/TL and IS of NSBI bank, it is even also positive with the value of 0.47416 with variation of 22.48%. Comparing the Value of $r(0.47417)$ and 6P.Er(2.0799) it can be said that there is no significant correlation between NPL/TL and IS of NSBI bank.

Table 4.14

Coefficient of Correlation between Interest Spread and Credit to Deposit ratio

BANKS	Evaluation Criteria			
	R	r^2	P.Er	6P.Er
ALL	-0.75725	0.573427	0.128673	0.7720
NABIL	0.548619	0.300982	0.21085	1.2651134

NIBL	-0.8592261	0.738269	0.0789499	0.4736
BOK	0.12665269	0.0166409	0.2966	1.7797
HIMALAYAN	0.4741766	0.224643	0.23384	1.40293
NSBI	0.8401366	0.705829	0.08873	0.5524

The table shows the value of R, r , P.Er and 6P.Er between independent variable Credit to deposit ratio(C/D) and dependent variable Interest spread (IS) of average of all banks and individual sampled banks for the study period of 2003-04 , 2008 -09.The coefficient of correlation measures the relationship between two dependent and independent variables. The objective of computing correlation between two variables is to justify whether IS is significantly correlated with C/D ratio of the bank or not. From the table it has been found that the correlation coefficient between C/D and IS of average of all banks is

-0.75725, i.e the correlation between two variable shows the negative relationship.By considering the value of coefficient of determination (r), i.e. 0.573427, it can be said that the variation between dependent variable ROE and independent variable C/D and IS is 57.348 %.Similarly the value of r which is lower that the the value of 6 P.Er, shows that there is no significant correlation between C/D and IS of average of all banks.

While comparing the data of individual banks with average of all banks , the Nabil banks shows the positive correlation between independent variable C/D and dependent variable IS by the value of 0.548619,comparing its value of coefficient of determination i.e. ,0.3009, it can be said that there is total 30.09% variation between these two variables. Since the value of r is lower than the value of 6P.Er, it can be said that there is no significant relationship between C/D and IS of NABIL bank. While considering the value

of NIBL, it shows the negative correlation between C/D and IS, with the value of -0.8592261 and with total of 73.832 variation. Since the value of r of NIBL is smaller than value of 6PE.r it can be said that there is no significant relation between C/D and IS. BOK also shows the positive correlation between C/D and IS with variation of just 1.66 %. Since the value of r is smaller than the value of 6P.Er it can be said that there is no significant relationship between C/D and IS. Along with NABIL and BOK, Himalayan bank also shows the positive correlation of 0.474176 between C/D and IS , with variation of only 22.46 %

.Since value of r of Himalayan bank is smaller than 6P.Er ,it can be said that there is no significant relationship between C/D and IS. While considering the correlation of C/D and IS of SBI bank ,it is also positive with the value of 0.8401 with variation of 70.58 %. Comparing the Value of r(0.8401) and 6P.Er(0.5524) it can be said that there is significant correlation between C/D and IS of NSBI bank.

4.3 Simple and Multiple Regression Analysis

Regression is the statistical tool which is used to determine the statistical relationship between two or more variables and to make estimate of one variable on the basis of the other variable. Regression is the line equation which gives the best estimate of one variable for any given value of the other variable. The regression line of Y on X estimates the most probable values of Y for given values of X.

Simple Regression Equation is expressed as,

$$X = a + bY$$

$$II = a + b IEA$$

Where, X is dependent variable II (Interest income)

Y is Independent variable IEA (Interest Earning Assets)

a and b are regression constants.

Table 4.15

Regression equation between II and IEA

Banks	Regression Equation		
NABIL	$Y = -0.778 + 0.0685X$	$a = -0.778$	$b = 0.0685$
NIBL	$Y = -3.966 + 0.0696X$	$a = -3.966$	$b = 0.0696$
BOK	$Y = -0.5283 + 0.0635X$	$a = -0.5283$	$b = 0.0635$
Himalayan	$Y = -0.7892 + 0.06345X$	$a = -0.7892$	$b = 0.06345$
NSBI	$Y = -4.2 + 0.0571 X$	$a = -4.2$	$b = 0.0571$

The regression Coefficient of all banks shows the positive value which directly shows the positive relationship between interest earning assets and interest income.

The regression equation of NABIL bank is $Y = -0.778 + 0.0685X$ which reflect that every unit increase in Interest earning assets will increase Interest income by 0.0685unit. The regression equation of NIBL bank is $Y = -3.966 + 0.0696X$ which shows that every unit increase in Interest earning assets will increase Interest income by 0.0696 unit.

Similarly .the regression equation of Bok and Himalayan is $Y = -0.5283 + 0.0635X$ and $Y = -0.7892 + 0.06345$ respectively which shows that every unit increase in Interest earning assets will increase Interest income by 0.0635 and 6345 unit respectively.

Multiple Regression Analysis

The regression equation of X_1 the dependent variable representing Interest spread on two independent variables X_2 , NPL/TL and X_3 , C/D ratio is expressed as,

$$X_1 = a + b_1X_2 + b_2 X_3$$

$$IS = a + b_1 NPL/TL + b_2 C/D$$

Where, X_1 is dependent variable IS (Interest Spread)

X_2 is Independent variable NPL /TL (Nonperforming loan to Total Loan)

X_3 is Independent variable C/D (Credit to Deposit ratio)

a_1, b_1 and b_2 are regression constants.

Table 4.16

Regression equation between IS, NPL/TL and C/D ratio

BANK	REGRESION			
NABIL	$Y = -0.1821 + 0.3854X_1 + 0.0621X_2$	$a = -0.1821$	$b_1 = 0.38541$	$b_2 = 0.621$
NIBL	$Y = 3.2542 + 0.0024009X_1 + 0.00724X_2$	$a = 3.2542$	$b_1 = 0.002409$	$b_2 = 0.007246$
BOK	$Y = -6.746 + 0.002409 X_1 + 0.08354 X_2$	$a = -6.746$	$b_1 = 1.75086$	$b_2 = 0.08354$

HIM A	$Y = -6.5616 + 0.39236 X_1 + 0.14636 X_2$	$a = -6.5613$	$b_1 = 0.39263$	$b_2 = 0.14636$
NSB I	$Y = -1.3112 + 0.16269 X_1 + 0.503 X_2$	$a = -13112$	$b_1 = 0.16269$	$b_2 = 0.503$

The table 4.11 shows the regression equation of Interest Spread, Non performing loan to Total loan and Credit to deposit ratio of all individual sampled banks. According to table, the regression equation of IS on NPL/TL, C/D $Y = -0.1821 + 0.3854X_1 + 0.0621X_2$ in NABIL bank is negative. Both the regression coefficients are positive which indicates the positive relation between independent variable IS and independent variable NPL/TL and C/D. In other word, every unit increase in NPL/TL will increase IS by average of 0.3854 and every unit of increase in C/D will increase the IS by the average of 0.0621. The value of (a) is relatively low, the value of (a) indicates that if the value of both dependent variable is 0, then the value of Interest spread will be around -0.1821.

The regression equation of NIBL bank is $Y = 3.2542 + 0.0024009X_1 + 0.00724X_2$, i.e. the regression equation is positive. The positive equation represents the positive relationship between IS, NPL/TL and C/D ratio. Since both the regression coefficient is positive, it states that every unit increase in NPL/TL and C/D will increase IS by 0.0024 and 0.00724 unit respectively. The value of (a) i.e. 3.2542 indicates that, the value of IS will be 3.2542 if both value of NPL/TL and C/D is 0.

On the other hand regression equation of BOK is negative, but since both the regression coefficient is positive we can conclude that there exists the positive relationship between IS, NPL/TL and C/D ratio. In other words, every unit increase in NPL/TL will increase IS by average of 0.002409 and every unit of increase in C/D will increase the IS by the average of 0.8354.

Similarly, the regression equation of Himalayan bank is also negative. Both regression value b_1 and b_2 is positive we can assume positive relation between two dependent variables and one independent variable. The value of b_1 and value of b_2 reveals that every unit increase of NPL/TL will increase IS by 0.39263 and every unit increase in C/D ration increase IS by 0.14363.

Regression equation of SBI bank is also negative while relation between dependent and independent variable is positive. Every unit increase in dependent variables NPL/TL and C/D will increase IS unit by 0.16269 and 0.503. The value of (a) indicates that if the value of both the dependents variable remains 0, the value of IS will be around of 0.13112.

4.4 Qualitative Analysis

Other various qualitative factors in the market directly and indirectly affects the interest rate provided by financial institution. A questionnaire (qualitative analysis) has been conducted to identify possible factors affecting interest rate of market. Opinions and experiences of various related persons from various financial institution have been collected through questionnaire and direct interviews which are presented below

4.4.1 Maturity Period and Interest rate

Theoretically interest rate is affected by the maturity period of either deposit or loan. The longer the maturity period higher will be the risk-premium added to prime interest rate. The principle doesn't seem applicable in context of Nepal. From the questionnaires and direct interviews with the respondent regarding interest rate relationship between interest rate and maturity period, most of the respondent, around 70 % of respondents, disagree that the interest rate given and provided by the bank are related with maturity period. Respondents opines that the Interest rate provided by the bank are dependent on the reputation and the class of the bank and on other hand interest rate received by the banks are dependent to borrower' creditworthiness, types of business or project, cash flow capacity and pattern of loan. However some of the respondents agree that interest rate of commercial banks are govern by maturity period of loan or deposits.

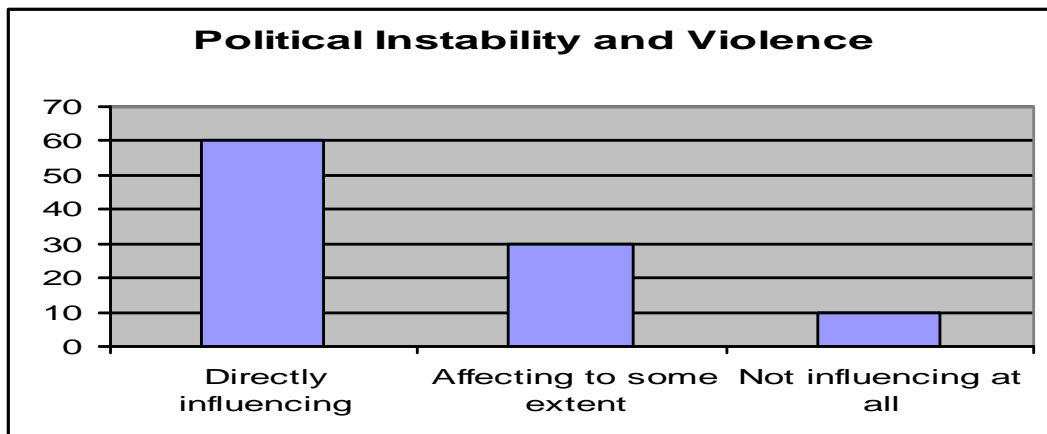
4.4.2 .Competition in the market and Interest rate.

Competition is an undeniable factor in any open and healthy market. In a question, if competition determines the interest rate provided by the bank, most of all respondent agree that competition affects the interest rate of any bank. Respondent express their view that competition among the commercial bank along with development banks, finance companies and mushrooming cooperative have forced commercial banks to increase the interest rate than the one they earlier used to provided.

4.4.3. Political Instability and Violence

Political instability, insecurity and violence have become phenomenal in Nepal. Our main concern is to find out whether these factors have played any role in interest rate provided by the bank, from questionnaire and direct interviews with the respondent we have following response.

Table 4.17

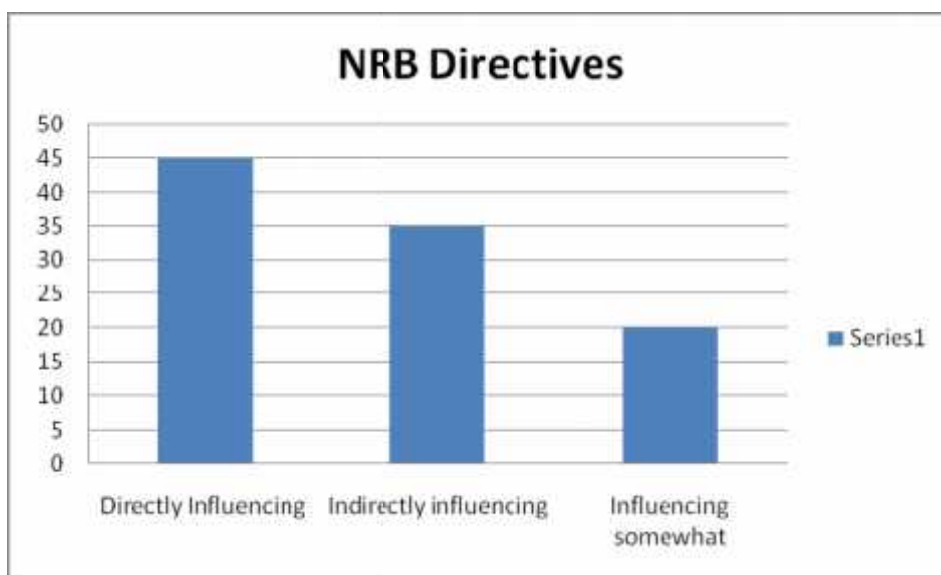


More than 50% of the respondents believe that political instability and violence has affected the interest rate. According to them instability in the country has reduced the investment opportunity for the investor and has also dampens the overall economy of the country. Frequently organized strikes and bandhas has reduced the working hours of the institution there by increasing operating cost burden.

4.4.4 NRB and Interest rate

Central bank has sole authority to fix the level of interest rate by controlling the money supply and credit creation of central bank through monetary and fiscal policy. Liberal economic policy allows commercial banks to affix interest rate by their own, However, The Central Bank, NRB decides the limit. When a question was asked “Does NRB directives influence the interest rate charged and offered by the commercial bank?.the respondents answer to this question is shown in the table below.

Table 4.16



4.4.5. Inflation rate.

Inflation has picked up in a number of emerging market in recent years, reflecting strong growth of domestic and the greater weight of rising food prices .when question was asked to the “ Does inflation and Interest rate has direct relation “ , most of the respondent reply yes, most of them believe that the increasing interest rate is the result of inflation.

4.4.6 Fixation of Interest rate

Upon query “who fix the interest rate of commercial bank ,most of the respondent around 60 percent believe that interest rate is affixed by banks itself where as 30 present respond that interest rate is fixed by NRB and 20 percent respond for market.

4.5 Major Findings

During studied period it has been found that the

1. Net Interest margin of all commercial bank are in increasing trend with NABIL bank holding highest Net Interest Margin value of around 7%. Increased Net interest Margin reveals the profit making motive of commercial banks which could be resulted due to the considerable difference between interest provided by the bank and interest received by the banks.

2 Interest Spread of commercial banks during study period has been remian somewhat constant and that too found in decreasing trend which can be attributed to neck to neck competition between mushrooming financial institution.

3. Interest income of all commercial banks found to be in increasing trend that truly reflects well maintained position of commercial banks. It can be said that banks are successful to channelized collected deposits and are successful to increase interest earning assets as well throughout the study period. Increased interest income resulted due to increased interest rates received by the banks.

4. Among selected commercial banks most of them have shown tremendous growth level in range of interest income throughout the period which we can attribute to excessive demand of loan in market or investment opportunities.

5. Interest expense of all commercial banks was also found in the rising trend throughout the study period which can be concluded as the growing position of commercial banks in financial market.

6. Growing Interest expense of commercial bank can be attributed to increased volume of interest paying liabilities or increased interest rate provided by commercial banks .

6. Return on assets of commercial bank has been increasing gradually which could be attributed to increase in profit earning by commercial banks. NIM and ROA of commercial banks shows the positive correlation. Increase in Interest margin increase the profit of the bank there by increasing ROA. Through analysis it has been found that there is significant relationship between NIM and ROA with least variation between two variables.

7. Some of the banks shows the negative correlation between NIM and ROE , which represents that despite increase in profit with increase in NIM could not equally increase the ROE of banks which could be result due to increase in number of shares issued by the banks. During analysis it has been found that the NIM and ROE has Significant correlation with variation ranging between 20 to 30 Percent with all sample commercial banks.

8. Interest spread and non performing loan to total loan of commercial bank shows the positive correlation i.e. Increase in IS could equally increase Nonperforming loan proportion of the bank thereby increasing the threat to commercial banks. Although the average IS of all commercial banks do not show the significant relationship with NPL/TL, analysis of individual banks shows the positive correlation between IS and NPL/TL. Despite that, Ratio of Nonperforming loan to Total which was at highest record at the initial study period shows the decreasing trend over study period. The decreased ratio of NPL/TL might have been due strict regulation imposed by NRB or due to corrective measures implemented by the banks.

9. The correlation coefficient between Interest spread and credit to deposit ratio is negative for NIBL bank and average correlation of all banks. The negative correlation of NIBL banks shows that the interest spread of bank has not directly affected the C/D ratio of the bank, which could have resulted due to strong liquidity and market position of the bank. However the correlation coefficient of IS to C/D ratio of other bank are positive and shows the significant role of C/D over the IS of the banks. From which we can concluded that the interest rate received and imposed by the banks affects C/D ratio of bank and vice versa.

10. The regression Coefficient of all banks shows the positive value which directly shows the positive relationship between interest earning assets and interest income.

11. The regression equation reflects that every unit increase in Interest earning assets will increase Interest income by 0.0685unit.

12. The regression equation of NIBL bank shows that every unit increase in Interest earning assets will increase Interest income by 0.0696 units. Similarly, from the regression equations of Bok and Himalayan we can conclude that every unit increase in Interest earning assets will increase Interest income of BOK and Himalayan bank by 0.0635 and 6345 unit respectively.

13. From regression analysis it has been found that every unit increase in NPL/TL will increase IS of the NABIL bank by average of 0.3854 and every unit of increase in C/D will increase the IS by the average of 0.0621.

14. For NIBL every unit increase in NPL/TL and C/D will increase IS by 0.0024 and 0.00724 unit respectively.

15. Regression analysis of Bank of Katmandu has revealed that for every unit increase in NPL/TL will increase IS by average of 0.002409 and every unit of increase in C/D will increase the IS by the average of 0.8354.

16. Similarly regression analysis of Himalayan bank shows that every unit increase of NPL/TL will increase IS by 0.39263 and every unit increase in C/D ration increase IS by 0.14363.

17. For SBI bank it has been found that every unit increase in dependent variables NPL/TL and C/D will increase IS unit by 0.16269 and 0.503 respectively.

18. From qualitative analysis it has been found that the maturity period of deposit and credit have directly influence the interest rate provided and received by the bank.

19. From qualitative analysis we can conclude that political instability lack of investment opportunity can directly influence the interest rate provided by the bank.

20. From qualitative analysis we have found that NRB guidelines and inflation rate can directly influence the interest rate.

Chapter –Five

SUMMARY, CONCLUSIONS AND RECOMMENDATION

Commercial banks are major Financial institution, which occupy quite an important place in the framework of every economy because they provide capital for development of the industry trade and business and other resources deflects sector investing the saving collected as deposit of commercial banks, by playing an active role . In context of Nepal banks and other financial institution has played a pivotal role in an economic prosperity of the country. Interest rate among other is one of the indispensable tools that determines the utilization of unutilized financial resource that collected as deposit by the customer to the productive sector to shape the economy of the country.

Interest rate is the main determinant factor in the fund based activities of financial institution. An appropriate interest rate structure greatly affects the collection of deposits, mobilization of saving and profit position of any financial institution which in turn affects the economic upliftment of the whole country.

When we examine how money affects the economic activities, we will focus in the interest rates, which are often called the price of money. The major objective of this study is to identify the factors that directly and indirectly affect the interest rate provided by the banks while receiving deposit and lending. The objective of the study is to find out whether the interest provided by commercial bank govern solely by banks own discretion or by the market activities. The study is totally depends upon secondary sources of data and required data have been collected by using various published and unpublished sources.

Among all commercial bank that has been operating in Nepal, which has been considered as population of the study, out of them five commercial banks has been taken as a sample commercial bank for the study and the required data have been collected and analyzed by using various financial tools and statistical tools.

5.2 Conclusion

From the analysis and interpretation done in earlier chapter we can conclude that ,

Interest income, interest expense and net interest margin of all commercial bank increased over time representing increase in interest rate provided by and received by commercial banks. The volume of interest earning assets and interest paying liabilities of all commercial banks also increased with increase in interest rate which directly reflects that depositors are attracted towards bank due to increased interest rate and lack of opportunity for investment in other sectors.

Increase in volume of interest paying liabilities reveals the fact that banks are successful to channelize the deposit collected despite increased interest rate. The attraction of investors towards banks for loan and advances is due to least interest spread of commercial banks.

The correlation of Net interest margin with return on assets and return on equity was positive since the increased net interest margin directly contributes to net profit of commercial bank. The increased net interest margin of commercial banks reveals the profit making motives of commercial banks.

The correlation of IS with NPL/TL was positive i.e. every unit increase in interest spread will increase NPL /TL ratio which could be a threat to commercial banks because increase interest rate imposed by commercial banks could leave borrower bankrupt. However most of the banks NPI / TL ratio are in decreasing trend which we could attributed to guidelines of NRB for commercial banks and better policy of banks regarding credit.

The correlation between IS And C/D ratio of most of the bank is negative and the banks which have positive correlation also shows the insignificant correlation which reflects that C/D ratio of banks isn't govern by interest rate provided and offered by the banks.

Other qualitative factors had also found playing an important role in interest rates of commercial banks such as political instability , violence , competition and other unmentioned factors

5.3 Recommendation

Financial Market, the major part of which is occupied by financial institution .The role of financial institution should be efficient toward transformation of fund between savers and users' .Capital investment is essential as it is considered as the key source for healthy 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 rate. Hence, all financial institution is suggested to set proper and practical interest rate policy.

Base on the analysis, interpretation and conclusion the following recommendations can be made which would be helpful in near future for the commercial banks, researcher and academicians.

1. Huge increment in volume of Interest expense and interest earning reflects the profit motive of commercial banks. Commercial banks should emphasize on non interest income as viable source.
2. Excessive interest provided by the bank and received by the bank could bring negative impact on long run, hence commercial bank should adopt better policy.
3. Increased and high interest spread could increase the ratio of Nonperforming loan to total loan which could be threatening to commercial bank hence commercial banks should considered the limit on interest rates.
4. NRB, the central bank, the information house for public and all concerned, has authority to control and stimulate the financial system. Financial information is the strong power. Therefore, NRB is suggested to pride and improve its mechanism in information dissemination activities so that all the concerned parties can make correct decision at the right time and the right place. Furthermore NRB is suggested to develop stable legal framework to formulate solid policies.

5. Commercial banks are suggested to consider inflation rate while quoting interest rate on deposits .So that the depositors real rate of return comes in positive.

6. There should be fair competition among financial institutions aiming at providing quality service, but in the name of competition the financial institutions are suggested not to exploit the customers.

Bibliography

Baidhya, Shakespeare, (1996). *Banking Management*, Monitor Nepal, Kathmandu.

Barrow, Robert J, and Grossman, Herschel L,(1981) “*Money Employment and Inflation*”. Cambridge University Press, Cambridge.

Cheney, John M, and Moses Edward, (1985) ‘ *Fundamental of Investment*’ West Publishing Company, St. Paul.

Cooper.s Kerry and Fraser, Donald J Fred (1982) , *The Financial Market Place*.

Joshi, P.R ‘ *Research Methodology* ’ Buddha Academy Publisher and Distributors Pvt Ltd Kathmandu.

Joshnson, Hajel J, (1993) “*Financial Institution and Market* ” A Global Perspective, Tata Mc Graw Hill New Delhi

Khan Mehira, (1993) “*Financial Institution and Market* ” Tata Mc Graw Hill New Delhi

Madera Jeff, (2001) ‘*Financial markets and Institutions* ’ South western College Publishing USA.

Shrestha, Manohar Krishna and Bhandari, Dipak .B(2004) ‘ *Financial Markets and Institutions* ’ Asmita Books Publishers and Distributors Kathmandu.

Sing, S.P. and Sing. (1983). *Financial Analysis for Credit Management in Banks*. Vikash publishing House New Delhi.

Van Horne, James c. (1985) *Fundamentals of Financial Management*. Prentice Hall of India. New Delhi.

Weston and Brigham (1980), *Managerial Finance*. 7th ED , USA, The Dryden Press, Hinsdale.

Wolf, Howard K. Pant, P.R (1999). *Social Science Research and Thesis Writing*. Second Edition, Kathmandu, Buddha Academic Enterprises Pvt Ltd.

Dissertations

Bhusal Yam Lal (1995) '*An analysis of cause of Inflation in Nepal*'

K.C Kishore (1980) '*Interest Rate structure and its Relation with Deposit Inflation in Nepal* .

Neupane, Guru Prashad (1999) '*Money Interest Rate and Financial Development in Nepal*'.

Santosh Poudel (2008), "*Factors Influencing Interest Rates on Nepalese Commercial Banks.*"

Santosh Poudel

' *Factors influencing Interest rates on Nepalese commercial Banks*'

Annual Reports and Journals

Annual Reports of sample commercial banks.

Banking and Financial statistics, Nepal Rastra Bank.

Visited Websites

www.nrb.org.np

www.nabilbank.com

www.nibl.com

www.bok.com

www.himalayanbank.com

www.sbibank.com

It gives me immense Pleasure to inform you that I am carrying out a research entitled “ Study On Interest rate of Commercial bank”. The real objective behind conducting this research work is to explore and identify the key factors affecting interest rate of Nepalese commercial Banks . The other objective of the study is to find out the interrelation between these factors with 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

Monika shrestha

Padma Kanya Multiple college

Questionnaire relating to the study

Name:

Occupation:

Organization:

Address:

1) Does the Interest rate provided by bank differ according to maturity period (Time Preference)?

a) Yes ()

b) No ()

2) Does competition among the market participant put any influence the interest rate on lending and

borrowing of commercial banks?

a) Yes ()

b) No ()

3) Do political instability and violence influence interest rate charger and offered by commercial bank.

a) Directly influencing

b) Indirectly influencing

c) Influencing somewhat

4) Does NRB Directives influence the interest rate charged and afford by commercial banks?

a) Directly influencing

b) Indirectly influencing

c) Influencing somewhat

5) “ Does inflation and Interest rate has direct relation?

a) Yes ()

b) No ()

6) what attracts you to deposit your saving in a particular bank?

a) Interest rate

b) Reputation of bank

c) security

APPENDIX 1

NABIL BANK

(In Millions)

	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Income	1068747	1309999	1587759	1978696	2798486
Interest expense	243544	357161	555710	758436	1153280
Borrowing (a)	17,062	173,202	882,573	1,360,000	1,681,305
Deposits (b)	14,586,609	19,347,399	23,342,285	31,915,047	37,348,256
Investment (c)	4,267,233	6,178,533	8,945,311	9,939,771	10,826,379
Loan and advances (d)	10,586,170	12,922,543	15,545,779	21,365,053	27,589,933
Interest Paying Liabilities (a+b)	14603671	19520601	24224858	33275047	39029561
Interest Earning Assests (c+d)	25189841	32443144	39770637	54640100	66619494
Ratios					
Return on equity	31.28	33.88	35.9	36.3	42.3
Return on Assets	3.06	6.23	2.72	2.32	2.55
C/D ratio	7 5.05	68.63	68.13	68.18	73.87
NPL/TL	1.32	1.38	1.12	0.74	0.8

(source : Annual Report Nabil Bank)

Nepal Investment bank

(In Millions)

	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Income	886,800	1,172,742	1,584,987	2,194,275	3,267,941
Interest expense	354,549	490,947	685,530	992,158	1,686,973
Borrowing (a)	350,000	-	-	-	38,800
Deposits (b)	14254574	18927306	24488856	34451726	46698100
Investment (c)	3934189	5,602,869	6,505,680	6,874,024	7,399,812
Loan and advances (d)	10,126,056	12,776,208	17,286,428	26,996,652	36,241,207
Interest Paying Liabilities (a+b)	14604574	18927306	24488856	34451726	46736900
Interest Earning Assests (c+d)	14060245	18379077	23792108	33870676	43641019
Ratios					
Return on equity	19.67	24.77	26.68	25.93	23.05
Return on Assets	1.42	1.61	1.79	1.77	1.68

C/D ratio	73.33	69.83	72.56	79.91	78.86
NPL/TL	2.69	2.07	2.37	1.12	0.54

(Source : Annual Report Nepal Investment Bank)

Himalayan Bank

	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Income	1446468	1626474	1775582	1963647	2342198
Interest expense	561964	648842	767411	823745	934778
Borrowing (a)	506,048	144,625	235,968	83,178	
Deposits (b)	24,814,012	26,490,851	30,048,418	31,842,789	34,681,345
Investment(c)	11,692,341	10,889,031	11,822,985	13,340,177	8,710,691
Loanand advances (d)	12,442,710	14,642,559	16,997,997	19,497,520	24,793,155
Interest Paying Liabilities (a+b)	25320060	26635476	30284386	31925967	34681345
Interest Earning Assests (c+d)	24135051	25531590	28820982	32837697	39503846
Ratios					
Return on equity	20.08	25.9	22.91	25.38	24.13
Return on Assets	1.11	1.55	1.47	1.76	1.91
C/D ratio	50.07	55.27	56.57	61.23	71.49
NPL/TL	7.44	6.6	3.61	2.36	2.16

(Source : Himalayan Bank annual report)

Bank of Kathmandu

(In Millions)

	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Income	607,096	718,121	819,004	1,034,158	1,347,755
Interest expense	241,639	308,156	339,181	417,543	563,113
Borrowing (a)	6,000	553,180	730,000	100,000	100,000
Deposits (b)	8,942,748	10,485,359	12,388,928	15,833,738	18,083,980
Investment (c)	2,598,253	3,374,712	2,992,434	3,204,068	2,783,599
Loanand advances (d)	5,912,579	7,259,083	9,399,328	12,462,637	14,647,297
Interest Paying Liabilities (a+b)	8948748	11038539	13118928	15933738	18183980
Interest Earning Assests (c+d)	8510832	10633795	12391762	15666705	17430896
Ratios					
Return on equity	19.04	24.1	26.38	26.9	26.51

Return on Assets	1.42	1.65	1.8	2.04	2.25
C/D ratio	68.87	71.42	78.25	80.51	82.65
NPL/TL	4.99	2.72	2.51	1.86	1.27

(Source : Annual reports Bank of Kathmandu)

Nepal SBI Bank Ltd

(In Millions)

	2004-05	2005-06	2006-07	2007-08	2008-09
Interest Income	578372	708719	831117	970513	1460446
Interest expense	258430	334770	412262	454918	824700
Borrowing (a)	469,629	612,428	815,365	1,627,480	727,466
Deposits (b)	8,654,774	11,002,041	11,445,286	13,715,395	27,957,221
Investment (c)	2,607,680	3,610,775	2,659,453	3,088,887	13,286,182
Loan and advances (d)	6,213,879	7,626,736	9,460,451	12,113,698	15,131,748
Interest Paying Liabilities (a+b)	9124403	11614469	12260651	15342875	28684687
Interest Earning Assets (c+d)	8821559	11237511	12119904	15202585	28131748
Ratios					
Return on equity	8.23	12.04	22.01	17.64	18.58
Return on Assets	0.55	0.9	1.83	1.44	1.02
C/D ratio	77.87	69.32	82.66	88.32	55.84
NPL/TL	6.54	6.13	4.56	3.83	2.02

(Source : Nepal SBI Bank Ltd)

Appendix 2

Coefficient of correlation between NIM and ROA of Nabil bank.

Years	X (NIM)	Y (ROA)	X ²	Y ²	xy
2004-05	7.195	3.06	51.76803	9.3636	22.0167
2005-06	6.858	3.23	47.03216	10.4329	22.15134
2006-07	6.483	2.72	42.02929	7.3984	17.63376
2007-08	6.32	2.32	39.9424	5.3824	14.6624
2008-09	7.28	2.55	52.9984	6.5025	18.564
Total	34.136	13.88	233.7703	39.0798	95.0282

$$r = \frac{n \sum xy - \sum x - \sum y}{n \sum x^2 - (\sum x)^2}$$

$$\frac{\sqrt{n \sum y^2 - (\sum y)^2}}{\sqrt{n \sum x^2 - (\sum x)^2}}$$

$$r = \frac{5 \sum 95.0282 - \sum 34.136 - \sum 13.88}{\sqrt{5 \sum 233.7703^2 - (\sum 34.136)^2}} = 0.1313$$

$$\frac{\sqrt{5 \sum 39.0798^2 - (\sum 13.88)^2}}{\sqrt{5 \sum 233.7703^2 - (\sum 34.136)^2}}$$

Coefficient of determination (r²) = 0.1313* 0.1313 = 0.1717

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{1-0.1313^2}{5} = 0.2964$$

Coefficient of correlation between NIM and ROA of NIBL bank

Years	X (NIM)	Y (ROA)	X ²	Y ²	xy
2004-05	3.785	1.42	14.32623	2.0164	5.3747
2005-06	3.709	1.61	13.75668	2.5921	5.97149
2006-07	3.782	1.79	14.30352	3.2041	6.76978
2007-08	3.549	1.77	12.5954	3.1329	6.28173
2008-09	3.622	1.68	13.11888	2.8224	6.08496
Total	18.447	8.27	68.10072	13.7679	30.48266

$$r = \frac{n \sum xy - \sum x - \sum y}{n \sum x^2 - (\sum x)^2}$$

$$\frac{\sqrt{n \sum y^2 - (\sum y)^2}}{\sqrt{n \sum x^2 - (\sum x)^2}}$$

$$r = 0.472936$$

$$\text{Coefficient of determination (} r^2 \text{)} = 0.472936 * 0.472936 = 0.2236$$

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{0.472936^2}{5} = 0.23419$$

Coefficient of correlation between NIM and ROA of BOK bank

	X (NIM)	Y (ROA)	X ²	Y ²	xy
2004-05	4.43	1.42	19.6249	2.0164	6.2906
2005-06	3.96	1.65	15.6816	2.7225	6.534
2006-07	4.023	1.8	16.18453	3.24	7.2414
2007-08	3.98	2.04	15.8404	4.1616	8.1192
2008-09	4.5	2.25	20.25	5.0625	10.125
Total	20.893	9.16	87.58143	17.203	38.3102

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$r = 0.276994$$

$$\text{Coefficient of determination (} r^2 \text{)} = 0.276994 * 0.276994 = 0.0767$$

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{0.276994^2}{5} = 0.27850$$

Coefficient of correlation between NIM and ROA of Himalayan bank.

	X (NIM)	Y (ROA)	X ²	Y ²	xy
2004-05	3.664	1.11	13.4249	1.2321	4.06704
2005-06	3.829	1.55	14.66124	2.4025	5.93495
2006-07	3.498	1.47	12.236	2.1609	5.14206

2007-08	3.471	1.76	12.04784	3.0976	6.10896
2008-09	4.21	1.91	17.7241	3.6481	8.0411
Total	18.672	7.8	70.09408	12.5412	29.29411

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

r = 0.1457031

Coefficient of determination (r^2) = 0.1457031 * 0.1457031 = 0.02122

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{0.1457031^2}{5} = 0.2952$$

Coefficient of correlation between NIM and ROA of NSBI bank.

years	X (NIM)	Y (ROA)	X ²	Y ²	xy
2004-05	3.626	0.55	13.14788	0.3025	1.9943
2005-06	3.327	0.9	11.06893	0.81	2.9943
2006-07	3.455	1.83	11.93703	3.3489	6.32265
2007-08	3.391	1.44	11.49888	2.0736	4.88304
2008-09	2.25	1.02	5.0625	1.0404	2.295
Total	16.049	5.74	52.71521	7.5754	18.48929

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

r = 0.05976

Coefficient of determination (r^2) = 0.05976 * 0.05976 = 0.003782

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{0.05976^2}{5} = 0.3015384$$

Coefficient of correlation between NIM and ROE of Nabil bank.

YEARS	X (NIM)	Y (ROE)	X ²	Y ²	xy
2004-05	7.195	31.28	51.76803	978.4384	225.0596
2005-06	6.858	33.88	47.03216	1147.854	232.349
2006-07	6.483	35.9	42.02929	1288.81	232.7397
2007-08	6.32	36.3	39.9424	1317.69	229.416
2008-09	7.28	42.3	52.9984	1789.29	307.944
Total	34.136	179.66	233.7703	6522.083	1227.508

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

r = 0.135164

Coefficient of determination (r²) = 0.135164* 0.135164 =0.01826

Probable error (P.Er) = $0.675 * \frac{1-r^2}{n} = 0.675 * \frac{0.135164^2}{5} = 0.296$

Coefficient of correlation between NIM and ROE of NIBl bank.

YEARS	X (NIM)	Y (ROE)	X ²	Y ²	xy
2004-05	3.785	19.67	14.32623	386.9089	74.45095
2005-06	3.709	24.77	13.75668	613.5529	91.87193
2006-07	3.782	26.68	14.30352	711.8224	100.9038
2007-08	3.549	25.93	12.5954	672.3649	92.02557
2008-09	3.622	23.05	13.11888	531.3025	83.4871
Total	18.447	120.1	68.10072	2915.952	442.7393

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$r = -0.317048$$

$$\text{Coefficient of determination (} r^2 \text{)} = -0.317048 * -0.317048 = 0.010052$$

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{1-0.317048^2}{5} = 0.272$$

Coefficient of correlation between NIM and ROE of BOK bank.

___ YEARS	X (NIM)	Y (ROE)	X ²	Y ²	Xy
2004-05	4.43	19.04	19.6249	362.5216	84.3472
2005-06	3.96	24.1	15.6816	580.81	95.436
2006-07	4.023	26.38	16.18453	695.9044	106.1267
2007-08	3.98	26.9	15.8404	723.61	107.062
2008-09	4.5	26.51	20.25	702.7801	119.295
20.893	122.93	87.58143	3065.626	512.2669	20.893

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$r = -0.249934$$

$$\text{Coefficient of determination (} r^2 \text{)} = -0.249934 * -0.249934 = 0.06247$$

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{1-0.249934^2}{5} = 0.2828$$

Coefficient of correlation between NIM and ROE of Himalayan bank.

___ YEARS	X (NIM)	Y (ROE)	X ²	Y ²	Xy
2004-05	3.664	20.08	13.4249	403.2064	73.57312
2005-06	3.829	25.9	14.66124	670.81	99.1711
2006-07	3.498	22.91	12.236	524.8681	80.13918
2007-08	3.471	25.38	12.04784	644.1444	88.09398
2008-09	4.21	24.13	17.7241	582.2569	101.5873

Total	18.672	118.4	70.09408	2825.286	442.5647
-------	--------	-------	----------	----------	----------

$$r = \frac{n\sum xy - \sum x - \sum y}{\sqrt{n\sum x^2 - (\sum x)^2} \sqrt{n\sum y^2 - (\sum y)^2}}$$

$$r = 0.448976$$

Coefficient of determination (r^2) = $0.448976^2 = 0.20157$

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{1-0.20157}{5} = 0.241$$

Coefficient of correlation between NIM and ROE of NSBI bank.

YEARS	X (NIM)	Y (ROE)	X ²	Y ²	Xy
2004-05	3.626	8.23	13.14788	67.7329	29.84198
2005-06	3.327	12.04	11.06893	144.9616	40.05708
2006-07	3.455	22.01	11.93703	484.4401	76.04455
2007-08	3.391	17.64	11.49888	311.1696	59.81724
2008-09	2.25	18.58	5.0625	345.2164	41.805
Total	16.049	78.5	52.71521	1353.521	247.5659

$$r = \frac{n\sum xy - \sum x - \sum y}{\sqrt{n\sum x^2 - (\sum x)^2} \sqrt{n\sum y^2 - (\sum y)^2}}$$

$$r = -0.365156$$

Coefficient of determination (r^2) = $-0.365156^2 = 0.13334$

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{1-0.13334}{5} = 0.262$$

Coefficient of correlation between IS and NPL/TL of Nabil bank

___ YEARS	X (IS)	Y (NPL/TL)	X ²	Y ²	xy
2004-05	5.527	1.32	30.54773	1.7424	7.29564
2005-06	5.028	1.38	25.28078	1.9044	6.93864
2006-07	4.189	1.12	17.54772	1.2544	4.69168
2007-08	4.041	0.74	16.32968	0.5476	2.99034
2008-09	4.32	0.8	18.6624	0.64	3.456
Total	23.105	5.36	108.3683	6.0888	25.3723

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

r = 0.815087

Coefficient of determination (r²) = 0.815087* 0.815087 = 0.66436

Probable error (P.Er) = 0.675* $\frac{1-r^2}{n}$ = 0.675* $\frac{0.815087^2}{5}$ = 0.1012

n 5

Coefficient of correlation between IS AND NPL/TL of NIBL BANK

___ YEARS	X (IS)	Y (NPL/TL)	X ²	Y ²	Xy
2004-05	3.879	2.69	15.04664	7.2361	10.43451
2005-06	3.786	2.07	14.3338	4.2849	7.83702
2006-07	3.862	2.37	14.91504	5.6169	9.15294
2007-08	3.598	1.12	12.9456	1.2544	4.02976
2008-09	3.878	0.54	15.03888	0.2916	2.09412
Total	19.003	8.79	72.27997	18.6839	33.54835

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

r = 0.32825

Coefficient of correlation between IS AND NPL/TL of Himalayan BANK

____ YEARS	X (IS)	Y (NPL/TL)	X ²	Y ²	Xy
2004-05	3.77	7.44	14.2129	55.3536	28.0488
2005-06	3.993	6.6	15.94405	43.56	26.3538
2006-07	3.626	3.61	13.14788	13.0321	13.08986
2007-08	3.399	2.36	11.5532	5.5696	8.02164
2008-09	4.295	2.16	18.44703	4.6656	9.2772
Total	19.083	22.17	73.30505	122.1809	84.7913

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$\frac{5 \times 84.7913 - 19.083 \times 22.17}{\sqrt{5 \times 73.30505 - (19.083)^2} \sqrt{5 \times 122.1809 - (22.17)^2}}$$

$$r = 0.52849$$

$$\text{Coefficient of determination (} r^2 \text{)} = 0.52849 \times 0.52849 = 0.2793$$

$$\text{Probable error (P.Er)} = 0.675 \times \frac{1-r^2}{n} = 0.675 \times \frac{1-0.2793}{5} = 0.2173$$

$$n \qquad \qquad \qquad 5$$

Coefficient of correlation between IS AND NPL/TL of NSBI BANK

____ YEARS	X (IS)	Y (NPL/TL)	X ²	Y ²	Xy
2004-05	3.72	6.54	13.8384	42.7716	24.3288
2005-06	3.28	6.13	10.7584	37.5769	20.1064
2006-07	3.49	4.56	12.1801	20.7936	15.9144
2007-08	3.418	3.83	11.68272	14.6689	13.09094
2008-09	2.31	2.02	5.3361	4.0804	4.6662
Total	16.218	23.08	53.79572	119.8914	78.10674

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$\frac{5 \times 78.10674 - 16.218 \times 23.08}{\sqrt{5 \times 53.79572 - (16.218)^2} \sqrt{5 \times 119.8914 - (23.08)^2}}$$

$$r = 0.47417$$

Coefficient of correlation between IS AND C/D of NIBL BANK

___ YEARS	X (IS)	Y (C/D)	X ²	Y ²	Xy
2004-05	3.879	73.33	15.04664	5377.289	284.4471
2005-06	3.786	69.83	14.3338	4876.229	264.3764
2006-07	3.862	72.56	14.91504	5264.954	280.2267
2007-08	3.598	79.91	12.9456	6385.608	287.5162
2008-09	3.878	78.86	15.03888	6218.9	305.8191
Total	19.003	374.49	72.27997	28122.98	1422.385

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$r = -85922$$

$$\text{Coefficient of determination } (r^2) = -85922 * -85922 = 0.73826$$

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{-85922^2}{5} = 0.07894$$

$$n \qquad \qquad \qquad 5$$

Coefficient of correlation between IS AND C/D of BOK BANK

___ YEARS	X (IS)	Y (C/D)	X ²	Y ²	Xy
2004-05	4.43	68.87	19.6249	4743.077	305.0941
2005-06	3.96	71.42	15.6816	5100.816	282.8232
2006-07	4.023	78.25	16.18453	6123.063	314.7998
2007-08	3.98	80.51	15.8404	6481.86	320.4298
2008-09	4.63	82.65	21.4369	6831.023	382.6695
Total	21.023	381.7	88.76833	29279.84	1605.816

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$r = 0.12665$$

Coefficient of correlation between IS AND C/D of NSBI BANK

___ YEARS	X (IS)	Y (C/D)	X ²	Y ²	Xy
2004-05	3.72	77.87	13.8384	6063.737	289.6764
2005-06	3.28	69.32	10.7584	4805.262	227.3696
2006-07	3.49	82.66	12.1801	6832.676	288.4834
2007-08	3.418	88.32	11.68272	7800.422	301.8778
2008-09	2.31	55.84	5.3361	3118.106	128.9904
Total	16.218	374.01	53.79572	28620.2	1236.398

$$r = \frac{n \sum xy - \sum x - \sum y}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}}$$

$$r = 0.84013$$

$$\text{Coefficient of determination } (r^2) = 0.84013 * 0.84013 = 0.7058$$

$$\text{Probable error (P.Er)} = 0.675 * \frac{1-r^2}{n} = 0.675 * \frac{0.84013^2}{5} = 0.0887$$

n

5

Regression equation between interest income and interest earning assets of Nabil bank.

(IN Millions)

YEARS	INTEREST INCOME (X)	INTEREST EARNING ASSETS(Y)	X ²	Y ²	XY
2004-05	1069	14853	1142761	220611609	15877857
2005-06	1310	19101	1716100	364848201	25022310
2006-07	1588	24491	2521744	599809081	38891708
2007-08	1979	31305	3916441	980003025	61952595
2008-09	2798	38416	7828804	1475789056	107487968
Total	8744	128166	17125850	3641060972	249232438

X = independent variable

Y=Dependent variabl

Let the regression equation of Y on X be ,

$$Y = a + bx \dots \dots \dots \text{eqn (1)}$$

To find the value of a and b we have two normal equations

$$\sum y = na + b \sum x \dots \dots \dots \text{equation (2)}$$

$$\sum xy = a \sum x + b \sum x^2 \dots \dots \dots \text{equation (3)}$$

Substituting the value of n , $\sum x$, $\sum y$, $\sum x^2$, $\sum xy$ in equation (2) and(3) we get,

$$8744 = 5a + 128166b \dots \dots \dots \text{equation (4)}$$

$$249232438 = 128166a + 17125850b \dots \dots \dots \text{equation (5)}$$

Solving the equation we get the value of a and b as

$$a = -0.778 \quad b = 0.0685$$

Regression equation between interest income and interest earning assets of Nibl bank.

(IN Millions)

YEARS	INTEREST INCOME (X)	INTEREST EARNING ASSETS(Y)	X ²	Y ²	XY
2004-05	8868	140602	78641424	19768922404	1246858536
2005-06	11727	183791	137522529	33779131681	2155317057
2006-07	15850	237921	251222500	56606402241	3771047850
2007-08	21943	338707	481495249	114722431840	7432247701
2008-09	32679	436410	1067917041	190453688100	14261442390
Total	91067	1337431	2016798743	415330576275	28866913534

X = independent variable

Y=Dependent variabl

Let the regression equation of Y on X be ,

$$Y = a + bx \dots\dots\dots \text{eqn (1)}$$

To find the value of a and b we have two normal equations

$$\sum y = na + b \sum x \dots\dots\dots \text{equation (2)}$$

$$\sum xy = a \sum x + b \sum x^2 \dots\dots\dots \text{equation (3)}$$

Substituting the value of n , $\sum x$, $\sum y$, $\sum x^2$, $\sum xy$ in equation (2) and(3) we get,

$$91067 = 5a + 1337431b \dots\dots\dots \text{equation (4)}$$

$$28866913534 = 1337431a + 415330576275b \dots\dots\dots \text{equation (5)}$$

Solving the equation we get the value of a and b as

$$a = -3.966 \quad b = 0.0696$$

Regression equation between interest income and interest earning assets of BOK bank.

(IN Millions)

YEARS	INTEREST INCOME (X)	INTEREST EARNING ASSETS(Y)	X ²	Y ²	XY
2004-05	6,071	85108	36857041	7243371664	516690668
2005-06	7,181	106338	51566761	11307770244	763613178
2006-07	8,190	123917	67076100	15355422889	1014880230
2007-08	10,341	156667	106936281	24544548889	1620093447
2008-09	13,477	174309	181629529	30383627481	2349162393
Total	45260	646339	444065712	88834741167	6264439916

X = independent variable

Y=Dependent variable

Let the regression equation of Y on X be ,

$$Y = a + bx \dots \dots \dots \text{eqn (1)}$$

To find the value of a and b we have two normal equations

$$\sum y = na + b \sum x \dots \dots \dots \text{equation (2)}$$

$$\sum xy = a \sum x + b \sum x^2 \dots \dots \dots \text{equation (3)}$$

Substituting the value of n , $\sum x$, $\sum y$, $\sum x^2$, $\sum xy$ in equation (2) and(3) we get,

$$91067 = 5a + 1337431b \dots \dots \dots \text{equation (4)}$$

$$28866913534 = 1337431a + 415330576275b \dots \dots \dots \text{equation (5)}$$

Solving the equation we get the value of a and b as

$$a = -0.5283 \quad b = 0.0635$$

Regression equation between interest income and interest earning assets of Himalayan bank.

(IN Millions)

YEARS	INTEREST INCOME (X)	INTEREST EARNING ASSETS(Y)	X ²	Y ²	XY
2004-05	1446	24135	2090916	582498225	34899210
2005-06	1626	25532	2643876	651883024	41515032
2006-07	1776	28821	3154176	830650041	51186096
2007-08	1964	32838	3857296	1078334209	64493832
2008-09	2342	33504	5484964	1122518016	78466368
Total	9154	144830	17231228	4265883550	270560538

X = independent variable

Y=Dependent variabl

Let the regression equation of Y on X be ,

$$Y = a + bx \dots \dots \dots \text{eqn (1)}$$

To find the value of a and b we have two normal eqations

$$\sum y = na + b \sum x \dots \dots \dots \text{equation (2)}$$

$$\sum xy = a \sum x + b \sum x^2 \dots \dots \dots \text{equation (3)}$$

Substituting the value of n , $\sum x$, $\sum y$, $\sum x^2$, $\sum xy$ in equation (2) and(3) we get,

$$144830 = 5a + 9154b \dots \dots \dots \text{equation (4)}$$

$$270560538 = 9154a + 144830b \dots \dots \dots \text{equation (5)}$$

Solving the equation we get the value of a and b as

$$a = -0.7892 \quad b = 0.06345$$

Regression equation between interest income and interest earning assets of NSBI bank.

(IN Millions)

YEARS	INTEREST INCOME (X)	INTEREST EARNING ASSETS(Y)	X ²	Y ²	XY
2004-05	578	8821	334084	77810041	5098538
2005-06	708	11237	501264	126270169	7955796
2006-07	831	12119	690561	146870161	10070889
2007-08	970	15203	940900	231131209	14746910
2008-09	1460	28131	2131600	807582724	41071260
Total	4547	75511	4598409	1389664304	78943393

X = independent variable

Y=Dependent variabl

Let the regression equation of Y on X be ,

$$Y = a + bx \dots \dots \dots \text{eqn (1)}$$

To find the value of a and b we have two normal eqations

$$\sum y = na + b \sum x \dots \dots \dots \text{equation (2)}$$

$$\sum xy = a \sum x + b \sum x^2 \dots \dots \dots \text{equation (3)}$$

Substituting the value of n , $\sum x$, $\sum y$, $\sum x^2$, $\sum xy$ in equation (2) and(3) we get,

$$75798 = 5a + 4547b \dots \dots \dots \text{equation (4)}$$

$$79362413 = 4547a + 4598409b \dots \dots \dots \text{equation (5)}$$

Solving the equation we get the value of a and b as

$$a = -4.2 \quad b = 0.00571$$

Appendix 3

Interest Rate Of Himalayan Bank

We are pleased to announce our revised rates of interest* on Deposits, Loans and Advances to be effective from Saturday, 1st Magh, 2067 (15th January, 2011)

Savings Deposit	% Per Annum	Fixed Deposit	% Per Annum	
LCY Savings – Normal	5.00	3 Months	7.00	
LCY Savings – Himal	5.10	6 Months	10.00	
LCY Savings – Bishesh	5.25	1 Year	9.50	
Premium Savings Account	6.50	1 Year - Special	11.00	
Super Premium Savings	7.00	2 Years	11.50	
Shareholder's Savings	5.50	5 Years	11.00	
Himal Remit Savings	5.50	Jumbo Term:	3 years	10.00
Special Payroll Account	5.50		5 years	11.00
Foreign Currency (US Dollars)	0.60	3-Year Recurring Deposit	9.50	
		Structured Deposit - 1 year and above	9.50 - 11.50	

Call Deposit	% Per Annum
Current Call	4.00 - 9.50
Non-Profit Organisation Current Call Account	2.00 - 4.00
14 Days	3.00
1 Month	4.00

Interest Rate on Loans and Advances

Type of Loan	Prime A Category (%p.a.)	Prime B Category (% p.a.)	General(% p.a.)
Demand Loan	12.50 - 15.00	14.00 - 16.00	15.00 - 17.00

Interest Rate on Loans and Advances

Type of Loan	Prime A Category (%p.a.)	Prime B Category (% p.a.)	General(% p.a.)
--------------	--------------------------	---------------------------	-----------------

Demand Loan	12.50 - 15.00	14.00 - 16.00	15.00 - 17.00
Export Finance	12.00 - 14.00	14.00 - 16.00	15.00 - 17.00
Overdraft	12.50 - 14.50	14.00 - 16.00	15.00 - 17.00
Term Loan	14.00 - 16.00	15.50 - 17.00	16.00 - 17.00
Short Term Pledge Loan	12.00 - 15.00	13.50 - 15.50	14.00 - 17.00
Importer's Loan	12.00 - 15.00	14.00 - 16.00	15.00 - 17.00
Deprived Sector Loan	10.00 - 12.00	-	12.00
Hire Purchase	-	13.50 - 15.50	15.00 - 17.00
Revolving Cash Credit	13.50 - 15.50	-	-
Non Revolving Cash Credit	14.00 - 16.00	15.50 - 17.00	-
Mortgage Loan - Secured Personal Loan	15.00 - 17.00	-	-

Type of Loan	For all Customers (% p.a.)	Type of Loan	For all Customers (% p.a.)
Home Loan:			
Tenure 5 Years:	13.00 - 15.00	SME Loan Package: WC Loan Fixed Term Loan	13.50 - 16.00 14.00 - 16.00
Tenure 10 Years:	13.50 - 16.00		
Tenure 15 Years:	14.00 - 17.00	Loan in Local Currency Against FD (FCY)	Plus 1.50 or 12.50% whichever is higher
Tenure 20 Years:	14.50 - 17.50		
Loan Against HBL FD (NPR)	Plus 1.50 (Minimum 10.00%)	Loan Against Government Bonds	3 Months TB Rate + 2.50% or 12.50%, whichever is higher
Loan Against FD of Other Banks	Plus 2.00 (Minimum 13.00%)		
Educational Institution Financing:		Loan against First Class Bank Guarantee	Rated Bank: 12.50 - 15.00 Non Rated Bank: 15.00 - 17.00
WC Facility: FT Tenure Upto 10 Years	12.50 - 16.00 13.50 - 17.00		
Subidha Loan	14.00 - 16.00	USD Denominated Loan	LIBOR + 2% Minimum 4.50 - 6.00
Loan Against Share of Company listed in Stock Exchange	14.00 - 17.00		

* Co

NABIL BANK

INTEREST RATES

(Effective from 3rd October 2010)

<u>DEPOSITS</u>	<u>% PER ANNUM</u>
A. Savings	
Normal	3.00
Special	02.00 -08.00
B. Fixed:	
- Up to 1 Month	02.00 - 03.00
- 3 Months	03.00 - 04.00
- 6 Months	06.00 - 07.00
- 1 Year and above	09.00 - 09.50
- Bulk Deposits (1 Year & Above)	09.50 - 10.50
<u>LOAN AND ADVANCES</u>	
A. Deprived Sector	
Institutional Prime	08.00 - 9.00
Institutional Others	09.00 - 10.00
Others	11.00 - 12.00
B. Export Finance	
Corporate/Multinational	11.50
Prime	12.00
Standard	13.00
Others	14.00
C. Term Loan	
Corporate/Multinational	14.00
Prime	14.50
Standard	15.00
Others	16.00
D. Working Capital Loan	
Corporate/Multinational	12.50
Prime	13.00
Standard	14.00
Others	15.00
E. Import Loan	
Corporate/Multinational	11.50
Prime	12.50
Standard	13.00
Others	14.00
F. Loan in FCY	5.00
G. LCY Loan Against FCY Deposit	12.00
H. Mortgage Overdraft	
Corporate/Multinational	15.50
Prime	16.00
Standard	16.50
Others	17.00
I. Personal Loans	
Housing/Mortgage	

Interest Rates: Nepal investment bank ltd

Deposit Interest Rates	
Saving Accounts*	% per annum
Afnai Bachat Khata	4.5
E-ZEE Student	4.5
Karmachari Bachat Khata	6
Ketaketki Bacha Khata	4.5
Locker	4.5
Lotus Savings Account	4.5
Pariwar Bachat	4.5
Remittance Savings Account	5
Saving Plus Plus	6
E-ZEE Savings	5
NIBL Savings Bonanza	6.5
Normal Savings	4.5

* Savings Accounts interest payable on a daily balance with effect from Falgun 01, 2067

Lending Rates	
Corporate/Multinational	% per annum
Overdraft	15.00
Working Capital	15.00
Short term Loan/Time Loan	16.00
90 Days Cash Credit	15.00
Term Loan	16.00
Export Credit	12.00

Lending Rates		
Corporate/Multinational	% per annum	
Trust Receipt	Level 1	Level 2
	12.50	14.50

Lending Rates

Corporate/Multinational	% per annum	
	Prime	Others
Term Loan	16.50	17.00
Export Credit	15.00	15.50
Overdraft	17.00	18.00
Working Capital	17.00	18.00
Short Term Loan / Time Loan	17.00	17.50
Trust Receipt 90 days	15.00	16.00
Deprived Sector	11.00	12.00
Hire Purchase Loan	15.00	16.00
Loan Against Govt. Bonds**	14.00	
Loan Against 1st Class Guarantee	14.00	
Loan Against Fixed Deposites held with our Bank	3% above the coupon rate	
Loan Against USD Pledge	9.50	11.00
Other Loans	18.00	
Housing Loan (Up to 5yrs)	15.00	
Housing Loan(Above 5yrs)	16.00	

**or 3% above coupon rate whichever is higher

Fixed Deposit		
	Prime (%)	Others (%)
1 month	6.00	5.50
3 months	6.50	6.00
6 months	7.00	6.50
1 year	7.50	7.00
2 years	8.00	7.50
Above 2 years	8.50	8.00
Special Deposit Account	10.00	9.00
NIBL Special Fixed Deposit	11.00	10.50
Special Bulk Fixed Deposit Account	11.50	11.00