CHAPTER 1
INTRODUCTION

Background of the Study

Capital in a free economy is allocated through the price system. The interest rate is the price paid to the borrowed capital. While in the case of equity capital, investors' return come in the form of dividends and capital gains. This cost is affected by various factors. The most fundamental things that affect cost of money are production opportunity and time preference for consumption. The returns available within an economy from investment in productive assets determine the cost of investment or borrowing. Similarly, the preference of consumers for current consumption as opposed to saving for future consumption also determines the cost of borrowing or return on lending.

Interest is the price that one pays for utilising a certain amount of money for a specific period of time. It is the rent paid for using money provided by a lender. Essentially, there are three components in the interest rates – risk free rate, risk premium and adjustment for inflationary or deflationary situations (Resta Jha)

Risk-free rate is paid as compensation for deferred consumption by the borrower to the lender. As a borrower derives satisfaction well in advance by bringing forward his consumption, he is required to pay some price, which can be considered as risk-free part of the interest rates.

Risk-premium depends on the credit worthiness of the borrower. Higher the perceived risk on part of the lender, more risk premium is added to the risk-free rates and vice-versa. An interest rate also has adjustments for inflationary or deflationary economic situations. When value of money is going to fall in inflationary economy, equivalent

amount of premium is added to the interest rates, whereas in deflationary economies, interest rates are discounted to factor increase in the value of the money (ibid)

Weston & Brigham in their 11th edition has identified four fundamental factors affecting the cost of money which are (a) Production opportunities (b) Time preference for consumption (c) risk & (d) inflation. They have added risk and inflation to as fundamental factors of determining interest rate. Risk is the borrower's ability to repay the loan. In financial market context, risk is the chance that financial assets will not earn the return promised. On the other hand, inflation is the tendency of prices to increase over time. (J. Fred Weston and Eugene F. Brigham, 1984)

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

On the rate of return, producer expects to earn on invested capital

- On Saver's time preference for current versus future consumption
- On the risk of the loan and
- On the expected rate of inflation

The level of interest rate is set by the interaction of supply and demand forces, with demand for funds coming largely from businesses, individuals, borrowers and when it is running deficit, the federal government. Funds are supplied by individuals and corporate savers and under the control of the Federal Reserve System by the creation of money by the Banks. Depending on the relative level of supply and demand the basic pattern of interest rate is determined. Usually, the lower rates are for safest investments and the higher on the risky ones.

In 1986, financial institutions got freedom in fixing their interest rates in their deposits and loans. In addition, there was also limitation on the interest rate amounts on the different loans provided for productive and priority and full deprived sector. However, there were limitations on certain sectors of lending such as the rate of maximum of 15

percent on the priority sector loan. And for other kinds of loans, financial institutions were given freedom to maintain the interest rate structure. In this way the government has provided freedom as well as limitations on the determination of interest rate. (Manohar Krishna Shrestha)

Interest rate is sometimes referred to as the financial oil of the economy. Therefore, a vision on its development is of vital importance to every financial organization and to its clients. Predicting the interest rate, however, is hardly possible. Nevertheless, identifying the driving forces behind the interest could help to create an image of its future course. Combining these forces in a number of relevant, plausible and surprising scenarios, a clear image of the risks and uncertainties with regard to interest rate development in the future arises. The interest rate development has important consequences for the bank, for instance for the interest rate margin. Possible policy measures are being considered. But this is also important for the clients. For companies the interest rate to be paid is a major expense and often an indicator for the general economic situation and expectation. For consumers, the interest rate influences the burden of mortgage and in a roundabout way also the value of houses.

The collection of deposit and its mobilisation are the two sides of the same coin, in the absence of one, another cannot work i.e. without the collection of deposit, mobilisation of deposits would be quite impossible and vice versa. They both get along with another under favourable condition., interest rate being the most. Interest is the main factor in fund activities of commercial banks. Interest rate affects on the collection of deposits mobilisation of saving position.

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The NRB with change in monetary policy has given directives to the commercial banks and financial institutions to maintain balance in determination of interest rate on deposit and loan.

History of amendment in the interest rates by Nepal Rastra Bank

1. NRB has been determining minimum interest rates of saving and fixed deposit from 15th Bhadra 2023 as per circular issued on 8th Bhadra 2023.
2. NRB established a new interest rate structure effective April 14, 1970 AD
3. Major revision in interest rate on 19th April, 1975
4. Revision of interest rate, lowered by 1% in Shrawan 1, 2033.
5. Revision of interest rate, lowered by 2% in Falgun 1, 2033.
6. Revision of interest rate, increased ion Ashad 1,m 2039.
7. Authorised bank to increase interest rate between 1%-1.5% above the minimum interest rate determined by NRB. –Manshir 1, 2041.
8. Anything above minimum interest rate determined by NRB-29th may, 1986
9. Full authority to determine their own interest rate. –Bhadra 15 2046
10. Directives issued 9n Bhadra 6 2050

- Set the interest orate of deposit for period of at least one year
- Interest rate of any loan disbursed for dame purpose and nature should not vary by more than 1%
- Hereafter no flat rate on interest is applicable
- Interest spread should not be more than 6 percent

11. Effective from Marga 2, 20-54, the interest rate of deposit and loans and advance accepted pr disbursed under same head and for same purpose must not be varied by more than 0.5%, that also with the consent of the customers.

12. Maximum Interest spread was reduced to 5%- Shrawan 1, 2059
13. Any institutions can determine their own interest spread. –Shrawan 1, 2059
14. Effective from Shrawan 1, 2060, the bank was given freedom to charge any interest rate on same loan for same purpose, which was restricted to more or less o.5% while rule remained same for accepting deposits.

1.2. Statement of the problem

As the economy has taken a reverse turn making the financial sector hitting the record low return it has not left the banking sector either. Though banking sector has always been the promising sector giving high return and value to its promoters and shareholders, its down looking financial scenario has created very less investment alternatives and comparatively lower return. The deteriorating situation of peace and security of the country has rendered the economy further sluggish, whereby the pace of lending to private sector is yet to accelerate. The establishment of new industries and organizations have come to halt giving banks fewer opportunities to mobilize its resources. This has caused interest rates dipping the lowest point, which was 2 to 3 times higher earlier.

Our country showed several joint venture banks within short period of time fighting for small amount of market share, which requires excessive force making high operational cost. Interest rates as a major tool to change the fortune of the bank it has always been modified as per situation and economy. After commercial banks received autonomy to determine their own interest rate they have greater burden to carry if it is to shoulder responsibility to drag country towards prosperity. An appropriate interest rate is always sought to keep both parties i.e. depositors and borrowers at profitable minimum. Due to stiff competition between the banks to increase the volume of deposit and loans and investments it has been working under very less interest spread which is able to hardly cover total cost. This has been because of excessive availability of financial institutions. Moreover frequent changes of interest rate within and outside the bank has changed the

banking habit of individual depositors. There has been high tendency to transfer fund from less interest bearing bank to higher interest bearing ones while lower rated lending banks are seeing huge loan applications.

The change in interest rates certainly has deep impact on the activities of the commercial banks. This study basically deals with such impacts of interest rate on the deposit mobilization and the ultimately the profitability of the company. The main attempt of this study will be to answer the following question:

- What will be the impact of fluctuations (increment and fall) in the interest rates on deposit loans and investment and ultimately profitability of the company?
- Do interest rate structures affect the investments of commercial banks?
- Do charges in interest rates affect total deposits and loans of commercial banks & financial institutions?
- Is interest rate the main factor in attracting customers to deposit and lend in banks?
- Is there any stability in deposit mobilization policy of the bank?
- What are the alternatives to interest rate policies if we have to increase or decrease deposit and investment level?
- What are the interest rate structures in Nepal in the past few years?

1.3. Objective of the study

The general objective of the report will be to understand and analyse the impact of interest rate on deposit mobilization and its long-term effect on the profitability of the bank. The specific objectives of this report are as follows: -

- To study the impact of the interest rates on the mobilization of deposits.
- To study the interest spread and its impact on the profitability on bank.
- To study the dominance of interest income to total earning of the bank.

- To provide recommendations and suggestions to further improve the standing and position of the bank in the competitive market.
- To study the trend of deposit interest rates, the investment rates and the interest rates for loans & advances.
- To present the deposit and loans & advances situations to potential investors, depositors & banks for the right investment decisions and proper fixing of interest rates.

1.4 Organisation of the study (Chapter Plan of the study)

This study has been organized into five chapters. Each chapter has its importance and deals with important aspect of the study

Chapter One: Introduction

This chapter will introduce the research topic citing the research gap and a brief background regarding the study. This will further highlight the importance of intellectual capital in Nepalese banks and depict a brief development process of banks in Nepal. The objectives of the research will also be listed in this chapter.

Chapter Two: conceptual framework and review of literature

This chapter will further stress on the conceptual understanding of impact of interest on deposit mobilisation and its significance in the banking scenario. It will deal with what empirical works are available and give a brief review of Nepalese studies, if any.

Chapter Three: Research Methodology

This chapter will deal about the nature of research design, nature and sources of data and clearly list the enterprises that are taken under study. This chapter will also describe the methods and models of data analysis

Chapter Four: Presentation and Analysis of Data

This chapter will primarily deal with analysis of both primary and secondary data and it'll end with some concluding remarks.

Chapter Five: Summary, Conclusion and Recommendation

This will be one of the most important chapters of the research work it will briefly summarize the research work, draw rational conclusion and make necessary recommendation to the authorities concerned.

CHAPTER 2

CONCEPTUAL FRAMEWORK AND REVIEW OF LITERATURE

The review of literature provides basic foundations to this study. The various concepts employed in the study are, in fact, derived from the different literature surveyed in this part. The review of these literatures has been described in three parts. This first part presents discussion on conceptual frameworks while the other two parts deal with review of literature in the international context, and review of Nepalese studies.

2.1 Conceptual Framework

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

2.1.1 Interest Rate Theories

R. D. Pant mentioned the following theories about interest rate in his book

1. The Traditional Approach

This approach believes the changes in the demand for any supply for supply of money cannot affect interest rates except for transitional states in which the system moves from one long run equilibrium position to another. Keynes relegated the quantity of money primarily to the job of determining the level of interest rate by the liquidity preference and the quantity of money it is needed to keep the interest rate at low level, to hold the interest payments in the government budget, to increase investment and to stimulate aggregate demand to increase both real income and employment.

Economists and policy makers have, no doubt, long recognised the effects of variations in the stock of money on the rate of interest. There has been less agreement, however, on precisely what in the economy effects, although it is generally agreed that the effect, transmission process and the stability of relationship depend on what one assumes about the state of the economy. In unemployment situations like those, for example, experienced by the western world in 1930s, when the increase in the demand for goods is expected to result in the increase in output rather than price, both income and for goods is expected to result in increase in output rather than price, both income and interest rate, given the saving consumption and liquidity preferences functions and the money supply are mutually determined as in IS-LM analysis. In such a situation, both fiscal and monetary changes, given the price level, affect the interest rate. Once the full employment situation is reached, however, the price level rather than the rate of interest will given public demand for real balances, move in proportion to excess money supply: and it is precisely the effect on the money market of such a rising price level that rids the economy of excess demand and brings it to equilibrium. In real world, however, both real income and price may change simultaneously and the current controversies in the theory of interest are due to lack consistent economic theory designed to explain the division of a change in nominal income prices and output

2. The Modern Approach

In the modern view that the natural rate hypothesis and the theory of rational expectation in economic theory trace out any facts like, monetary changes are the dominant cause of changes in nominal interest rate even in the short monetary authorities can make temporary change in the interest rate provided it changes of growth of money in an unpredictable way. The continued growth of money supply, however, will not lower interest rate if the initial position is one of the full employment. The excess supply of money will increase expenditure partly because of effects of low real interest rate on

investment and due partly to an increase in other spending since for an individual nothing has occurred to make the cash holding more attractive. If the public expect the rise, the price borrowers will be willing to pay higher interest and lenders will be willing to pay more to compensate for rising prices.

The monetary effects on interest rate can be separated into three effects they are as follows:

i. Liquidity Effect
ii. Income Effect
iii. Expectation Effect

The nominal demand for money at time t is assumed to be as follows

$M_t^d = F(Y_t, I_t)P_t$

Where, t = Time

Y_t = Real income

I_t = Nominal Interest Rate

P_t = Price Level

M_t = Money

And the money supply is assumed to be exogenously determined as $M^st = M^st$. The nominal interest rate I equal to the real rate of interest plus the expected rate of inflation. The basic form is like this

$I = r + [I/P + Dp/Dt]e$

Where,

I = Nominal Interest Rate

R = Real Interest Rate

[I/P + Dp/Dt]e = Expected Rate of Inflation

The real investment is negatively related with the real interest rate and savings function is positively related with real interest rate

So, the equilibrium form of investment and savings is I/P = S/P

The increase in the rate of growth money supply will create excess supply of money. The nominal and real rate of interest rate must decline to clear excess supply in the money market if there has been no change in income or price. It is due to the liquidity effect. Nominal and real interest rate decreases from equilibrium level if there was unexpected change in money growth rate. The decrease in real interest rate will stimulate expenditure due to partly to the effect of lower interest rate on investment and an increase in consumers' spending due to the excess supply of money. The increase in the rate of inflation will reduce demand for cash balance and the public may hold more capital goods at the expense of real balance. This will lead to an increase in capital labour ratio and make the real interest rate permanently lower than it would otherwise be. The real interest will return to the original stage and an increase in money supplies will raise the price level and nominal interest rate in proportion to the rise in money supply with no change in real interest rate.

The change of nominal and real interest rate is based on the following expectations:

- An increase in the rate of growth of money supply will initially decrease the nominal and real interest rate.
- In the equilibrium stage, inflation will rise to a new value equal to the change in the rate of growth of money supply
- The nominal interest rate will rise in population to the rise in inflation when the position is in equilibrium. There will be no change in the real rate of interest.

2.1.2 Determining the Interest Rates

Dr. Raghab Dev Panta has simplified the balance sheet of commercial banks as follows.

Account 1

Assets	Liability
1. Required reserve (A) 2. Excess Reserve (B) 3. Earning Assets (C) i. Loans and Advances ii. Investments	1. Loanable Funds (D) i. Time ii. Current iii. Others 2. Capital Reserve & Other Net Liabilites (G)

Account II

Interest Earned (F) Interest Cost (I)

Effective Interest Rate = (F/C) * 100% = ⇐

Effective Interest Cost = (I/D) * 100% = ℘

Hence he has determined the effective interest rate as,

=Interest earned/ Interest Earning assets * 100%

And, Effective Interest costs as,

= Interest Cost/ Interest Paying Liabilities * 100%

If Rastra banks change interest rate structure, the change in the interest rate will affect both supplies of deposits and demand for loans from the commercial banks. Both the earning assets and the loanable funds may not change in same proportions and this'll affect the excess reserve positions of the banks.

Rate of return on capital is ⇐=℘⇐∉D-C)/C. this return will be positive only if the ⇐∉1-(D-C)/C>℘ This indicates that apart from the margin between lending and deposit rates the change in both loanable funds and earning assets, which in turn, determines the excess

reserve available to the banks, play a major role to determine the profit position of the banks.

According to Kenneth J.Thygerson, "commercial banks have very diversified assets structure. Loans are largest assets categories, amounting to 60% of total assets and spread between business, real estate and consumer loans. These banks also invest heavily on US government agency, state and local government securities.

2.2 NRB's Domination on Interest Rates

NRB has been a dominant force in the development and regulation of the financial and economic sector in Nepal. Commercial banks have been allowed to determine their own interest rates on deposits and loans as a result of interest rate deregulations. The whole are of interest rate structures and its roles have been a major concern for both commercial banks and NRB. Commercial banks can determine their own interest rates on deposits and loans due to the deregulation of the interest rates but it has been decided that the disparity should not exceed more than 6 percent. The authority of controlling the commercial banks and financial institutions has fallen to the NRB after its establishment. NRB was actively involved in formulating the monetary policies and fixing the interest rates.

The establishment and growth of commercial banks in the country within a short span of time have been encouraged by the economic liberalisation policy of the government. The proper determination of the interest rates is one of the important instruments of monetary policy especially in situations when existing financial institutions such as commercial banks are unable to supply timely and any capital market activities. According to the monetary policy, Nepal Rastra Bank controls over the commercial banks statutory reserve of liquid assets, limitations and spread of interest rates over deposits and loans, ceiling

the flow of loans on priority sector etc. Nepal Rastra Bank has also sometimes controlled and provided facility in the past in determination of interest rates of commercial banks.

The NRB issued their directives to increase their interest rates with a view to attract savings into the banking sector and to make deposit rate structure in Nepal Competitive effective from August 31st 1996. 6% per annum on fixed deposit and a minimum rate of 4% per annum were fixed accordingly. Directions were given to the commercial banks to increase their loan rates, on their own directions, and send the deposit rates of the commercial banks increased by 1% point in savings and by 2% points in one year fixed deposits.

The NRB announced a new interest rate structure, effective from April 14th 1971 for further development in the national economy.

The new deposit rates ranged from 5% to 8.5% compared to 7% prior to this revision. On the fixed account, the interest rates were raised by 1.5% points, on the saving by 0.5% points and by 1.75% in 1-year and 2-year deposits respectively.

Compared to the previous ranging from 7.5% to 12%, the new lending rates of the commercial banks ranged from 7% to 13%. The new lending rates of financial institutions in the agricultural sector were set at 3.4% for term loans as compared to previous rates ranging from 5% to 10%. The new lending rates of Nepal Industrial Development Corporation had fixed at an interest rate of 7.5%. For the short, medium and long-term loans, the corporation on an average fixed the interest rates at 8%, 6.5% and 5.5% respectively.

Even when the demand for credit was rising steadily from the very beginning of the FY 1971/1972, the rate if growth in fixed and saving deposits started to decline. One of the main causes of the fall in deposit growth was the non-effective interest rate structure,

turned negative due to spiralling prices. Although the interest rate revision of the July 1974 had given some impacts to the deposit growth for a few months, this did not continue fir long. The exploding international price situation due to the oil price hike caused the Nepalese price also to move upwards and inflation rate was recorded at as high as 18% during 1973/74 and 17% during 1974/1975. This resulted in a negative real state of interest on saving, discouraging deposit mobilisation. To correct this, a historical upward revision in interest rate structure was made in April 1975.

In this revision of the rates of interest, the rates in the 3 and 6 month fixed deposits was raised from 3.5% to 4%, on the saving to 8% from 6.5% and fixed at 10%. The rate on one-year deposit was increased from 9.5% to 15% and on two-year deposits from 9.75% to 16%.

The Nepal Rastra Bank made a downward revision in the interest rate structure effective from mid-July 1976 with a view to make use of the expanding sector in agriculture, industry and export promotion. Accordingly, fixed were cut down 1% fixing 1-year and 2-year deposit rates at 14% and 15% respectively.

The NRB also instructed the banks in regard to the saving account operation authorizing to fix ceilings on periodic withdrawals, amount of minimum balance to be maintained by the saving account holders' as well as the maximum balance that would be eligible to carry interest etc. Besides this, restriction on opening accounts by individuals only was lifted by the NRB. Institutions did not benefit through this exercise.

Freedom was allowed in fixing the lending rates in all areas except for the credit to the priority sector.

The interest rate revision aimed at controlling credit and was geared more towards mobilisation of resources to enable commercial banks and financial institutions to advance more credit.

In order to provide additional resources to productive sector, the Nepal Rastra Bank, effective June 15th 1982 increased the deposit rates marginally by 0.5% and lending rates by 1.0%.

The Nepal Rastra Bank granted autonomy to the commercial banks in offering the rates of interest on savings and time deposits to the extent of 1.5% and 1% respectively above the minimum level effective November 16, 1984. The commercial banks and the agricultural development banks were directed by the Nepal Rastra Bank to reduce the interest rate by 2% for agricultural and cottage industries in the 18 remote districts.

The commercial banks and financial banks were allowed to freely fix the minimum interest rates on deposits and lending rates above the minimum interest rates and maximum lending rates for productive and priority sectors. The minimum interest rates were 8.5% on saving deposit and 12.5% for one year fixed deposits.

The interest rates of the banks and financial instructions were completely liberalized and granted autonomy in fixing their own deposit and lending rates by 13th August 1989. The rationale for ending the administered interest rates structures were to bring about the flexibility in the mobilisation of financial savings and for efficient allocation of available resources.

Interest rates liberalisation could not fully meet the objectives and the lending rates faster than the deposit rates. Interest rate structure could not meet uniformly in terms of interest rates. Thus instead of competition in the market, discrepancies were observed in the

interest rate structure. The following directives were issued in August 1992 to all the banks and other financial institutions.

- Interest rates on deposit of at least up to one year to be clearly spelt out.
- Interest rate range on the credit of same type or purpose not to be more than one percent
- Stopping of the fixation of the interest rate on flat basis.

2.2.1 Provision on Interest Income

The interest accrual on loans and advances is recognised on cash basis and exhibited under this head. The amounts of interest accrued but not received is debited to "Accrued Suspense Account" in the assets side and credited to "Interest Suspense Account" in Liability side of the balance sheet. However, if the accrued interest on loan is realised in cash within one month from the date of closure of the fiscal year. In this respect, the f0ollowing procedure shall be adhered to:

- Interest accruals during the related period shall be debited to "accrued Interest Account" credit to "Internet Suspense Account."
- The balance is such "Accrued Interest Account" shall be recognised into income only if cash is realised from the customer or by debiting the customer's current account, if the balance is sufficient of falls within the overdraft limit.
- Only the amount within one month from the closure of the fiscal year may be recognised into interest income in the earlier fiscal 1 year by debiting "Interest Suspense Account"
- In this respect of interest realisation by way of capitalisation the same may be done for interest covering the period specified as per the repayment schedule in the loan agreement. Particulars of loans on which interest are thus realised by way of capitalisation shall be submitted to NRB, inspection, Supervision, and Department.

2.2.2 The Current Interest Rate Policy of Nepal Rastra Bank

Interest rate spread is to be maintained at 5% with a view to maintain the weighted average interest rate spread between interest rate offered on the deposit and the interest rate charged on the loans by the commercial banks within the 5% levels. Nepal Rastra Bank has made the following provisions in calculating such spread.

1. The following procedures are to be followed for the calculation of the interest rate spread.

   a. The calculation of the interest rate spread is based on the interest expenditures payable on the total domestic and foreign deposits held by the commercial banks as well as the interest income of the commercial banks received in domestic and foreign currency from loans and advances, money at call and balances held abroad.

   b. For any specific period, the weighted average deposit rate is to be calculated by dividing the sum of the interest expenses on the total deposits by monthly average deposits and multiplying it by 100. Deposits here include the current deposits, saving deposits, fixed deposits; money at call and other deposits both in domestic and foreign currencies. Likewise weighted average lending rate is to be calculated by dividing the sum of the interest income by monthly average amount of loans and advances, investment, money at call and balances held abroad and then multiplying it by 100. the inter-banking lending is not including in calculation.

   c. Difference between weighted average lending rate and the weighted average deposit rate is considered to be the weighted interest spattered.

2. Interest spread is to be calculated and monitored based on the half yearly data (from August to January and from February to July). These data is to be filled up in a prescribed format and dispatched after internal auditing, to the banking operations

department and to the inspection and supervision department of the Nepal Rastra Bank within a period of 2 months. Commercial banks are also required to send the prescribed data on the monthly basis to the above departments.

3. If the interest spread of any commercial banks exceed stipulated spread limit of 5%, exceeding amount of interest income of that period should be deposited in a separate special reserve fund created for it. Distribution out of this fund is restricted. However, such special fund can be treated as supplementary capital for the purpose of calculating capital adequacy.

2.3 The Interest Rate Spread

The intermediate cost or spread rate of the commercial banks has a direct bearing on saving and investment and thus economic growth of the country because the commercial banks hold dominant portion of financial intermediation, i.e. by July 2007, the shares if commercial banks, ADB/N, NIDC, and Regional Rural Development Banks were more than 85%. The higher spread rate of commercial banks can be observed from comparative figure of unweighted interest spread derived from the difference between the one year average fixed deposit rates and average industrial loan rate of 1982, 1986, 1990, 1995 and 1997, which were 2%, 2.5%, 5.25%, 7.32% and 6.25% respectively. It says that deregulation alone was not sufficient to reduce the spread over the years as the possibility of informal collusions for earning high profit margins for the commercial banks could not be ruled out.

Though Nepal Rastra Bank, through moral suasion on the interest rate spread, directed the commercial banks to keep the spread below 6 % in September 1993, this direction had almost no effect on their cartel and syndicate type of behaviour. In a way, the moral suasion contained no specific method of calculation and procedure of monitoring. Even after the moral suasion, the situation of higher interest rate spread continued. High

interest rate spread indicated that depositors were getting low interest rate where borrowers were punished with interest rate creating the flow of loans to export and industrial sector, or other productive projects. At some time, commercial banks had higher cash reserves and were enjoying greater profit margin.

In the view of the above situation, in July 1998 Nepal Rastra Bank gave directive to the commercial banks to lower their weighted average interest rate spread to within 5% and if necessary to change the existing interest rate structure. Since the directive contained no specific methodology as to how to calculate spread, commercial explode the situation for manipulating calculation. Following this, Nepal Rastra bank issued further directive in mid-November 1998 prescribing the detailed method of calculation of Weighted Average spread rate (difference between the interest rates applicable for deposits and credits) Together with the required monitoring and reporting procedures, with the Nepal Rastra Bank, thus give concrete directive to commercial banks to maintain the spread rate within the limit, it has been found however, was more than 5%, for commercial banks in the beginning.

2.3.1 Nepalese Economy and its Relationship with Interest Rate Spread

Financial system acts as a facilitator to bridge definite units and surplus units. Financial intermediation helps promote economic growth through the process of saving mobilisation and promotion of productive investment in the country. In this process, financial institutions (FIs) generally pay certain prevailing rate of interest on lending. The differential interest margin is incentive to financial institutions to cover their operational costs and contribute to the worth of the equity holder. The determination of the interest rate of the deposits and lending is more or less governed by the market force. However, the differential rate is mostly influenced by operational efficiencies and the interest margin of the financial institutions. Financial intermediation means transfer of surplus from the investor via intermediaries to the ultimate borrowers, the process involves

higher cost of acquiring and evaluating information on the potential borrowers. Since the intermediaries are generally large, they gain economies of scale in analysing the credit worthiness of the potential borrowers, in processing and collecting loans and pooling risks. Therefore, it is postulated that the existence of efficient and competitive financial system leads to higher level of financial intermediation and lower intermediation cost or interest rate spread, i.e. lesser difference between the deposit rate and the lending rate of the financial institutions.

The history of the development of modern banking and financial system isn't long in Nepal. The establishment of the Nepal Bank Limited in 1937 A.D. was the foundation stone laid in the history of banking and financial development of Nepal. Up to the mid-1980s, Nepal had one central bank, Nepal Rastra Bank established in 1956, 2 commercial banks namely Nepal Bank Limited and Rastriya Banijya Bank, established in 1966. There were other two specialised financial institutions functioning as development banks. ADB/N established in 1968 and Nepal Agriculture Development Corporation established in 1956. In addition, some insurance companies and one employee provident fund corporation were also established. There were thus very few financial intermediaries up to the mind 1980's and almost all are more or less state owned and controlled. Financial activities were tightly regulated and controlled through measures like the administered interest rate regime, SLR (Statutory Liquidity Ratio) requirement, imposition of other stringent conditions on funds and portfolio management etc. Therefore, at that time, there were no competitive environment among the financial institutions and the quality of financial service was poor and traditional. There were no other non-bank financial institutions to provide the service as per the diverse needs and requirements of the consumers. That is why innovations of new financial service and improved quality service could not take place. The level of intermediation as measured by total outstanding deposits of the financial institutions inclusive of the commercial banks, ADB/N, and NIDC as percentage of GDP was less than 25% in July 1989. The same was the case for loans and advances.

As against the aforementioned backdrop, Nepal initiated the financial liberalisation in the mid-1980s. The objective behind the liberalisation was to create competitive atmosphere among the financial system operators so as to increase and improve the financial service, reduce intermediation cost and thus help promote economic growth. The financial sector liberalisation measures included among others the deregulation of the interest rates, free entry and exit arrangement of commercial banks and other financial institutions, removal of SLR, adoptions of indirect and market friendly monetary instruments and establishment and implementations of potential norms etc. As a result of financial liberalisation measured undertaken during 1990s. By 2001, the financial system of Nepal comprised of the central bank, 14 commercial banks, 9 development banks, 5 regional rural development banks, more than 48 financial institutions and many more cooperatives, insurance companies, citizen investment trust and NGOs performing limited banking activities. These financial institutions are providing financial service all over the country with via a network of more than 1300 institutional entities.

The level of the financial institutions as measured by total outstanding deposits of financial institutions include commercial banks, ADB/N, NIDC, Regional Rural Development Banks and cooperatives as a percentage of GDP from 21.2 % in July 1989 to 44.1% in July 2000. But after the reform measures particularly after the full deregulation of the interest rate regime in 1989,it was expected that there would be competitive behaviour among commercial banks and financial institutions which would prompt banks to provide higher interest rate on the deposits while charging competitive lower interest rate on lending. It was also envisaged that while doing so, banks could increase quantum of financial intermediation and thus profit form it. Consequently it was expected that competition would further bring down the interest spread, which would contribute to the economic growth by benefiting both depositors and borrowers alike. In addition, the reduced spread was considered as mechanism & parameter that would

reflect the financial efficiency and commercial expediency of the financial system in general and the banking system in particular.

2.3.2 Major Causes of High Interest Spread

In past, to reduce the high interest rate spread Nepal Rastra Bank has taken measures such as cut in Credit Reserve Ratio (CRR), freedom to determine interest rate, moral suasion and mandatory directive etc. Still several factors contributed to make higher spread rate in banking system of Nepal. They're mainly related to high cost of funds or high margin resulting from requirements of maintaining high CRR, priority sector lending requirements, structural and operational characteristics of banking system.

3 major causes of Surya Chandra Shrestha's (2002) article are as follows

a. Requirement of marinating Credit Reserve ratio (CRR)
b. Priority Sector Lending Programs
c. Structural and operational characteristics of banking system.

2.4 Review of Some Relevant Books

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

According to the modern view, interest rate determination depends upon the investment, saving, liquidity preferences and supply of money. This view is a combination of previous theories. It has expressed both monetary and non-monetary factors. In this

opinion, the marginal efficiency of capital to the rate of interest and investment is equal to the desired volume of saving. Thus the Total Investment = Total Saving or I = S.

Where,
I = Investment and S = Savings.

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

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

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

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

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

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

According to Neo-classical economists, demand and supply, factors are important in the determination of interest rate structure. The supply of loanable fund is composed of real saving and credit money and demand of the loanable found is composed of the demand for the investment funds. The interplay monetary and non-monetary forces determine the rate of interest.

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

Supply of loanable funds:
The supply of loanable funds is derived from four basic sources, namely:

a) Saving: Saving by individuals or household constitutes the most important source of loanable funds. Any individual's and household's savings primarily depend upon the size of their income. But, given the level of income, savings vary at various rate of interest. More savings will be forthcoming at higher rate of interest and vice-versa.
b) Bank credit: Another source of loanable funds is the banking system. Banks can create money and advance them to businessmen as loans. By contracting their lending, the banks can also reduce their amount of money. The bank's newly created money in a period, greatly adds to the supply of loan funds. The supply curve provided the banks is to some degree interest elastic. It varies with various rate of interest.
c) Dishoarding: Labelled as another source of loanable funds, individuals may dishoard money form a hoarded stock, of a previous period. More stock will be dishoarded at higher rate of interest. Cash balances, lying idle in the past period, can become active balances in the present period and are available as loanable funds.
d) Disinvestments: They are considered to be the opposite of investment. This happens due to structural changes or bad ventures and the existing stock of machines and other equipment is allowed to wear out without being replaced or the inventories are drawn below the level of previous period. When this happens, a part of the revenue from the sale of products, instead of going into capital replacement, flows into the market for loanable funds.

Demand for Loanable Funds:

The demands for loanable funds come mainly from three fields:

a) Investments: this is the most important constituent of the total demand for loanable funds. The interest serves as the price of the loanable funds required to purchase the capital good. The demand for the loanable funds obviously is the rate of interest elastic.

b) Hoarding: Those people who want to hoard money may make a demand for the loanable funds. it serves to satisfy their liquidity preferences. Hoarding signifies the people's desire to hold their savings as idle cash balances. The demand for hoarding money is "interest elastic." At a higher rate of interest, people will hoard or hold less money because much of the money will be lent to take advantage of the higher interest rates.
c) Consumption: consumption serves the purpose of the second biggest demand for the loanable funds. Individuals or households want to borrow and demand loanable funds whe3n they wish to make purchases in excess of their current incomes and cash resources.

2.5 Review of Thesis

In the opinion of Tara Chitrakar, "interest rate is an essential feature of loan and based on the principle of probability. Interests are charged on the loans by the banks and interests on deposits are distributed. Substantial emphasis is given on the statement that higher rate of interest on loan results in lower demand of loan and vice versa. The interest rate for the loan, which the banks charges are higher than the interest rate for the deposit."

It is mentioned in Mr. G.P. Neupane's thesis that, interest rate depends upon the economic activities and existing policies of a nation. We find inverse relationship between investment and interest rate in every type of economy. Lower investment is the result of higher interest rate and vice versa. There is direct relationship between interest rates and savings. Lower interest rate brings about a fall in the deposits. There should always be equality in savings and investment. If the interest rates and appropriately fixed, investments can be directed towards proper fields.

In the Opinion of Mr. Kishor K.C., " it is the liquidity if interest rates that highly affect the deposits and lending positions. The relation of interest rate and deposit show that

interest elasticity is greater than unity i.e. if the interest rate increases, deposit increases at a greater level. In the same way, credit is related with loan rate of interest. It is known that the relationship between loan rate of interest and credit flows is negative. There tends to be an increase in credit flow when the rate of interest on the loan is low. Therefore the deposits and loans depend upon the interest rate. If interest rate only is taken by keeping, other variable constant we will get that the institutional interest rate is the important explanatory variable to influence the volume of deposits in Nepal.

In the observations made by Mr. Narendra Bahadur Rajbhandari, "Policy of interest rates deserves a vital role in the management of bank funds. It is the best tool to mobilize savings and channel them to desired channels. It is possible because the interest rate is sensitive to changes in both deposits and loans. But we should not accept that changes in the deposit and credits occur only due to the changes in the interest rates. Actually there are many other variables that affect the volume of deposits and credits of the banks. The inflations rate, the trade conditions, the policy legs of the state corporations, seasonal variations in some loans, the monopoly of banks., the non-development of the money markets, the lending policy of the banks, the tax rates, the margin rate and so on may affect the policy of interest rate as well as the credit-deposit operations of the banks."

In the research called "A Study on deposit mobilisation and utilization of commercial banks with special reference to Nepal Bank Limited" by Mrs. Shova Shrestha has specified, "Nepal Bank Limited has been much efficient in the collection of resources from the people in both urban and rural area of the country. But in the progress of its utilization, they are still behind. There is a decrease in the ratio loans and investment deposits and a wide gap has existed between them.

The interest rate has played an important role in mobilizing and utilizing the resources of the bank. So, the structure of interest rate should be changed according to the need of the nation. Even though the function of commercial banks is to off short –term loans for

working capital but they collect fixed deposits. Thus they have capacity to offer medium and long-term credit and are found keeping deposits idle. Thus it can be said that the Nepal bank Limited is not playing active role to utilize the collected savings according to the borrowers and national requirement of long term and medium term investments."

CHAPTER 3
RESEARCH METHODOLOGY

Research methodology is the procedure by which researcher go about their work of describing, explaining and predicting phenomenon. In other words, research methodology describes methods and process applied in the entire aspect of the study. In this chapter, efforts have been made to present and explain the specific research design for the sake of attaining the research objective.

This chapter has been organised into five sections. Section one presents the research design, while section two describes the nature, sources of data. Section three describes the selection of enterprises. Section four explains the methods of analysis e3mployed in this study. Similarly, the definition of key terms and limitations of the study are described in the last two sections.

3.1 Research Design

Research design is the plan, structure and strategy of the investigation conceived as to obtain answers to research questions and to control variance (Kerlinger, 19860. The research design is an integrated frame that guides the researcher in planning and executing the research work. (Wolf and Pant, 2005). This study follows descriptive research design. Although descriptive research cannot predict and control conditions and events, it contributes to science primary by building a foundation of facts upon which exploratory hypotheses may be constructed, by checking the validity of existing theories and by directing attention toward alternative hypothesis which better fit the facts (Vans Dalen, 1962).

Descriptive approaches have been adopted mainly for describing the situation and conduct a survey of opinions. Analytical approach has been followed to analyse the related data and the relationship among variables.

3.2 Populations and Sample (Selection of Enterprises)

It is likely to be a very cumbersome job to study all the data related with all the commercial banks of Nepal. There are 23 commercial banks in the country and their stocks are traded actively in the stock market. Therefore a study of only 15 major banks will be done as subjects of samples.

The sample banks are

- Nabil Bank Limited (NABIL)
- Standard Chartered Bank Nepal (SCBNL)
- Machhapuchhre Bank Limited (MBL)
- Kumari Bank Limited (KBL)
- Nepal Bangladesh Bank Limited (NBBL)
- Nepal Credit and Commerce Bank Limited (NCC)
- Himalayan Bank Limited (HBL)
- Everest Bank (EBL)
- Rastriya Banijya Bank (RBB)
- Nepal Bank Limited (NBL)
- Nepal Investment Bank Limited (NIBL)
- Nepal SBI Bank Limited (NSBIBL)
- Lumbini Bank Limited (LBL)
- Bank Of Kathmandu Limited (BOK)
- Nepal Industry and Commerce Bank Limited (NICBL)

These above stated commercial banks of Nepal were further regrouped into sub-categories of Joint-Venture Commercial Banks, Public Commercial Banks and Private

Commercial Banks of Nepal. The categorised banks have shown in a table format below with their names and the dates within which their data were taken into consideration.

Table 3.1

Names of the commercial banks and their dates

Taken into consideration

S.N.	Name of the Commercial Bank	Study Period (Mid-July)	No. of Observations
Private Commercial Banks			
1.	NABIL Bank Limited	2001-2007	7
2.	Nepal Investment Bank	2001-2007	7
3.	Bank Of Kathmandu Limited	2001-2007	7
4.	Nepal Credit & Commerce bank	2001-2007	7
5.	Lumbini Bank Limited	2001-2007	7
6.	Machhapuchhre Bank Limited	2001-2007	7
7.	Kumari Bank Limited	2001-2007	7
8.	Nepal Industrial & Commerce Bank	2001-2007	7
Joint Venture Commercial Banks			
9.	Standard Chartered Bank Nepal	2001-2007	7
10.	Himalayan Bank Limited	2001-2007	7
11.	NSBI Bank Limited	2001-2007	7
12.	Nepal Bangladesh Bank Limited	2001-2007	7
13.	Everest Bank Limited	2001-2007	7
Public Commercial Banks			
14.	Rastriya Banijya Bank	2001-2007	7
15.	Nepal Bank Limited	2001-2007	7
	Total number of observations	-	105

3.3 Nature and Sources of Data

The research work has covered a period of seven years i.e., FY 2000/2001 to FY 2006/2007. The secondary data will be used to a higher extent due to time constraints. These secondary data will be collected mainly from published sources like annual reports, prospectus of banks, balance sheets, newspapers, journals, the Internet and other sources. Furthermore, various data will also be collected through periodicals, economic journals, managerial magazines and other published and unpublished reports and documents. Besides this, in some cases, if needed, primary data will also be overseen and collected through direct interview and observation.

Sectors	Number Of Banks
Private Banks	8
Joint Venture Banks	5
Public	2

3.4 Methods of Analysis

Being a small and confined research, in spite of many available research tools, only a few that are most suitable have been selected for this study. It must be noted that though many tools are in line and could be used, these leftover tools can be considered as subjects of limitation of this study. Some research tools that were used in this study are:

3.4.1 Econometric Model

The method of analysis employed in this study includes simple as well as multiple regression models. The regression models are based on pooled data of 15 commercial banks of Nepal from the year 2001 to the year 2007.

Simple Regression Models

In this model the Deposit Amount (DEP AMT) is regressed against each of the selected explanatory variables i.e. the Deposit Rate for its respective sector. Likewise, the Loan Amount (LOAN AMT) is regressed against each of the selected explanatory variables i.e. Loan Rate. The Investment Amount (INV AMT) is regressed against the selected explanatory variables, which are the Investment Rate. In equations 4 and 5, the interest rates of loans and the investment rates are regressed against the deposit rates.

The equations are:

DEP AMT = a + B_1 (DEP RATE) + E…….(1)

LOAN AMT = a + B_2 (LOAN RATE) + E.…….(2)

INV AMT = a + B_3 (INV RATE) + E….…….(3)

LOAN RATE = a + B1 (DEP RATE) + E……...…….(4)

INV RATE = a + B2 (DEP RATE) + E……...…….(5)

Where,

DEP AMT = Deposit Amount

LOAN AMT = Loan Amount

INV AMT = Investment Amount

DEP RATE = Deposit Rate

LOAN RATE = Loan Rate

INV RATE = Investment Rate

E = Error Term

Multiple Regression Equations

Model I

In this model, the Deposit Amount is regressed against the rate of deposit, the investment rate, the loan rate and other explanatory variables. The multiple regression equation of the model is:

$$DEP\ AMT = a + B_1 DEP\ RATE + B_2\ INV\ RATE + B_3\ LOAN\ RATE + E$$

Where,

DEP AMT = Deposit Amount

DEP RATE = Deposit Rate

INV RATE = Investment Rate

LOAN RATE = the Interest Rate of Loan

E = Error Term

Model II

In this model, the interest rate of the loans and advances are regressed against the interest rate of the investment, the interest rate of deposit and other explanatory variables. The multiple regression of this equation of the model is:

$$LOAN\ RATE = a + B_1 INV\ RATE + B_2 DEP\ RATE + E$$

Where,

LOAN RATE = The Interest Rate of Loan

INV RATE = Investment Rate

DEP RATE = Deposit Rate

E = Error Term

Model III

In this mode, the total credit given out by the commercial banks have been regressed against the rate of investment done, loan given out and other explanatory variables. The multiple regression equation of the model is as follows,

$$CREDIT = a + B_1 INV\ RATE + B_2\ LOAN\ RATE + E$$

Where,

LOAN RATE = the Interest Rate of Loan

INV RATE = Investment Rate

CREDIT = Total Amount of Loan + Total Amount of Investment

E = Error Term

3.4.2 Calculation of the Interest Rate Spread of Commercial Banks

The interest rate spread is the difference in the interest rate between the lending rate and the deposit rate. The interest rate can be calculated as follow: (rupees of interest earned divided by the Rupees amount of interest earning assets) minus (Rupees of interest paid divided by the rupees amount of interest costing liabilities.)

$$\text{WADR} = \frac{\text{Amount of Interest Paid for the Year in Rupees}}{\text{Amount of Interest Costing Liabilities for the Year in Rupees}}$$

$$\text{WALR} = \frac{\text{Amount of Income for Year in Rupees}}{\text{Interest Earning Currents for the Year}}$$

$$= \frac{\text{Interest on Loan + Interest on Investments}}{\text{Total Loan Amount + Total Investment Amount}}$$

WALR = Weighted Average Lending Rate
WADR = Weighted Average Deposit Rate
Interest Rate Spread = WALR - WADR

The interest rate spread for the bank can be obtained by subtracting the Weighted Average Deposit Rate (WADR) from the Weighted Average Lending Rate (WALR). The percentage obtained from this is the interest rate spread for a specific year.

3.4.3 Other Statistics

1. Coefficient of Correlation (R):

The measure of relations between two or more variables is called correlation. The scale of measurement of correlation ranges from –1.00 to +1.00. A perfect positive correlation is one that has a value of +1.00 and a perfect negative correlation is one that has a value of –1.00.an uncorrelated data refers to those which have a value of 0.00 or near zero.

A necessity of correlation analysis is required here to find out whether the variables that have been selected have any sort of relationship or not.

2. Coefficient of Determination (R^2):

Measurement of the goodness of fit of the model is done by the coefficient of determination. The coefficient of determination measures the proportion of percentage of the total variation in the dependent variable explained by the regression model. When R^2=1, it means a perfect fit. R^2 limits are $0^{TM}R^{2TM}1$. Therefore high value near to 1 is taken as a measure of goodness of fit of model. It is preferred to use adjusted R^2 to capture an unbiased estimate of the coefficient of determination bearing in the mind that the theory says R^2 is biased upward giving a too good answer

3. Mean

Generally, mean indicates the measure of the middle of the set and denoted by '⇑'. In other words, it is just the sum of all the observations divided by the number of observations. During analysis, mean or average have been used as synonyms to equal weighted mean.

4. Standard Deviation

Standard Deviation (SD) is the absolute means of dispersion. It shows the degree of variation among the observations' value in the date set. Normally, higher the value of standard deviation, higher the degree of fluctuations and higher will be the risk. In this study, standard deviation has been used to indicate the degree of fluctuations in the respective variables.

3.4.4 Definition of Key Terms

1. Loan to Deposit Ratio (LTD)

The loan to deposit ratio is another ratio used in the study. The ratio analyses the amount of loans that have been given out as loans and advances from all the deposits obtained. The deposits are mobilised in various places and funding of loans and advances is one of them. The ratio analyses how much of the deposits are given out as loans and how effective deposit mobilisation there is:

$$\text{LTD} = \frac{\text{Total Loans And Advances}}{\text{Total Deposits}}$$

2. Investments to Deposits Ratio (ITD)

This ratio is used to determine how much of the deposits are utilised as investments by the commercial bank. The ratio determines the amount of investments that have come from the deposits. The investments can be in various sectors such as government securities and treasury bills.

$$\text{ITD} = \frac{\text{Total Investments}}{\text{Total Deposits}}$$

3. Total Credit to Deposit ratio

The total credit to deposits ratio is another ratio used in the study. This ratio analyses the amount of total credit given out in comparison to the total deposits flowed into the bank. The total credit is the sum of total loan and total investments. It measures how much of the deposits are given out as investments and loans combined together. Higher ratio is considered better because it is understood that more deposits have been utilised.

$$CTD = \frac{\text{Total Credit}}{\text{Total Deposit}}$$

Where, Total Credit = Total Investments + Total Loans

4. Average Interest On Credit

Average interest on credit is the average interest that is earned for all the funds that is given out as loans or invested. It is the average interest earned by the commercial bank for the part of deposits that are invested or loaned

$$AIC = \frac{\text{Rate of interest on Loans} + \text{Rate of Interest on Investments}}{2}$$

3.5 Limitations of the Study

Though this study has been attempted to an accurate and deficiency free , the use of different econometric models for the analysis of impact of interest rate on deposit mobilisation may have rendered it quite reliable. The empirical analysis has been done only for a period of seven years and this may serve as a constraint for future studies made on the subject. Also, to add to more woes, the time period given is not sufficient to make different tests and analysis.

- The study covers only a period of 7 years or less. This is strictly due to constraints in resources and time

- The study is based on the annual data only. The rates that respective banks have taken out in mid-July have been taken as interest rates for the whole year. This limits the reliability of the analysis. Deeper and more introspective views of monthly or quarterly data might significantly change the outcome of the analysis.

- The empirical analysis is based on both primary and secondary sources of data, the authenticity of which may be questioned, as there are variations in same data at different sources.

- The unavailability an inconsistencies regarding some data made it necessary to adjust them for the necessary analysis.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

In the previous chapters, we discussed about the impact of interest rates on funds mobilisation of commercial banks, historical background of interest rate and NRB's policies regarding it. Likewise in second chapter we discussed about the previous studies through literature review and in the subsequent chapter, we presented the methods that have been used to analyse the information. This chapter is the heart of the study. This chapter consist of relevant data and information necessary for the study.

4.1 Overview of Nepalese Financial Sector

4.1.1 Components of the Nepalese Financial Sector

The Nepalese financial sector is composed of Nepal Rastra Bank (NRB) and commercial banks, development banks, finance companies, micro-credit development banks, cooperative financial institutions, non-governmental organisations (NGOs) performing limited banking activities and other financial institutions such as insurance companies, employee's provident fund, citizen investment trust, postal saving offices and Nepal stock exchange. During the last two an half decades the number of financial institutions has grown significantly. At the beginning of the 1980s there were only two commercial banks and development banks in the country. After the induction of the economic liberation policy, particularly the financial sector liberalisation, it provided the impetus in the establishment of new bank and non-bank financial institutions. Consequently, by the end of mid-July 2007 altogether 208 bank an d non bank financial institutions licensed by NRB are in operation. Out of them, 20 are "A" class commercial banks, 38 "B" class development banks, 74 "C" class finance companies, and 12 "D" class micro-credit development banks 17 saving and credit cooperatives and 47 NGOs. (Table 4.1)

Table 4.1
Growth of Financial Institutions in Nepal from 1980 to 2007

Type of financial Institutions	Number of Institutions in Mid-July							
	1980	1985	1990	1995	2000	2005	2006	2007
Commercial Banks	2	3	5	10	13	17	18	20
Development Banks	**2**	2	2	3	7	26	28	38
Finance Companies	-	-	-	21	45	60	70	74
Micro-credit Development Banks	-	-	-	4	7	11	11	12
Saving and Credit Cooperatives	-	-	-	6	19	20	19	17
NGOs (limited banking activities)	-	-	-	-	7	47	47	47
Total	4	5	7	44	98	181	193	208
Percentage Growth	-	25	40	528.6	122.7	84.7	6.6	7.7

Source: Banking and Financial Statistics, NRB

Table 4.1 presents a clear picture of the growth of financial institutions in Nepal. As presented above, the finance companies, in terms of their number, have led the financial sector. The financial sector had taken a quantum leap in 1995 when the financial institutions had increased by 528.6 percent as compared to their number in 1990. The statistics further reveal that the number of financial institutions has increased in a decreasing trend in the post-1995 period.

4.1.2 Status of Nepalese Financial System

Nepalese financial system has been largely dominated by the commercial banking activities. Though the financial companies have led the financial sector in terms of their number (see table 4.1), it is truly the commercial banks that have largely contributed to financial growth in Nepal. Among all other financial institutions, commercial banks are the leading player in terms of overall financial activities like deposit accumulation, loans and advances, and assets position as shown in table 4.2.

Table 4.2
Study of Total Assets, total Deposits and Loans and Advances from 2003 to 2007

Rs. In Millions

	2001	2002	2003	2004	2005	2006	2007	Average
1. Total Assets	**273946**	**314567**	**357050**	**387432**	**474325**	**505958**	**582477**	**413679**
Commercial Banks	251483	274932 (87.4)	301351 (84.4)	334741 (86.4)	411240 (86.7)	428698 (84.7)	490620 (84.2)	356152 (86.1)
Development Banks	4657	18874 (6.0)	26779 (7.5)	18209 (4.7)	23242 (4.9)	26411 (5.2)	22658 (3.9)	1777 (0.4)
Finance Companies	15889	18559 (5.90)	22137 (6.2)	27120 (7.0)	30357 (6.4)	38857 (7.6)	53471 (9.2)	29484 (7.1)
Micro Credit Development Banks	-	-	4285 (1.2)	5036 (1.3)	6166 (0.7)	8197 (1.6)	10309 (1.7)	6799 (1.6)
Others	1918	2202 (0.7)	2499 (0.7)	2324 (0.6)	3320 (0.7)	3795 (0.7)	5417 (0.9)	3068 (0.7)
2. Total Deposits	**197326**	**205135**	**228736**	**258742**	**284115**	**327925**	**391152**	**270447**
Commercial Banks	181737	185237 (90.3)	203803 (89.1)	233903 (90.4)	252294 (88.8)	291197 (88.8)	337564 (86.3)	197962 (73.2)
Development Banks	2565	4923 (2.4)	6405 (2.8)	3881 (1.5)	6819 (2.4)	5903 (1.8)	15255 (3.9)	6536 (2.4)
Finance Companies	11642	13539 (6.6)	16469 (7.20	19406 (7.5)	22445 (7.9)	27218 (8.3)	34421 (8.8)	20734 (7.7)
Micro Credit Development Banks	-	-	686 (0.3)	776 (0.3)	852 (0.3)	984 (0.3)	1173 (0.3)	8942 (3.3)
Others	1381	1641 (0.8)	1830 (0.8)	1552 (0.6)	1705 (0.6)	2623 (0.8)	2738 (0.7)	1924 (0.7)
3. Loans And Advances	**124049**	**148291**	**165119**	**184389**	**209053**	**230424**	**291605**	**193276**
Commercial Banks	109163	113146 (76.3)	124500 (75.4)	139951 (75.9)	163688 (78.3)	176735 (76.7)	231826 (79.5)	15287 (7.9)
Development Banks	2853	21799 (14.7)	24603 (14.9)	25446 (13.8)	19233 (9.2)	20047 (8.7)	15455 (5.3)	18491 (9.6)
Finance Companies	10916	12012 (8.1)	14530 (8.8)	17517 (9.5)	21323 (10.2)	27190 (11.8)	35576 (12.2)	19866 (10.3)
Micro Credit Development Banks	-	-	2477 (1.5)	2766 (1.5)	3554 (1.7)	4378 (1.9)	5832 (2.0)	3801 (28.6)
Others	1240	1335 (0.9)	1486 (0.9)	1291 (0.7)	1463 (0.7)	2074 (0.9)	2916 (1.0)	1686 (0.9)

Source: Banking and Financial Statistics: Mid-July 2007, NRB

Note: Figures in Parenthesis indicate percentage of total value

Table 4.2 provides a brief outlook to the prevailing financial system of Nepal as determined by the size of total assets, deposits positions and loans and advances. Commercial banks, undoubtedly, are the key players in the financial system with their huge contribution in deposits accumulation, loans and advances, and assets position. In terms of total assets, commercial banks alone, on average, account for around 85 percent of the total value of the total value. Under total assets, commercial banks (85.2 Percent) are followed by finance companies (7.3 percent), development banks (5.2 Percent), micro-credit development banks (1.4 percent) and others (0.7 percent). The assets position of each category of the financial institutions has been growing persistently except for development banks that exhibit fluctuating figures. As for total deposits, commercial banks average Rs. 263,752 million, which stands at 88.7 percent of the total deposits. They are followed by finance companies (7.9 percent), development banks (2.5 percent). All financial institutions with the exception of development banks and others exhibit a growing trend in total deposits. Under loans and advances, the share of commercial banks (77.2 percent) is a bit low as compared to their share in total deposits (88.7 percent) and total assets (85.2 percent). However, they are still the leaders with an average loans and advances (10.5 percent), development banks (10.4 percent), micro-credit development banks (1.7 percent) and others (0.8 percent) in total deposit s have others exhibit a fluctuating trend in loans and advances whereas the rest depict a consistent growth.

Apart form analysing the total deposits, total assets and loans and advances for the entire financial system, it is imperative to analyse the same within the commercial banking framework. The following section deals with the analysis of total deposits for the entire commercial banks under study. The trend of total deposit of public banks, joint-venture banks and private banks form 2003 to 2007 has been presented in table 4.3.

Table 4.3
Trend of Total Deposit of Public Banks, Joint-Venture Banks and Private Banks

Rs. In Millions

	2001	2002	2003	2004	2005	2006	2007
Public Banks							
NBL	35529	34060 (-4.1)	34737 (2.0)	36,288 (4.5)	34,744 (-4.3)	35,445 (2.0)	38,715 (9.2)
RBB	40500	38965 (-3.8)	39309 (0.9)	40,314 (2.6)	43,489 (7.9)	45,701 (5.1)	50,193 (9.8)
Total	76029	73025	74046	76,602	78,233	81,146	88,908
Mean	38015	36513 (-4.0)	37023 (1.4)	38,301 (3.5)	39,116.5 (2.1)	40,573 (3.7)	44,454 (9.6)
Joint-Venture Banks							
SCBNL	15430	15836 (2.6)	18756 (18.4)	21,161 (12.8)	19,344 (-8.6)	23,050 (19.2)	24,640 (6.9)
HBL	17614	18595 (5.6)	21003 (12.9)	22,761 (8.4)	24,831 (9.1)	26,456 (6.5)	29,906 (13.0)
NSBL	6618	5572 (-15.8)	6523 (17.1)	7,232 (10.9)	8,646 (19.6)	10,853 (25.5)	11,445 (5.5)
EBL	4574	5461 (19.4)	6695 (22.6)	8,064 (20.4)	10,098 (25.2)	13,802 (36.7)	19,098 (38.4)
NBBL	8579	9514 (10.9)	10548 (10.7)	12747 (20.8)	12126 (-4.9)	13015 (7.3)	9454 (-27.4)
Total	52816	54978	63525	71965	75045	87176	94543
Mean	10563	10996 (4.1)	12705 (15.5)	14393 (13.3)	15009 (4.3)	17435 (16.2)	18907 (8.4)
Private Banks							
BOK	5724	5736 (0.2)	6170 (7.6)	7742 (25.5)	8943 (15.5)	10429 (16.6)	12359 (18.5)
NABIL	15839	15371 (-0.3)	13438 (-12.6)	14098 (4.9)	14587 (3.5)	19348 (32.6)	23342 (20.6)
NIBL	4256	4175 (-1.9)	7923 (89.8)	11706 (47.7)	14255 (21.8)	18927 (32.8)	24489 (29.4)
NCC	3773	3709 (-1.7)	4294 (15.8)	5960 (38.8)	6630 (11.2)	6620 (-0.2)	6500 (-1.8)
LBL	2097	2646 (26.2)	2960 (11.9)	3778 (27.6)	4030 (6.6)	4787 (18.8)	6025 (25.9)
NIC	3576	3165 (-11.5)	3144 (-0.7)	5146 (63.7)	6243 (21.3)	8766 (40.4)	10068 (14.9)
MBL	700	995 (42.1)	1779 (78.8)	2755 (54.9)	5587 (102.8)	7893 (41.3)	9475 (20.0)
KBL	316	1180 (273.4)	2513 (113)	4817 (91.6)	6270 (30.2)	7800 (24.4)	10560 (35.4)
Total	36281	36977	42221	56002	66545	84570	99818
Mean	4535	4622 (1.9)	5278 (14.2)	7000 (32.6)	8318 (18.8)	10571 (27.1)	12477 (18)

Table 4.3 presents the trend of deposit collection of the commercial banks under study. The deposit collection of public banks is quite promising and the have dominated all other banks in this regard, much of which can be attributed to their large branch network. The joint-venture banks too are successful in increasing the volume of total deposits year after year though SCBNL had faltered in the year 2005. SCBNL witnessed its total deposit drop by 8.6 percent in the year 2005. SCBNL and HBL however are the two largest contributors of deposit collection in the joint –venture group. The private banks, though large in number, are the least contributors in total deposit accumulation. All the banks in the group have increased their yearly volume of deposits with the exception of NCC bank. The total deposit of this bank could not grow in the years 2006 and 2007. NABIL and NIBL are the two largest contributors from this group. The trend of the mean deposit of the banking groups can be better presented from the following figure:

Figure 4.1

Trend of Mean Deposits of Banks

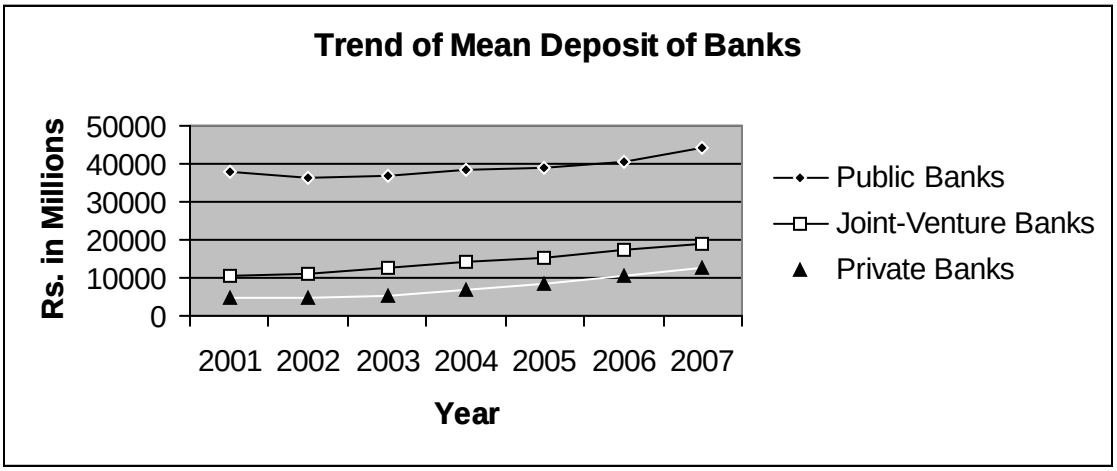

Figure 4.1 presents the trend of mean deposit of each category of commercial banks. The figure reveals that the mean deposits are in a rising trend for all the banking groups. However, it is the public banks which dominate the chart in terms of their massive deposit volume as compared to the joint venture and private banks. Joint-venture banks rank second in the volume of deposits while the private banks. Joint-venture banks rank second in the volume of deposits while the private banks are at the bottom.

4.2 Correlation Analysis

In order to examine the possible degree of multiple co linearity among the regressors, correlation matrixes of the selected variables for overall commercial banking sector, private commercial banks, joint venture commercial banks and public commercial banks are included in table 4.2**.** Correlation matrix gives a preliminary idea of the direction of the relationship between the selected variables. The variables selected for this study are- Deposit Rate (Dep Rate), Deposit Amount (Dep Amt), Loan and Advances Rate (Loan Rate), Loan and Advances Amount (Loan Amt), Investment Rate (Inv Rate), Investment Amount (Inv Amt). A study has been made to find the relationships between all of these variables. A correlation matrix has been presented below showing the correlations between each variable.

Table 4.4

Correlation Matrix For Overall Commercial Banking Sector

Overall Commercial Banks (n = 15)						
	DEPRATE	DEPAMT	LOANRATE	LOANAMT	INVRATE	INVAMT
DEP RATE	1.000000					
DEP AMT	-0.912691	1.000000				
LOAN RATE	0.979455	-0.944581	1.000000			
LOAN AMT	-0.956441	0.984378	-0.960619	1.000000		
INV RATE	0.839624	-0.848522	0.923960	-0.815455	1.000000	
INV AMT	-0.927513	0.977876	-0.971039	0.976212	-0.894041	1.000000

The above table shows the correlation relationships that exists and is maintained among the different variables in the overall commercial banking sector. As one can notice with promptness, negative correlations have been observed between Deposit Amount and Deposit rate, which is really surprising. Likewise there are high negative correlations

between Investment Rate with Investment Amount and Loan Rate with Loan Amount. The Deposit Rate has high positive relationships with Loan Rate and Investment Rate. When one looks at the Deposit Amount, there is a considerably higher relationship between it and Loan Amount and Investment Amount. One noticeable thing about this correlation matrix is that the variables are either highly positively correlated with each other or very highly negatively correlated with one another. There is almost no record of low or neutral correlations.

Table 4.5

Correlations Matrix for Private Commercial Banks

Private Commercial Banks (n = 8)						
	DEP RATE	DEP AMT	LOAN RATE	LOAN AMT	INV RATE	INV AMT
DEP RATE	1					
DEP AMT	-0.9354	1				
LOAN RATE	0.9210	-0.9683	1			
LOAN AMT	-0.9465	0.98011	-0.9411	1		
INV RATE	0.8975	-0.8997	0.8605	-0.8647	1	
INV AMT	-0.9241	0.9816	-0.9598	0.9794	-0.9172	1

The above table shows the relationship between all the variables of amounts and interest rates concerning loans, deposits and investments for private commercial banks. Again here, higher positive correlations can be seen between all of the interest rates i.e. between deposit rates, loan rates and investment rates. Another surprising observation that must be duly noted is the positive relationships between the amounts of transactions i.e. the deposit amount, loan amount and the investment amount. Highly negative correlations have been noted for investment rates and investment amount, deposit rate and deposit amount, loan rate and loan amount.

Table 4.6
Correlation Matrix for Joint-Venture Commercial Banks

Joint Venture Commercial Banks (n = 5)						
	DEP RATE	DEP AMT	LOAN RATE	LOAN AMT	INV RATE	INV AMT
DEP RATE	1					
DEP AMT	-0.9354	1				
LOAN RATE	0.9210	-0.9683	1			
LOAN AMT	-0.9465	0.9801	-0.9411	1		
INV RATE	0.8975	-0.8997	0.8605	-0.8647	1	
INV AMT	-0.8949	0.9658	-0.9083	0.9591	-0.9422	1

The above table show the correlations between different variables for the joint venture banks and their positive and negative relationships. As one can note, there is a high correlation for the deposit rate with the investment rate and the loan rate. This shows that one rate impacts the other rates and the fluctuation of one makes the other follow suit. On the other hand there is also a significant positive relationship between the deposit amounts, the loan amount and the investment amount.

This means that when one of these amounts fluctuates, it greatly affects the other. There are negative correlations between the loan rate and the loan amount, deposit rate and the deposit amount, and finally investment rate and the investment amount. Negative correlations can also be noted between the loan amount and the deposit rate, deposit rate and the investment amount, loan rate and investment amount.

Table 4.7
Correlation Matrix For Public Commercial banks

Public Commercial Banks (n = 2)						
	DEP RATE	DEP AMT	LOAN RATE	LOAN AMT	INV RATE	INV AMT
DEP RATE	1					
DEP AMT	-0.7421	1				
LOAN RATE	0.9385	-0.6189	1			
LOAN AMT	0.7962	-0.8642	0.7833	1		
INV RATE	0.8175	-0.6914	0.8740	0.9242	1	
INV AMT	-0.8224	0.8904	-0.8013	-0.8901	-0.7452	1

The above table is a representation for the relationships between the different variables of Public Commercial Banks in terms of their correlations. The correlations between the deposit rate, deposit amount, loan rate, loan amount, investment rate, investment amounts are shown here. Here, there is a negative correlation between the loan rate and the loan amount, investment rate and the investment amount, and finally the deposits and the deposit rates.

It should also be factly noted that the rates of the interests i.e. loan rate of interest, deposit rate of interest and investment rate of interest are highly positively correlated. The same is the case for the amount of deposits, the amount of loans and advances taken and the amount of investment made. Another observations are that these variables are either very highly positively correlated or very highly negatively correlated. The numbers of variables that are not correlated or very slightly correlated are very few and far between.

4.3 Regression Analysis

The correlations of the selected variables have been computed and analysed in the previous pages. Now, the regression analysis and estimations are done. Firstly the simple regressions have been made followed by multiple regressions, which follow up later.

4.3.1 Estimation of Simple Regression Results

Estimated Relationship Between Interest Rates and Fundamental Variables

The results are based on pooled cross sectional data of 15 commercial banks of Nepal for the period of 2001 AD to 2007 AD by using simple regression equation.
The three regression models are presented as

DEP AMT = a + B1 (DEP RATE) + E …….(1)
LOAN AMT = a+B2 (LOAN RATE) +E …….(2)
INV AMT = a+B3 (INV RATE) + E …….(3)
LOAN RATE = a + B1 (DEP RATE) + E…..…….(4)
INV RATE = a + B2 (DEP RATE) + E……..…….(5)

In illustrating the simple regression models, the equations have been split into two tables. The first table show the regression values for models 1, 2 and 3. The second table show the regression values for models 4 and 5.

The next aspect of the study is devoted to analysing how the funds are related to the fundamental variables. The simple regression analysis has been carried out firstly for all each group and also for overall commercial banks. Here all the amounts of funds, namely the deposit amount, the loan amount and the investments amount have been denoted as dependent variables.

Table 4.8

Regressions of Deposit Amount, Loan Amount and the Investment Amount on Deposit Rate, Loan Rate and the Investment Rate Respectively

Sectors	Independent Variable	Constant (a)	Regression Coefficient	R^2	SEE	F
Overall Banks (n = 105)	Dep Rate	393597.6 (10.501)	-49108.26* (-4.994)	0.833005	20624.31	24.94093
	Loan Rate	424349.8 (11.204)	-28269.52* (-7.730)	0.922790	8098.446	59.75809
	Inv Rate	192628.5 (6.169)	-22797.28* (-4.462)	0.799309	11303.67	19.91386
Private Banks (n=56)	Dep Rate	171906.4 (7.191)	-27635.34* (-4.734)	0.817586	11929.07	22.41013
	Loan Rate	290591.1 (7.670)	-23242.00* (-6.497)	0.894106	7578.789	42.21684
	Inv Rate	57404.40 (6.700)	-7217.195* (-5.149)	0.841341	3101.305	26.51405
Joint Venture Banks (n=35)	Dep Rate	134120.3 (12.371)	-17446.70* (-5.916)	0.875000	6073.818	35.00001
	Loan Rate	140881.0 (8.811)	-9842.084* (-6.226)	0.885744	3576.221	38.76137
	Inv Rate	81098.60 (8.557)	-9748.019* (-6.287)	0.887707	3430.728	39.52650
Public Banks (n=14)	Dep Rate	93635.63 (14.676)	-4366.550 (-2.475)	0.550646	3961.143	6.127076
	Loan Rate	14963.48 (1.363)	3123.221* (2.818)	0.613612	3038.850	7.940351
	Inv Rate	54125.49 (3.793)	-5832.067 (-2.498)	0.555257	5164.867	6.242446

Notes: 1. Figures in parentheses are t – values.
2. The sign * denotes that the results are significant at 5 percent level of significance

In the first model, the dependent variable is deposit amount and the independent variable is the deposit rate. In all four groups, the regression coefficients are negative. The R2 for all the groups too are all very high which means that the DEP RATE explains most of the variations in the DEP AMT.

In the second model, the dependent variable is the loan amount and the independent variable is the loan rate. The regression coefficients of all the groups are mostly negative.

The R2 for all the groups too are high meaning the LOAN RATE explains most of the variations in the LOAN AMOUNT.

In model three, the investment rate is taken as the independent variable and the dependent variable is considered to be the investment amount. Here the regression coefficients too are all negative. Here, the INV RATE accounts for most variations in the INV AMT.

Table 4.9

Regressions of Loan Rate and Investments Rate on the Deposit Rate

Sectors	Dependent Variable	Independent Variable	Constant (a)	Regression Coefficient	R^2	SEE	F
Overall Banks (n = 105)	Loan Rate	Dep Rate	6.466943 (17.81623)	1.034153* (10.86037)	0.959332	0.199720	117.9477
	Inv Rate	Dep Rate	2.752367 (2.817615)	0.885764* (3.456496)*	0.704969	0.537481	11.94737
Private Banks (n=56)	Loan Rate	Dep Rate	6.486165 (16.15733)	1.013387* (10.33720)	0.955300	0.200326	106.8577
	Inv Rate	Dep Rate	2.597091 (2.154954)	0.859871* (2.921661)	0.630618	0.601405	8.536106
Joint Venture Banks (n=35)	Loan Rate	Dep Rate	6.443885 (9.161606)	1.011642* (5.287527)	0.848291	0.394055	27.95794
	Inv Rate	Dep Rate	2.590878 (3.325770)	0.964169* (4.549883)	0.805458	0.436451	20.70144
Public Banks (n=14)	Loan Rate	Dep Rate	5.818284 (8.534965)	1.145958* (6.079789)	0.880850	0.423242	36.96383
	Inv Rate	Dep Rate	3.222861 (3.511200)	0.805566* (3.174154)	0.668331	0.569878	10.07525

Notes: 1. Figures in parentheses are t – values.
2. The sign * denotes that the results are significant at 5 percent level of significance

In the above table, looking at the overall banking group, the regression coefficients are all positive. This means that when the interest rates of deposits (DEP RATE) increases, there is an increase in the dependent variables which are the investment rates (INV RATE) and the interest for loans (LOAN RATE) and vice versa. Likewise, viewing the private banks group, the public banks group and the joint venture group, the beta coefficients for all of them is also positive. This means that the deposit rates too have a positive effect on their investment rates and the loans & advances rate of interest.

The R-square for most of the groups too are quite high meaning most of the variations in the investment rates (INV RATE) and the loans & advances rates (LOAN RATE) are caused by the changes in the interest rates for deposits (DEP RATE).

4.3.2 Estimation of Multiple Regression Results

After examining the correlation and simple regression analysis among the selected variables, the multiple regression analysis has been undertaken for the purpose of investigating the causality between the dependent and the independent variables. The multiple regressions open up several additional options to enrich analysis and make modelling more realistic compared to the simple regression.

The models are

1. DEP AMT = $a + B_1$DEP RATE + B_2 INV RATE + B_3 LOAN RATE + E
2. LOAN RATE = $a + B_1$INV RATE + B_2DEP RATE + E
3. CREDIT = $a + B_1$INV RATE + B_2 LOAN RATE + E

The table presents the regression results for each banking group and for overall banks. If one takes a look at the relationships between the different variables in model I, very contrasting outcomes have been found out between the joint venture, private and public banks. Notice how all the beta coefficients for the private banks and the joint-venture banks are negative which can only mean that when the interest rates for the deposit, loans and investment decreases, the source of money in the bank or the deposit amount increases.

Table 4.10

Estimated Relationship Between the Deposit Amount, Loan Rate, Credit And Their Fundamental Variables

Sectors	Model	Constant (a)	Regression Coefficient Of			R^2	SEE	F
			Dep Rate	Loan Rate	Inv Rate			
Overall Banks (n = 105)	1	1536789 (2.995)	109312.1 (1.587)	-200070.6 (-2.160)	54736.14 (1.590)	0.944	15473.19	16.73
	2	5.518438 (22.599)	0.728906* (9.943)		0.344614* (-1.484)	0.994	0.083519	349.53
	3	786692.9 (9.795)		-66921.95* (-4.392)	15070.42 (0.988)	0.954	12905.59	41.86
Private Commercial Banks (n = 56)	1	314927.9 (1.013)	-3884.872 (-0.091)	-20811.34 (-0.389)	-3094.094 (-0.174)	0.861	13454.93	6.18
	2	5.770368 (16.485)	0.776394* (7.667)		0.275615* (2.947)	0.986	0.125774	139.88
	3	383400.0 (5.971)		-30078.98* (-2.858)	-1138.936 (-0.113)	0.908	10488.51	19.78
Joint-Venture Banks (n = 35)	1	215130.3 (6.147)	-2847.897 (-0.423)	-11214.97 (-2.112)	-3374.171 (-0.704)	0.957	4587.448	22.37
	2	5.982850 (4.330)	0.840072 (1.767)		0.177946 (0.402)	0.854	0.431925	11.716
	3	234575.6 (7.183)		-11745.47 (-2.057)	-8660.092 (-1.484)	0.918	6580.775	22.51
Public Banks (n = 14)	1	71545.42 (2.675)	-8050.831 (-1.498)	5958.445 (1.142)	-3902.653 (-1.007)	0.702	4164.781	2.36
	2	4.533152 (3.787)	0.824734 (2.672)		0.398755 (1.273)	0.915	0.399210	21.58
	3	86756.05 (7.426)		-4426.040 (-1.870)	3527.402 (1.203)	0.517	3153.213	2.14

Notes: 1. Figures in parentheses are t-values.

2. The sign * denotes that the results are significant at 5 percent level of significance.

3. "n" denotes the number of observations.

Contrarily, in public banks, the beta coefficients for the loan rate of interest are positive in relationship with the deposits. This means for the public banks the increase in interest rate on loan increases the deposits in banks. On the overall commercial banking sector, it is clear that the DEP RATE and the INV RATE has a positive relationship with the DEP AMT while the LOAN RATE is negative effect. This means overall, the interest increase

in deposit rate and the investment rate results in the increase in the deposit amount in the bank.

Taking a look at model II, the one can also clearly see that the overall, there is a positive beta coefficients for the DEP RATE and the INV RATE. This means that if the interest rates on the deposits and investments increase, the interest on loans also increases. This is likewise in the sub-categories joint-venture banks, public banks and the private banks. Unlike the previous model, which had contrasting beta coefficients, here they are similar in all groups and categories.

Now, Model lII is analysed next. In the joint-venture group and the private banks group, the beta coefficients for both the LOAN RATE and the INV RATE are negative, which means higher the interest rate of investments and loans/advances, lower will be the credit given out. on the other hand, in the overall sector and the public banks, the beta coefficients of the LOAN RATE are negative but the INV RATE is positive. This means, higher the rate of investments, higher will be the credits flowed out.

4.4 Analysis of Deposit Interest Rates and Their Segregation

Table 4.11
The Interest Rate Structure on the Deposits of the Overall Banking Sector

Overall Commercial Banking Sector								
Year	2001	2002	2003	2004	2005	2006	2007	Mean
Saving	5.27	5.05	4.82	3.40	3.37	3.13	2.83	3.98
Special Saving	-	-	-	-	-	3.86	3.66	3.76
7 Days	3.75	2.63	2.60	2.5	1.38	1.38	1.38	2.23
14 Days	3.23	3.07	2.94	2.56	2.32	2.11	2.00	2.60
1 Month	3.88	3.68	3.45	2.98	2.81	2.53	2.20	3.08
2 Month	-	-	-	-	1.50	1.50	2.13	1.71
3 Month	4.73	4.32	4.10	3.34	3.21	2.98	2.78	3.64
6 Month	5.38	4.92	4.70	3.95	3.69	3.48	3.18	4.19
1 Year	6.58	6.05	5.68	4.45	4.28	4.10	3.78	4.99
2 Year	6.89	6.42	6.07	4.88	4.85	4.61	4.16	5.41
Mean	4.96	4.52	4.29	3.51	3.04	2.97	2.81	-

Source: Various Banking & Financial Statistics (NRB)

The above table shows the deposit interest rates for overall commercial banking sector. The table also tries to depict the saving interest rates and the fixed interest rates of the total commercial banking sector. As one can observe, the deposit interest rates for the earlier years i.e. 2001, 2002, 2003 are much higher and fall in the region above 4.00. this has dramatically decreased in the later years mainly in the years starting from 2004. This may be mainly due to the competitions that are prevalent in the commercial banking sector regarding deposits.

Table 4.12
Interest Rate Structure on Deposits of Private Commercial Banking Sector

Private Commercial Banking Sector								
Year	2001	2002	2003	2004	2005	2006	2007	Mean
Saving	5.46	5.41	5.16	4.08	3.75	3.44	3.28	4.37
Special Saving	-	-	-	-	-	-	-	-
7 Days	3.75	2.63	2.60	2.50	1.38	1.38	1.38	2.23
14 Days	3.71	3.32	3.21	2.93	2.45	2.40	2.13	2.88
1 Month	4.07	3.88	3.66	3.25	2.73	2.55	2.38	3.22
2 Month	-	-	-	-	-	-	-	
3 Month	4.97	4.59	4.41	3.86	3.30	3.14	3.05	3.90
6 Month	5.59	5.13	4.94	4.31	3.84	3.75	3.45	4.43
1 Year	6.66	6.25	5.88	5.09	4.43	4.38	4.07	5.25
2 Year	7.05	6.70	6.28	5.45	4.91	4.96	4.53	5.70
Mean	5.16	4.86	4.52	3.93	3.22	3.34	3.12	-

Source: Various Banking & Financial Statistics (NRB)

The above table shows the interest rate structure on deposits of the private commercial banks. Here too, like in the overall sector, the interest rates are relatively higher in the earlier years in comparison to the later years. This again may be due to the competition that exists among the commercial banks as they seek to attract and capture customers and funds. A total absence in special saving and on the two-month deposits rate must be taken under consideration here. The fixed interest rates for deposits for a year or more are considerably higher than the interest rates for short-term deposits.

Table 4.13
Interest Rate Structures on Deposits of Joint-Venture Banks

Joint-Venture Commercial Banking Sector								
Year	2001	2002	2003	2004	2005	2006	2007	Mean
Saving	4.8	4.50	4.30	2.72	3.20	3.00	2.45	3.57
Special Saving	-	-	-	-	-	3.21	3.21	3.21
7 Days	-	-	-	-	-	-	-	
14 Days	2.50	2.64	2.45	1.67	2.10	1.38	1.75	2.07
1 Month	3.63	3.41	3.16	2.63	2.91	2.44	2.10	2.90
2 Month	-	-	-	-	1.50	1.50	2.13	1.71
3 Month	4.45	4.00	3.75	2.75	3.30	2.85	2.55	3.38
6 Month	5.10	4.70	4.50	3.56	3.80	3.30	3.00	3.99
1 Year	6.35	5.75	5.35	3.65	4.35	3.85	3.55	4.69
2 Year	6.53	6.03	5.75	3.95	4.75	4.05	3.70	4.97
Mean	4.76	4.43	4.18	2.99	3.24	2.84	2.71	-

Source: Various Banking & Financial Statistics (NRB)

The table above shows the structures of interest rates from the year 2001 to the year 2007 for the total joint venture banks in the country. Here, the interest has been seen having a significant decline which projects that joint venture banks too have competitions enabling them to lower the rates. Special saving has received a late attention and provisions have commenced in it from the year 2005. Another issue not to be missed is the absence of the 7-day deposits.

Table 4.14
Interest Rates Structures on Deposits in Public Commercial Banks

Public Commercial Banking Sector								
Year	2001	2002	2003	2004	2005	2006	2007	Mean
Saving	5.75	5.00	4.75	2.38	2.25	2.25	2.00	3.48
Special Saving	-	-	-	-	-	-	-	-
7 Days	2.00	2.00	2.00	-	-	-	-	2
14 Days	2.50	-	-	-	-	-	-	2.5
1 Month	3.50	3.50	3.25	2.50	2.75	2.75	2.00	2.89
2 Month	-	-	-	-	-	-	-	-
3 Month	4.50	4.00	3.75	3.00	2.63	2.63	2.25	3.25
6 Month	5.25	4.63	4.25	3.25	2.88	2.88	2.50	3.66
1 Year	6.88	6.00	5.75	3.88	3.50	3.56	3.19	4.68
2 Year	7.19	6.25	6.00	-	-	-	3.50	5.74
Mean	4.70	4.48	4.25	3.00	2.80	2.81	2.57	-

Source: Various Banking & Financial Statistics (NRB)

The above figures and table shows the comparison between different rates of interests on the saving structures and the fixed interest rates structure. Public sector banks of Nepal typical in their lateness in opening new vistas have yet to open schemes involving Special Savings and 2 month deposits. Also, their interest rates structures on the 7 day and 14 day deposits have been swiped off in the recent years and they have inconsistencies on the 2-year fixed deposits. In comparison to the other banks such as private banks and joint

venture banks, public banks have lower interest rates and have major inconsistencies when offering their interest rates.

4.5 Analysis of Loans and Advances Interest Rates and Their Segregation

Table 4.15
Interest Rate Structures on Loans & Advances of Overall Commercial Banks

Overall Commercial Banking Sector (in %)								
	2001	2002	2003	2004	2005	2006	2007	Mean
Overdraft	12.96	12.83	12.13	11.13	11.14	10.63	10.01	11.55
Export Credit	10.37	10.13	9.98	9.45	9.06	8.81	8.49	9.47
Import L/C	11.63	11.06	10.26	9.89	9.74	9.10	8.53	10.03
Against FDR	8.68	8.00	7.86	6.62	6.74	6.22	6.29	7.20
Against HMG Bond	9.32	8.68	8.32	7.55	7.45	7.06	6.96	7.91
Against BG/CG	10.85	10.39	10.03	9.37	8.90	8.43	8.16	9.45
Against other Guarantee	10.19	10.25	10.14	10.06	9.63	9.13	9.21	9.80
Industrial Loan	12.25	11.95	11.81	11.18	11.31	11.03	11.03	11.51
Commercial Loan	12.88	12.31	12.12	11.53	11.33	10.83	11.25	11.75
Priority Sector	13.58	13.17	12.30	12.01	11.60	10.88	10.61	12.02
Deprived Sector	10.13	9.50	9.17	8.85	8.38	7.80	7.57	8.77
Term Loan	13.48	13.13	12.52	11.87	12.02	11.32	10.80	12.16
Working Capital	12.99	12.34	11.55	11.09	11.32	10.53	10.55	11.48
Hire Purchase	13.77	13.10	11.90	10.86	10.79	9.66	9.63	11.39
Others	12.11	12.21	11.08	10.57	10.04	9.55	9.15	10.67
Mean	11.68	11.13	10.74	10.13	9.96	9.40	9.22	10.32

Source: Various Banking & Financial Statistics (NRB)

The above table shows the loans and advances interest rates for the overall commercial banking sector. The interest rates for the loans and advances can be segregated into many different types with each type having a different interest rate. In the above table too, the overall interest rates can be seen as decreasing by looking at the interest rate means. An 11 percent interest rate in 2001 has decreased to about 9 percent in 2007. Here for the overall commercial banks, the term loan interest rates are the costliest. The cheapest loans are provide against the FDR or against the fixed deposit rates.

Table 4.16
Interest Rate Structures on Loans & Advances of Private Commercial Banks

Private Commercial Banking Sector (in %)								
	2001	2002	2003	2004	2005	2006	2007	Mean
Overdraft	12.88	12.96	12.36	11.56	11.94	11.34	11.23	12.04
Export Credit	10.56	10.42	10.38	9.63	9.30	8.55	8.31	9.59
Import L/C	11.80	11.23	10.39	10.09	9.67	9.38	9.00	10.22
Against FDR	8.74	8.35	8.17	7.50	7.39	6.83	6.88	7.69
Against HMG Bond	9.28	8.94	8.31	8.00	7.46	7.48	7.48	8.14
Against BG/CG	10.78	10.29	10.06	9.41	8.92	8.54	8.32	9.47
Against other Guarantee	10.00	10.33	9.60	9.33	8.75	8.67	8.56	9.32
Industrial Loan	12.67	12.60	12.04	11.46	11.63	11.63	11.63	11.95
Commercial Loan	12.92	13.00	12.35	12.021	12.06	11.69	11.69	12.25
Priority Sector	13.71	13.43	12.44	12.63	11.57	10.79	10.58	12.16
Deprived Sector	10.34	9.14	9.00	8.88	7.91	7.84	7.75	8.69
Term Loan	13.50	13.10	12.46	12.11	12.00	11.69	11.47	12.33
Working Capital	13.09	12.45	11.89	11.43	11.39	10.89	10.93	11.72
Hire Purchase	13.96	13.38	12.18	11.215	10.97	10.03	10.06	11.69
Others	12.77	13.23	11.06	11.34	10.06	9.88	9.77	11.16
Mean	11.78	11.52	10.85	10.46	10.06	9.68	9.58	10.56

Source: Various Banking & Financial Statistics (NRB)

The loans and advances rate of interest of the total private commercial banks have been shown above with segregations of the rates into various ones. The mean rate of loan interest has been decreasing year by year at a steady rate just like other sectors. The deprived sector loan rates come to prominence if you observe the decrement. In the private commercial banks, the costliest interest rates are for the term loans whose average falls to be about 12.33%. The cheapest loans are provided for the deprived sector or the poor sector.

Table 4.17
Interest Rate Structures on Loans & Advances of Joint-Venture Commercial Banks

Joint-Venture Commercial Banking Sector (in %)								
	2001	2002	2003	2004	2005	2006	2007	Mean
Overdraft	13.31	12.88	12.47	10.20	10.25	9.44	8.10	10.95
Export Credit	10.15	9.80	9.45	9.20	8.65	9.20	8.68	9.30
Import L/C	11.34	10.91	10.53	9.581	10.29	8.73	8.08	9.92
Against FDR	8.49	7.59	7.50	5.70	6.47	5.59	5.72	6.72
Against HMG Bond	8.80	8.35	8.35	7.05	7.70	6.50	6.60	7.62
Against BG/CG	11.20	10.80	10.40	9.50	9.35	9.55	8.10	9.84
Against other Guarantee	10.13	10.13	11.50	12.25	11.38	10.50	10.50	10.91
Industrial Loan	12.05	11.58	11.63	10.58	11.00	10.44	10.44	11.10
Commercial Loan	12.40	11.90	11.80	10.78	10.59	9.97	10.38	11.12
Priority Sector	13.25	12.69	12.56	11.47	11.69	11.13	10.08	11.84
Deprived Sector	10.10	9.90	9.80	9.05	9.30	7.68	7.10	8.99
Term Loan	13.45	13.15	12.60	11.53	12.31	10.66	9.70	11.91
Working Capital	12.31	12.38	11.58	10.63	11.58	9.50	9.50	11.07
Hire Purchase	13.38	12.70	11.95	10.30	10.55	8.90	8.75	10.93
Others	11.33	11.28	11.18	9.60	10.23	9.05	8.83	10.21
Mean	10.85	11.07	10.89	9.83	10.09	9.12	8.70	10.08

Source: Various Banking & Financial Statistics (NRB)

The loans and advances of different categories with their respective interest rates have been shown in the table above. The table above shows the loans and advances rate of interest for the joint venture banks from the year 2001 to the year 2007. Setting aside the year 2004, the mean interest rates for these banks have been decreasing too just like other banks such as the private banks and the public banks. The deprived sector loans have the cheapest interest rates in the joint venture banking sector. The costliest category of loans here fall under the term loan category.

Table 4.18
Interest Rate Structures on Loans & Advances of Public Commercial Banks

Public Commercial Banking Sector (in %)								
	2001	2002	2003	2004	2005	2006	2007	Mean
Overdraft	12.50	12.25	10.63	10.88	10.5	10.50	10.50	11.11
Export Credit	10.13	9.75	9.75	9.25	9.25	9.00	9.00	9.45
Import L/C	12.50	11.00	10.00	9.75	8.50	8.50	8.00	9.75
Against FDR	8.91	7.88	7.50	5.38	5.00	5.06	5.06	6.40
Against HMG Bond	10.75	8.50	8.25	7.00	6.75	6.75	5.75	7.68
Against BG/CG	10.25	9.75	9.00	8.88	7.75	7.75	7.75	8.73
Against other Guarantee	10.50	-	-	-	-	-	-	10.5
Industrial Loan	12.13	11.25	11.56	11.25	-	-	-	11.55
Commercial Loan	14.00	11.63	12.25	-	-	-	-	12.63
Priority Sector	13.75	13.25	11.25	11.25	11.50	10.75	11.50	11.89
Deprived Sector	10.50	9.75	8.25	8.25	8.00	8.00	8.00	8.68
Term Loan	-	-	-	-	11.00	11.0	11.00	11
Working Capital	14.00	11.81	10.31	10.38	10.00	10.0	10.00	10.93
Hire Purchase	14.00	13.25	10.81	10.88	10.50	10.5	10.50	11.49
Others	11.75	10.5	10.88	9.88	9.50	9.50	9.50	10.22
Mean	11.83	10.81	10.03	9.42	9.02	8.94	8.88	9.85

Source: Various Banking & Financial Statistics (NRB)

The public sector banks have been giving out loans and advances of different types, which can be seen in the table above. The term loans have become a late addition to the schemes of the public banks commencing only from 2005, while other type of loans such as guarantees, industrial loans and commercial loans have been taken out by the public banks. This might be because of the inconsistencies in effectively running the enterprise and losing the ever-inevitable battle against private banks of Nepal. The costliest interest rates are of the commercial loans with about 12.63%. the cheapest interest rates fall under the category of deprived sector with about 8.68%.

4.6 Analysis of Different Ratios

Table 4.19

Table Showing the Loan To Deposit Ratio, Investment to Deposit Ratio, Average Interest on Credit and the Total Credit to Deposit

Category	2001	2002	2003	2004	2005	2006	2007	Mean
Loan to Deposit (LTD)								
Public Banks	0.664	0.678	0.642	0.600	0.607	0.492	0.441	0.589
Joint Venture Banks	0.560	0.587	0.558	0.580	0.620	0.611	0.560	0.582
Private Banks	0.642	0.661	0.742	0.711	0.806	0.761	0.768	0.727
Overall	0.626	0.644	0.636	0.623	0.672	0.623	0.598	0.632
Investment to Deposit (ITD)								
Public Banks	0.164	0.155	0.216	0.185	0.287	0.323	0.327	0.237
Joint Venture Banks	0.162	0.274	0.307	0.295	0.030	0.393	0.357	0.260
Private Banks	0.123	0.210	0.231	0.249	0.223	0.243	0.239	0.217
Overall	0.154	0.207	0.252	0.241	0.271	0.320	0.306	0.250
Avg. Interest on Credit (AIC)								
Public Banks (%)	9.68	8.73	8.1	7.5	7.71	7.03	6.93	7.95
Joint Venture Banks (%)	9.19	8.86	8.53	7.7	8.25	7.12	6.84	8.07
Private Banks (%)	9.65	9.08	8.51	8.015	8.23	7.4	7.23	8.30
Overall (%)	9.6	8.89	8.45	7.85	8.18	7.26	7.1	8.19
Total Credit to Deposit (CTD)								
Public Banks	0.828	0.833	0.858	0.784	0.893	0.815	0.384	0.771
Joint Venture Banks	0.722	0.861	0.865	0.875	0.650	1.004	0.917	0.842
Private Banks	0.766	0.766	0.973	0.960	1.028	1.005	1.007	0.929
Overall	0.780	0.851	0.887	0.864	0.942	0.944	0.903	0.753

Table 4.19 shows the different ratios of between the variables from the year 2001 to the year 2007. in the observations of the LTD ratios, the private banks are doing the best with

a utilisation of 72.7% of the deposits towards loans. The LTD of the joint venture banks fare the worst here because they have the least utilisation of the deposits towards loans.

Interestingly, joint venture banks are doing quite well in terms of investments to deposit ratios (ITD). 26% of the funds generated from the deposits are geared towards investments. Public banks suffer the worst in terms of the ITD with only 23.7% of the deposits invested.

In observing the ratio of total credit to deposits ratio (CTD), again private banks seem to do well with a total mobilisation of 92.9 % of the deposits in creating credits. Here again the public banks have shown a dismal performance with only 77.1% mobilisation of deposits towards credit.

4.7 Analysis of Interest Rate Spread of Commercial Banks

The interest rate spread is the difference in the interest rate between the lending rate and the deposit rate. The interest rate can be calculated as follow: (rupees of interest earned divided by the Rupees amount of interest earning assets) minus (Rupees of interest paid divided by the rupees amount of interest costing liabilities.)

The following table below clearly states the spread of interest rates in all the commercial banks in Nepal. The spread has been shown above from the years 2001 all the way to the year 2007 along with each respective spread increase or decrease in percentage change. If one can observe more closely, the spread rates of most of Nepalese banks have been on the fluctuations year by year between 2001 to 2007. All the commercial banks, which include Joint-Venture banks, Private banks and Public banks have this surprising trend that lead to believe that most banks are rather inconsistent in fixing their interest rates. Of course these interest rates depend a lot on different forces but it is clearly noticeable that the banks do not hesitate to put up a different rate and adjust them form time to time.

Table 4.20

Interest Rate Spread of the commercial banks as a whole

	2001	2002	2003	2004	2005	2006	2007	Mean
Private Banks								
Nabil	5.61	5.21 (-7.1)	4.96 (-4.8)	5.03 (1.4)	5.91 (17.5)	4.92 (-16.8)	4.55 (-7.5)	5.17
NIB	6.17	6.35 (2.9)	5.51 (-13.2)	4.50 (-18.3)	5.65 (25.6)	5.21 (-7.8)	6.25 (20)	5.66
BoK	6.59	6.35 (-3.6)	5.34 (-15.9)	5.32 (-0.4)	5.90 (10.9)	5.40 (-8.5)	5.95 (10.2)	5.84
NC&CB	6.77	6.01 (-11.2)	6.42 (6.8)	6.29 (-2.0)	6.30 (0.2)	5.96 (-5.4)	5.36 (-10.1)	6.16
NI &CB Ltd.	5.48	6.07 (10.8)	4.33 (-28.7)	4.55 (5.1)	4.67 (2.6)	4.18 (-10.5)	4.80 (14.8)	4.87
LBL	4.66	4.57 (-1.9)	6.12 (33.9)	5.20 (-15.0)	4.57 (-12.1)	4.75 (3.9)	4.68 (-1.5)	4.94
KBL	6.13	5.84 (-4.7)	5.37 (-8.0)	5.95 (10.8)	7.33 (23.1)	5.74 (-21.7)	6.05 (5.4)	6.06
MBL	4.79	6.21 (29.6)	5.96 (-4.2)	5.91 (-0.8)	5.29 (-10.5)	3.94 (-2.5)	3.95 (0.3)	5.15
Mean	5.78	5.83 (0.9)	5.50 (-5.7)	5.34 (-2.9)	5.70 (6.7)	5.01 (-12.1)	5.20 (3.8)	5.48
Joint-Venture Banks								
EBL	4.89	4.33 (-11.5)	4.93 (13.9)	5.28 (7.1)	5.12 (-3.0)	3.65 (-28.7)	4.09 (12.1)	4.61
NSBIB	5.21	5.67 (8.8)	5.03 (-11.3)	4.75 (-5.6)	5.16 (8.6)	4.37 (-15.3)	4.50 (3.0)	4.96
SCBL	6.08	5.27 (-13.3)	4.92 (-6.6)	5.31 (7.9)	6.29 (18.5)	4.90 (-22.1)	4.87 (-0.6)	5.38
NBBL	6.26	6.02 (-3.8)	5.48 (-9.0)	5.00 (-8.8)	3.34 (-33.2)	3.86 (15.6)	5.33 (38.1)	5.04
HBL	5.96	5.92 (-0.7)	5.47 (-7.6)	5.84 (6.7)	5.44 (-6.8)	4.79 (-11.9)	4.05 (-15.4)	5.34
Mean	5.68	5.44 (-4.2)	5.17 (-5.0)	5.24 (1.4)	5.07 (-3.2)	4.31 (-15)	4.57 (6.0)	5.07
Public Banks								
NBL	6.17	5.34 (-13.5)	3.02 (-43.4)	4.46 (47.7)	4.42 (-0.9)	3.56 (-19.5)	3.95 (11)	4.42
RBB	5.03	4.99 (-0.8)	4.80 (-3.8)	6.33 (31.9)	6.01 (-5.1)	5.29 (-12)	4.78 (-9.6)	5.32
Mean	5.6	5.17 (-7.7)	3.91 (-24.4)	5.40 (38.1)	5.22 (-3.3)	4.43 (-15.1)	4.37 (-1.4)	4.87
Overall Mean	5.72	5.61 (-1.9)	5.18 (-7.7)	5.31 (2.5)	5.43 (2.3)	4.70 (-13.4)	4.88 (3.8)	5.26

Another point to be duly noted is the fact that in some of these interest spreads changes are quite subtle with the percentage change very low. On the other hand, some of these other percentage changes go as high up as a massive 38 percent. It shows that the Nepalese market is cruising in a volatile environment with banks adjusting their rates every so often. The spread increments between these banks do not seem to be correlated too. Some banks have increased spreads while other banks experience decreased spread in the same year.

4.8 Analysis of Interest Rate Structure on Investments

Table 4.21

Interest Rate Structure on Investment of commercial banks as on Mid-July

Deposit	2001	2002	2003	2004	2005	2006	2007
A. Investments: - Treasury Bills	4.94	3.78	2.98	1.47	3.94	3.25	2.77
- National Saving Certificate	10.875	10.625	10.00	9.75	9.75	7.25	7.25
- Development Bonds	6.75	5.5	5.5	5.5	5.5	4.875	4.875
B. Share & Debenture	-	-	-	-	-	-	-
C. NRB Bond	-	-	-	-	-	-	-
Mean Average of All Investments	7.52	6.64	6.16	5.57	6.40	5.125	4.97
Standard Deviation (∃)	0.8363						

Sources: Nepal Rastra Bank Quarterly Economic Bulletin Mid-July 2007

Note: Calculations of mean and standard deviations are done in annex

The above table shows the rates at which the commercial banks of Nepal have invested their funds or mobilised their funds in the following categories. The investments here are done in the treasury bills of the government, national saving certificates and the Nepal Rastra Bank (NRB) bonds.

CHAPTER 5
SUMMARY, CONCLUSION AND RECOMMENDATIONS

Finally, the research studies have come to the very end. This chapter includes the summary of the previous chapters and the conclusions drawn from the analysis of the research. Based on the summary and conclusions, the recommendations are suggested with a hope of improving the existing situations of the interest rate structure of the commercial bank of Nepal so that the banks can mobilise their deposits more smoothly and properly in the near future.

5.1 Summary:

There are various factors, which contribute in the acceleration of economic development of a country. Such factor varies from nation to nation. For underdeveloped countries like Nepal, country's economy, sound and co-ordinated fiscal and monetary policies play an important role.

The main and dependable factor is proper refinancing of resources through which development of a country's economy is possible. Commercial banks play an important role in capital formation. Scattered and unused financial resources hold no meaning unless it is mobilised and utilised effectively in some productive work, such as industry, trade, commerce and agriculture etc. many developing countries have achieved the status of developed countries with proper mobilisation of financial resources. In this connection, after adoption of globalisation policy of Nepal, various banks and financial institutions came into existence with a hope to play an important role in the development of financial system of the country.

This study covers fifteen commercial banks in the banking industry of Nepal, viz., Nepal Investment Bank Ltd. (NIBL), Nepal Credit & Commerce Bank (NCC), Nepal Bank Ltd. (NBL), Nabil Bank Ltd. (NABIL), Machhapuchhre Bank Ltd. (MBL), Lumbini Bank Ltd. (LBL), Kumari Bank Ltd. KBL), Himalayan Bank Ltd. (HBL), Everest Bank Ltd. (EBL), Bank of Kathmandu (BOK), Rastriya Banijya Bank Ltd. (RBB), Nepal SBI Bank Ltd. (NSBI), Standard Chartered Bank Ltd. (SCBL), Nepal Industrial & Commercial Bank Ltd. (NIC)

For the purpose of the study, the necessary data on interest, deposit mobilisation and other related variables were collected for the period 2001-2007. The financial statements mainly the Sources and Funds Accounts of banks, interest rate structures in the annual report of each bank provide the data required for completing this study.

Deposits are the obligation of commercial banks. So, commercial banks must allocate funds in different loans and advances and investments. The purpose of this study is to know whether the accumulated funds of all the commercial banks have been properly utilised. Besides this role, the interest rate is the most important variable of financial literature. This study has focused on the structure of interest rate, which has interrelationship between deposit and credit. The proper interest rate provided and charged on deposits and lending activities affects the profit positions of commercial banks and even attracts the depositors and the borrowers to deposit and borrow. The various theories and factors that affect the funds collections, mobilisation and impact of interest rate have been studied in the previous chapter.

With the impact of such theories and economic factors, interest rate fluctuates from time to time, such a fluctuations have been analysed with the help of financial tools and statistical tools in a systematic manner. Deposit rate, interest rate on loans and advances and interest on investment of all sample banks under the study are in a decreasing trend according to the study. The total credits to the total deposit ratio of all banks are in an

increasing trend. This indicates that all the sample banks under the study are able to mobilise its funds to the maximum extent. Similarly, statistical analysis shows that the correlation coefficient between the deposit rate and the lending rates are positive. This means that these factors are correlated. Thus, interest rate structure of commercial banks has greater influence over funds mobilisation in the productive sector. However, the commercial banks of Nepal have not been fully able to succeed in this regard.

According to the Banking and Financial Statistics published by Nepal Rastra Bank, the total deposits of all fifteen commercial banks were Rs. 165126 million and Rs. 286279 million respectively. Interest on deposit is paid according to the duration of deposits and categories of deposits. No interest is paid in the current account. In the saving deposits, the range of average interest rate from the years 2001 to 2007 were between 4.96% and 2.81%. Similarly, on the fixed deposits section, an average interest rate range from the years 2001 to the year 2007 were 11.74% to 9.22%.

The credit of all the fifteen commercial banks depends upon the position of the banks. The commercial banks of Nepal utilized their deposits in two ways, (a) Through Loans and Advances and (b) Investments. The total credit of the fifteen commercial banks were Rs. 128822.3 million in 2001 and this has steadily increased to Rs. 258558.7 in the year 2007.

The overall ratio between the deposits of 2001 and 2007 is slowly increasing. The total credit to total deposits ratio were 78.01% in the year 2001 and this ration is mostly increasing every year and at the end of 2007 the total credit to total deposits ratio stands at 90.32%. This is indicative of significant mobilisation of deposit and minimisation of idle money in the bank, which is a positive indication towards the Nepalese economy.

1. The deposit rates, the interest rates on loans & advances and interest on investments of all sample banks under the study indicate a decreasing or a downward trend. The

meaning of this is that every year the interest rates for deposits and lending are decreasing.

2. The statistical data shows that the when comparing the Loans/Advances rate and the Investment rate to the interest rate on the deposits, the difference between the loan rate and the deposit rate is extremely higher than the difference between the investment rate and the deposit rate. This tells that the banks can mostly gain through higher funding in the loans & advances section than through investments.

3. If one takes a look at the correlation coefficient between the deposit rate and the deposit amount on functioning of all the commercial banks, they are very highly negative correlated. This means that if the interest rates of the saving and fixed deposits go up then there is inverse relation ship with the amount of funds deposited in the bank. The same inverse relationship goes with the other groups namely the private banks, public and joint venture banks. But this actually does not match the financial theory in which there should be a positive relationship between the deposit rate of interest and the deposit amount.
4. If the loan to the deposit ratio (LTD) is considered, then the private group banks are doing the best. The overall banks group and the public banks group follow them in terms of rank. The private banks group are doing well in effectively lending the deposited amounts to the customers. The joint venture banks are bearing far worse according to this ratio. They are not effectively mobilising the deposits towards lending.

5. If the investment to the deposits ratio (ITD) is considered, then the joint-venture banks leads the other groups with 26% of the deposits mobilised into investing it. The overall banks group and the public banks group follow this group. The private banks fare the worst in according to this ratio in mobilising their deposits towards investments with only 21.7% of the deposits made available for the investing.

6. In the correlation analysis between the loan rate of interest and the amount of loan deposited, on the overall group, there is negative relationship between them. This means that if the loans & advances rate increases, the loan amounts taken out from the bank decreases or customers ask for fewer funds. The same goes for the private bank group and the joint-venture bank group. The matches the real theory i.e. increase in the loan interest rate decreases the loan amount taken from the bank and vice versa. But the correlation relationship in the public banks in this category contrasts the theory. In terms of public banks, there is a positive relationship between the rate of interest and the loan amount.

7. In the correlation analysis between the investment rate and the investment amount by the bank, there is an inverse relationship on the overall commercial bank group. This means that if there is an increase in the interest rate of investments, and then there will be a decrease in the investment amount by the bank. The same goes for the private bank group, the joint venture bank group and the public bank group. This totally goes against the accepted theory that the increase in the investment rate results in increase in investment amounts and vice versa.

8. If one takes a look at the interest rate spread among the banks the total overall difference in spread is more than 5 percent. The banks with the least spread of interest are the public banks followed by the joint-venture banks. The private banks have the highest difference in the interest spread, which means that it is the private banks that gain most profit through these gaps between the deposit rates and the lending rates of interest. Most of the banks have their spread rates around 5% or more. This means banks are earning significant profits through the spread rates. More deposit mobilisation enables more profit.

9. In the spread table, the private bank that has the least difference in the spread is Nepal Industrial & Commerce Bank (NICB). Likewise in the joint venture bank group, the bank with the least gap between the deposit rate and the lending rate is Everest Bank Limited (EBL) and on the public banks, Nepal Bank Limited (NBL) has the least difference in the interest rate spread.

8. Three different models were used to measure the influences of variables on the credit, the deposit amount and the loan rate. The study and the multiple regression analysis found that for the overall 15 commercial banks, the model II i.e. LOAN RATE = a + B_1INV RATE + B_2DEP RATE has more explanatory power than other models. The adjusted R Square for this model is over 99.43 %. For the private commercial sector and the public commercial banks, this model too has more explanatory power than the other two models. However for the joint-venture commercial banks the model I was proved to have more explanatory power with the R Square over 95.72%.

10. The R-square for the entire three regression model in multiple regressions is very high for all groups ranging from private banks, joint-venture banks to the public banks. When the R-squares of the models are high, it is considered that the explanatory powers of these models are very good and sound. Among the models, the model II is considered as the most powerful because of its higher percentages.

11. In the simple regression, the regression coefficient of deposit rate on the deposit amounts is negative for overall group of banks. This means that if the deposit rate increases, the deposit amount decreases. The same phenomenon is observed in all other groups i.e. the joint venture groups, the public banks group and the private group of banks. This is in stark contrast to the real theory in which there is positive relationship between the deposit amount and the deposit rate.

12. In simple regression, the regression coefficient of the loan rate on the loan amount is negative for overall bank group. This means as the loan rate increases, the loans taken out by the customers decrease and vice versa. The same phenomenon can be observed for the joint venture banks group and the private banks group. This actually complies with the theory that the loan rate has negative relationship with the loan amount. But contrastingly, there is a positive regression coefficient between the LOAN RATE and the LOAN AMOUNT in the public banks group.

13. Again looking at the simple regressions, the regression coefficients of the INV RATE on the INV AMT is negative in overall banks group. This means that there is an inverse relationship between the amounts invested and the interest rate on the investments. The same observed for all the other banking groups too.

14. Looking at the total credit to deposit ratio (CTD), the private banks fare the best among all the groups with deployment of 92.9 % towards the creation of credit for the customers. The joint venture banks group follow the private banks in rank. The worst performer according to this ratio is the public banks group with deployment of only 77.1% made available for credit. It shows that public banks are weaker in lending funds and investing towards productive sectors.

15. In the simple regressions, the equations 4 and 5 shows that the all of the beta coefficients are positive. This is for all the groups i.e. the private banks group, the joint venture banks group, the public sector group and the overall group. Therefore there is a positive relationship between the deposits rates fluctuations and the changes in the investment rates and the loan rates. The increase in the deposit rates will bring an increase in the investment rates and the loan rates and vice versa. This shows that changes in deposit rates affects the mobilisation of the deposits because the lending rate and the investment rates change.

5.2 Conclusion:

This study concludes that fluctuations in the interest rates of the commercial banks significantly affect the deposit mobilisation. When there is a slight increase or decrease in interest rates of deposits, loans and investments, the mobilisation of deposits are affected. The study also concludes that commercial banks should pay very high attention on how they fix the interest rates on the deposits or the money that flows into the banks as funds. The interest rate greatly affects the collection of deposits, flow of credit capital, and investments. The interest rates have direct impact on the profitability because when interest spread is higher, the profitability also goes up. Most of the spread rates are around 5% or thereabouts meaning that commercial banks are earning significant profits. The mobilisation or fuelling of the deposits in productive sectors should be highly calculated and studied by the banks.

The spread rate in Nepalese banks are getting smaller year by year because of the competition in the markets and the increase in the number of new banks coming into life. There are contrasting rates among the banks and this should be stabilised by the concerned government body or the Nepal Rastra Bank.

In Nepal, there are tendencies of the commercial banks to exploit the interest rates as per their own liking and benefit without concern for the general public's status, the economic situations such as inflation, the government rules and policies. Interest rates if handled well can be an extremely effective weapon for a country in increasing the status of a country's citizens can be powerful as a tool in the monetary policies and can help to stabilize inflation.

If the interest rates are studied and correctly injected, they can help overcome economic downturns in a country or a region. The banks should carefully introduce interest rates to

sustain itself in an economy and reap profits while also recognising and the general public's needs.

5.3 Recommendations:

Based on the analysis of data, the following recommendations have been offered.

1. The public banks namely the Rastra Banijya Bank and the Nepal Bank Limited offer comparatively lower interest rates on the deposits than other banking agencies. This results in more stress on the public banks to raise enough funds. This also proves that the banks then find it very hard to compete against other private banks and joint-venture banks. The recommendations for the public banks are to stay in the competition by straightening out or increasing the deposit rates to attract more customers to increase funds for more mobilisations.

2. The public sector banks mostly give out lesser industrial loans and commercial loans than the private sector banks and the joint-venture banks. In comparison to the private sector loans for commercial purposes and industrial purposes, the public sector loans are generally decreasing day by day. This should actually be the opposite because the public banks should encourage more people to take these types of loans by not diving directly towards gaining profit but rather working for uplifting of the people.

3. The Nepal Rastra Bank should be more systematic and authoritative in the rules of spread rate gains by the commercial banks of Nepal. Though there are existing rules made and exercised by the government, these rules are at times bent for reaping of profits by the commercial banks. The spread rates between the deposit interest rates and the loans/advances interest rate should not exceed beyond the stated limit and the government should

4. Banking is totally a customer-oriented organisation so strategies and policies should be made keeping the convenience and satisfaction of the customer as the highest priority.

5. In order to encourage small-scale depositors, banks must create congenial environment for such depositors. The amount needed to open bank accounts and minimum balance to be maintained is very high. This should be reduced to increase the deposit amount by drawing small investors into the bank, which may help reduce the situation of crisis in economy created due to higher credit ratio.

6. It is recommended that future researchers conduct more in-depth studies and throw more light in the impact of interest rate on funds mobilisation of all commercial banks of Nepal.

7. Though commercial banks have played important role in economic development of the country, they are not effectively playing the role of a merchant bank. Such effective roles include under writing of securities brokers, development of capital bank and supportive role to the security exchange centre. The commercial banks must improve in these spheres of activities.

8. Some of the banks are security oriented rather than project oriented. The commercial banks of Nepal should lend their deposits more in projected-oriented works. The commercial banks are strongly recommended to follow liberal lending policy.

9. Now, the world has become a small place for business. Bank should provide the easiest and the fasted way for the customers to make banking transactions. Various facilities like Internet banking, ATMs, SMS banking etc should be widely used. This on the other hand will reduce the need of extra human resources for the bank. Installations of such facilities in each and every part of cities of Nepal will bring the entire customer under one roof.

10. As lending rates are charged excessively, borrowers fail to pay their borrowed amount due to their low return on investment, which in return stands as a debt for banks. This is not favourable for the banks. For a smoother return of borrowed amount of time, bank should charge appropriate interest rate to the borrower according to the bearing capacity of the borrower. The banks need to do is to convince the borrower to repay the loan by offering services facility, providing discount on the interest rate and minimizing fines must also be looked by the banks. Good repayment of loans ensures strength of banks.

11. Banking administration holds an important part in the uplifting the banking sector. The negligence in administrating the assets like in proper utilization of deposit may cause liquidity of commercial banks.

12. It has been observed through these researches that some of the banks' lending amounts have far exceeded the deposited amount. Hence, there is a need of increase in deposit, so deposit rate should be increased to attract deposit amount. Other reason for the increase in lending ration is because the banks focus their banking services to big clients such as multinational companies, large-scale industries and exporters.

13. The Nepal Rastra Bank should monitor the interest rates of the commercial banks on time. It is because of the gaps in the monitoring that results in unfair and unbalanced interest rates. Also, the rates should change according to the capacity of the Nepalese people.

13. The methodology used in this study should be refined in future study to provide further insights

Dependent Variable: DEPAMT
Method: Least Squares
Date: 09/05/08 Time: 14:46
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1536789.	513188.4	2.994590	0.0579
INVRATE	54736.14	34421.13	1.590190	0.2100
LOANRATE	-200070.6	92633.21	-2.159815	0.1196
DEPRATE	109312.1	68873.43	1.587145	0.2107

R-squared	0.943603	Mean dependent var	210493.9
Adjusted R-squared	0.887206	S.D. dependent var	46071.94
S.E. of regression	15473.19	Akaike info criterion	22.42716
Sum squared resid	7.18E+08	Schwarz criterion	22.39626
Log likelihood	-74.49508	F-statistic	16.73141
Durbin-Watson stat	2.027736	Prob(F-statistic)	0.022348

ANNEXURE 1
Multiple Regression Results for Overall Banks (Model I)

Multiple Regression Results for Overall Banks (Model II)

Dependent Variable: LOANRATE
Method: Least Squares
Date: 09/05/08 Time: 14:53
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.518438	0.244180	22.59990	0.0000
DEPRATE	0.728906	0.073311	9.942686	0.0006
INVRATE	0.344614	0.069492	4.959043	0.0077

R-squared	0.994311	Mean dependent var	10.32286
Adjusted R-squared	0.991466	S.D. dependent var	0.904078
S.E. of regression	0.083519	Akaike info criterion	-1.829968
Sum squared resid	0.027901	Schwarz criterion	-1.853149
Log likelihood	9.404887	F-statistic	349.5335
Durbin-Watson stat	1.889809	Prob(F-statistic)	0.000032

ANNEXURE 2

Multiple Regression Results for Overall Banks (Model III)

Dependent Variable: CREDIT
Method: Least Squares
Date: 09/05/08 Time: 14:51
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	786692.9	80315.53	9.795028	0.0006
LOANRATE	-66921.95	15236.23	-4.392290	0.0118
INVRATE	15070.42	15249.13	0.988280	0.3790

R-squared	0.954398	Mean dependent var	187118.5
Adjusted R-squared	0.931597	S.D. dependent var	49344.78
S.E. of regression	12905.59	Akaike info criterion	22.06624
Sum squared resid	6.66E+08	Schwarz criterion	22.04305
Log likelihood	-74.23182	F-statistic	41.85794
Durbin-Watson stat	1.020240	Prob(F-statistic)	0.002080

Multiple Regression Results for Private Banks (Model I)

Dependent Variable: DEPAMT
Method: Least Squares
Date: 09/05/08 Time: 14:58
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	314927.9	310912.3	1.012915	0.3857
DEPRATE	-3884.872	42918.13	-0.090518	0.9336
LOANRATE	-20811.34	53488.64	-0.389080	0.7232
INVRATE	-3094.094	17816.84	-0.173661	0.8732

R-squared	0.860761	Mean dependent var	60772.90
Adjusted R-squared	0.721523	S.D. dependent var	25496.84
S.E. of regression	13454.93	Akaike info criterion	22.14764
Sum squared resid	5.43E+08	Schwarz criterion	22.11673
Log likelihood	-73.51673	F-statistic	6.181914
Durbin-Watson stat	0.878294	Prob(F-statistic)	0.084423

ANNEXURE 3

Multiple Regression Results for Private Banks (Model II)

Dependent Variable: LOANRATE
Method: Least Squares
Date: 09/05/08 Time: 15:00
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.770368	0.350035	16.48512	0.0001
INVRATE	0.275615	0.093527	2.946898	0.0421
DEPRATE	0.776394	0.101272	7.666452	0.0016

R-squared	0.985904	Mean dependent var	10.56143
Adjusted R-squared	0.978856	S.D. dependent var	0.864955
S.E. of regression	0.125774	Akaike info criterion	-1.011138
Sum squared resid	0.063276	Schwarz criterion	-1.034320
Log likelihood	6.538984	F-statistic	139.8826
Durbin-Watson stat	3.291764	Prob(F-statistic)	0.000199

Multiple Regression Results for Private Banks (Model III)

Dependent Variable: CREDIT
Method: Least Squares
Date: 09/05/08 Time: 14:59
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	383400.0	64216.99	5.970383	0.0040
INVRATE	-1138.936	10078.31	-0.113009	0.9155
LOANRATE	-30078.98	10525.25	-2.857792	0.0460

R-squared	0.908156	Mean dependent var	58826.71
Adjusted R-squared	0.862235	S.D. dependent var	28258.15
S.E. of regression	10488.51	Akaike info criterion	21.65148
Sum squared resid	4.40E+08	Schwarz criterion	21.62829
Log likelihood	-72.78016	F-statistic	19.77615
Durbin-Watson stat	0.961944	Prob(F-statistic)	0.008435

ANNEXURE 4

Multiple Regression Results for Joint Venture Banks (Model I)

Dependent Variable: DEPAMT
Method: Least Squares
Date: 09/05/08 Time: 15:06
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	215130.3	34997.26	6.147062	0.0087
DEPRATE	-2847.897	6738.215	-0.422649	0.7010
LOANRATE	-11214.97	5310.466	-2.111862	0.1251
INVRATE	-3374.171	4794.618	-0.703741	0.5323

R-squared	0.957216	Mean dependent var	71436.74
Adjusted R-squared	0.914432	S.D. dependent var	15682.53
S.E. of regression	4587.448	Akaike info criterion	19.99559
Sum squared resid	63134034	Schwarz criterion	19.96469
Log likelihood	-65.98458	F-statistic	22.37330

Durbin-Watson stat	3.279955	Prob(F-statistic)	0.014829

Multiple Regression Results for Joint Venture Banks (Model II)

Dependent Variable: LOANRATE
Method: Least Squares
Date: 09/05/08 Time: 15:07
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.982850	1.381738	4.329944	0.0124
DEPRATE	0.840072	0.475466	1.766839	0.1520
INVRATE	0.177946	0.442576	0.402068	0.7082

R-squared	0.854185	Mean dependent var	10.07857
Adjusted R-squared	0.781277	S.D. dependent var	0.923552
S.E. of regression	0.431925	Akaike info criterion	1.456398
Sum squared resid	0.746238	Schwarz criterion	1.433217
Log likelihood	-2.097395	F-statistic	11.71597
Durbin-Watson stat	0.935726	Prob(F-statistic)	0.021262

ANNEXURE 5

Multiple Regression Results for Joint Venture Banks (Model III)

Dependent Variable: CREDIT
Method: Least Squares
Date: 09/05/08 Time: 15:06
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	234575.6	32656.84	7.183047	0.0020
LOANRATE	-11745.47	5709.211	-2.057284	0.1088
INVRATE	-8660.092	5837.123	-1.483623	0.2121

R-squared	0.918390	Mean dependent var	63761.21
Adjusted R-squared	0.877585	S.D. dependent var	18808.76
S.E. of regression	6580.775	Akaike info criterion	20.71922
Sum squared resid	1.73E+08	Schwarz criterion	20.69604
Log likelihood	-69.51727	F-statistic	22.50684
Durbin-Watson stat	2.486818	Prob(F-statistic)	0.006660

Multiple Regression Results for Public Banks (Model I)

Dependent Variable: DEPAMT
Method: Least Squares
Date: 09/05/08 Time: 15:12
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	71545.42	26741.18	2.675477	0.0753
DEPRATE	-8050.831	5373.966	-1.498117	0.2310
LOANRATE	5958.445	5216.274	1.142280	0.3362
INVRATE	-3902.653	3874.070	-1.007378	0.3880

R-squared	0.701954	Mean dependent var	78284.09
Adjusted R-squared	0.403908	S.D. dependent var	5394.305
S.E. of regression	4164.781	Akaike info criterion	19.80227
Sum squared resid	52036199	Schwarz criterion	19.77137
Log likelihood	-65.30796	F-statistic	2.355186
Durbin-Watson stat	2.147477	Prob(F-statistic)	0.250038

ANNEXURE 6

Multiple Regression Results for Public Banks (Model II)

Dependent Variable: LOANRATE
Method: Least Squares
Date: 09/05/08 Time: 15:15
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.533152	1.197021	3.787026	0.0193
INVRATE	0.398755	0.313282	1.272832	0.2720
DEPRATE	0.824734	0.308703	2.671614	0.0557

R-squared	0.915197	Mean dependent var	9.847143
Adjusted R-squared	0.872796	S.D. dependent var	1.119311
S.E. of regression	0.399210	Akaike info criterion	1.298870
Sum squared resid	0.637476	Schwarz criterion	1.275689
Log likelihood	-1.546047	F-statistic	21.58410
Durbin-Watson stat	2.140201	Prob(F-statistic)	0.007192

Multiple Regression Results for Public Banks (Model III)

Dependent Variable: CREDIT
Method: Least Squares
Date: 09/05/08 Time: 15:13
Sample: 2001 2007
Included observations: 7

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	86756.05	11683.20	7.425708	0.0018
LOANRATE	-4426.040	2366.777	-1.870071	0.1348
INVRATE	3527.402	2932.713	1.202777	0.2954

R-squared	0.517276	Mean dependent var	64530.61
Adjusted R-squared	0.275914	S.D. dependent var	3705.597
S.E. of regression	3153.213	Akaike info criterion	19.24776
Sum squared resid	39771012	Schwarz criterion	19.22458
Log likelihood	-64.36716	F-statistic	2.143153
Durbin-Watson stat	1.550767	Prob(F-statistic)	0.233023

ANNEXURE 7

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for SCBL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	3.46	15430.1	11.18	5924.1	7.52	4822.3
2002	2.89	15835.7	10.59	5787.9	6.64	9276
2003	2.82	18755.5	10.43	6080.7	6.16	10357.7
2004	1.85	21161.4	9.85	6729.6	5.57	11360.3
2005	1.72	19344	9.84	8527.1	6.4	9704.1
2006	1.75	23050.5	8.79	9206.3	5.125	12850.6
2007	1.79	24640.3	8.79	10790	4.97	13564
Total	16.28	138217.5	69.47	53045.7	42.385	71935
Mean	2.325714286	19745.3571	9.924285714	7577.957143	6.055	10276.42857

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for KBL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*

2001	5.14	316	11.55	265.1	7.52	19.8
2002	4.57	1180	11.27	1121.6	6.64	255
2003	4.36	2513.1	10.43	2146.4	6.16	423.5
2004	3.79	4816.5	10.42	3709	5.57	601.9
2005	3.29	6270.1	11.64	5556.9	6.4	1340.7
2006	3.48	7800.4	9.875	7010.1	5.125	1114.7
2007	3.07	10560	9.72	9062.5	4.97	1298.3
Total	27.7	33456.1	74.905	28871.6	42.385	5053.9
Mean	3.957142857	4779.44286	10.70071429	4124.514286	6.055	721.9857143

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for NBBL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	5.85	8578.8	12.28	7347.1	7.52	277.5
2002	5.58	9514	12.22	8222	6.64	1029.4
2003	5.42	10548	12.17	8492	6.16	2276.7
2004	4.38	12747.3	10.35	10254	5.57	2617.3
2005	4.31	12125.5	7.94	9724.5	6.4	2275.3
2006	4.38	13014.8	9.06	9906.2	5.125	2590.1
2007	2.68	9464	8.34	9159.3	4.97	1009
Total	32.6	75992.4	72.36	63105.1	42.385	12075.3
Mean	4.657142857	10856.0571	10.33714286	9015.014286	6.055	1725.042857

ANNEXURE 8

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for LBL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	5.83	2097.4	10.84	1793.2	7.52	212.1
2002	5.83	2646.1	10.84	2296.6	6.64	270.7
2003	5.75	2959.8	10.89	2632	6.16	295.7
2004	4.69	3777.6	10.48	3218	5.57	438.4
2005	4.96	4029.5	10.21	3829.8	6.4	392
2006	4.78	4786.5	10.21	4384	5.125	674
2007	4.78	6024.6	10.21	4944.6	4.97	829.5
Total	36.62	26321.5	73.68	23098.2	42.385	3112.4
Mean	5.231428571	3760.21429	10.52571429	3299.742857	6.055	444.6285714

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for NBL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*

2001	4.53	35528.6	11.68	22062.3	7.52	6776.3
2002	4.46	34060.1	10.88	20997.5	6.64	7152.8
2003	4.25	34737.4	7.95	19266.1	6.16	11782.6
2004	3.1	36288.5	8.7	19141.7	5.57	11023.7
2005	3.05	34744.2	8.28	18530.6	6.4	13889.8
2006	3.05	35444.9	8.28	12791.1	5.125	14421.4
2007	2.54	38715.2	8.28	13750.6	4.97	16283.3
Total	24.98	249518.9	64.05	126539.9	42.385	81329.9
Mean	3.568571429	35645.5571	9.15	18077.12857	6.055	11618.55714

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for RBB

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	6.18	40500.4	11.94	28424.7	7.52	5656.9
2002	5.2	38964.6	10.71	28516	6.64	4170.6
2003	4.9	39308.6	10.23	28258.9	6.16	4232.9
2004	3	40313.6	9.77	26781.7	5.57	3142
2005	2.5	43489.2	9.13	28919.8	6.4	8552.9
2006	2.53	45700.7	8.99	27164.7	5.125	11778.9
2007	2.53	50192.6	8.49	25422.3	4.97	12822.2
Total	26.84	298469.7	69.26	193488.1	42.385	50356.4
Mean	3.834285714	42638.5286	9.894285714	27641.15714	6.055	7193.771429

ANNEXURE 9

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for NIB

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	5.11	4256.2	11.76	2431.3	7.52	312.7
2002	5.11	4174.8	11.93	2715.7	6.64	262
2003	5.11	7922.8	11.93	5949.2	6.16	1745.3
2004	5.11	11706.3	11.93	7290.2	5.57	4172.5
2005	2.66	14254.8	9.05	10490.4	6.4	4074.2
2006	2.66	18927.3	9.05	13171.5	5.125	5672.9
2007	2.66	24488.9	9.05	17769.1	4.97	6518.6
Total	28.42	85731.1	74.7	59817.4	42.385	22758.2
Mean	4.06	12247.3	10.67142857	8545.342857	6.055	3251.171429

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for NSBIB

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*

2001	6.05	6618.4	11.59	4176.3	7.52	373.6
2002	4.57	5572.2	10.65	4594.3	6.64	521.1
2003	4.57	6522.8	10.47	4766	6.16	1207.3
2004	3.63	7232.1	9.33	5552.6	5.57	1889.4
2005	3.35	8645.8	9.33	6765.1	6.4	2607.7
2006	3.67	10852.7	9.35	8250.8	5.125	3699.9
2007	3.5	11445.2	8.72	1065.4	4.97	2377.5
Total	29.34	56889.2	69.44	35170.5	42.385	12676.5
Mean	4.191428571	8127.02857	9.92	5024.357143	6.055	1810.928571

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for BOK

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	4.75	5724.1	11.63	4327.1	7.52	324.4
2002	4.75	5735.9	11.67	4977.6	6.64	630.7
2003	4.02	6169.6	10.41	4956.2	6.16	1618.8
2004	3.38	7741.6	9.93	6104.9	5.57	2394.6
2005	3.03	8942.8	9.83	6278.5	6.4	2235.7
2006	3.07	10429.3	9.68	7586.2	5.125	2748.4
2007	2.64	12358.6	9.71	9722.1	4.97	2995.2
Total	25.64	57101.9	72.86	43952.6	42.385	12947.8
Mean	3.662857143	8157.41429	10.40857143	6278.942857	6.055	1849.685714

ANNEXURE 10

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for NICB

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	6.34	3575.8	12.66	2622.2	7.52	511.4
2002	4.71	3165.3	12.09	2369.9	6.64	753.4
2003	4.71	3143.9	10.33	2564.3	6.16	1153.3
2004	3.2	5146.4	8.77	3746.6	5.57	1760.7
2005	4.71	6243.3	10.33	4913.3	6.4	1572.9
2006	3.45	8765.8	8.53	6902.1	5.125	2479.9
2007	3.55	10068.3	8.91	9128.7	4.97	1499.8
Total	30.67	40108.8	71.62	32247.1	42.385	9731.4
Mean	4.381428571	5729.82857	10.23142857	4606.728571	6.055	1390.2

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for EBL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	5.43	4574.5	11.1	2963.7	7.52	826.7

2002	5.34	5461.1	10.92	3969.6	6.64	1628.6
2003	4.5	6694.9	10.48	5030.9	6.16	1616.5
2004	2.79	8064	9.09	6116.6	5.57	2483.5
2005	4.5	10097.8	10.48	7944.1	6.4	2119.7
2006	3.5	13802.5	7.99	10154.9	5.125	4201.3
2007	3.28	19097.7	8.22	14100	4.97	4985.1
Total	29.34	67792.5	68.28	50279.8	42.385	17861.4
Mean	4.191428571	9684.64286	9.754285714	7182.828571	6.055	2551.628571

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for EBL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	4.36	17613.6	11	9176.9	7.52	2235
2002	4.19	18595.2	11.05	9673.5	6.64	2622.9
2003	4.01	21002.8	10.68	11074.2	6.16	4014.3
2004	2.62	22760.9	9.1	13081.7	5.57	2878.3
2005	4.01	24831.1	10.68	13590.9	6.4	5509.6
2006	2.69	26456.2	9.1	15768.3	5.125	10890.5
2007	2.69	29905.8	7.91	17841.5	4.97	11821.6
Total	24.57	161165.6	69.52	90207	42.385	39972.2
Mean	3.51	23023.6571	9.931428571	12886.71429	6.055	5710.314286

ANNEXURE 11

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for NABIL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	4.64	15838.9	11.14	8437.6	7.52	2752.7
2002	3.45	15370.6	10.09	7328.2	6.64	5202.1
2003	3.34	13437.7	9.25	8267.8	6.16	3687.8
2004	3.2	14098	9.35	8769.7	5.57	3697.1
2005	2.8	14586.8	9.6	11360.3	6.4	4353.3
2006	3.23	19348.4	9.54	13278.8	5.125	6100.5
2007	2.81	23342.4	8.63	15903	4.97	8398.8
Total	23.47	116022.8	67.6	73345.4	42.385	34192.3
Mean	3.352857143	16574.6857	9.657142857	10477.91429	6.055	4884.614286

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for NCC

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	5.21	3772.7	12.42	2925.9	7.52	288.9

2002	5.36	3709	11.89	2937.1	6.64	325.8
2003	4.84	4294.1	11.89	3322.3	6.16	407
2004	4.84	5959.6	11.89	4436.9	5.57	608.5
2005	4.66	6630.1	11.26	6038.3	6.4	392.8
2006	4.7	6619.5	11.22	5914.7	5.125	597.2

Year	Deposit Rate	Deposit Amount	Interest on L & A	Loan Amount	Investment Rate	Investment Amount
2001	4.96	165126	11.68	103377	7.52	25445.3
2002	4.52	164979.4	11.13	106190	6.64	34179.4
2003	4.29	179790	10.74	114303	6.16	45217.7
2004	3.51	204568	10.13	127478	5.57	49342.6
2005	3.04	219822	9.96	147601	6.40	59489.3
2006	2.97	252893	9.40	157636	5.125	81011.7
2007	2.81	286279	9.22	171108	4.97	87450.7

2007	4.65	6500.3	11.21	5122.2	4.97	1225.3
Total	34.26	37485.3	81.78	30697.4	42.385	3845.5
Mean	4.894285714	5355.04286	11.68285714	4385.342857	6.055	549.3571429

Table for Deposit Rate, Deposit Amount, Loan Rate, Loan Amount, Investment Rate and the Investment Amount for MBL

Rs. In Millions

Year	*Deposit Rate*	*Deposit Amt*	*Loan Rate*	*Loan Amt*	*Inv. Rate*	*Inv. Amt*
2001	5.63	700	10.75	499.8	7.52	55
2002	5.13	994.8	11.88	682.6	6.64	78.3
2003	4.72	1778.7	11.88	1496	6.16	398.3
2004	4.13	2754.6	10.52	2544.4	5.57	274.4
2005	3.67	5586.5	9.19	5131.6	6.4	468.6
2006	4.04	7893.3	8.53	6146.6	5.125	1191.4
2007	3.71	9475	8.33	7326.3	4.97	1822.5
Total	31.03	29182.9	71.08	23827.3	42.385	4288.5
Mean	4.432857143	4168.98571	10.15428571	3403.9	6.055	612.6428571

ANNEXURE 12

Deposit rates, deposit amounts, loan rates, loan amounts
investment rates, and investment amounts

Overall Banks

Private Banks

Year	Deposit Rate	Deposit Amount	Interest on L & A	Loan Amount	Investment Rate	Investment Amount
2001	5.16	36281.1	11.78	23302.2	7.52	4477
2002	4.86	36976.5	11.52	24429.3	6.64	7778
2003	4.52	42219.7	10.85	31334.2	6.16	9729.7
2004	3.93	56000.6	10.46	39819.7	5.57	13948.1
2005	3.22	66543.9	10.06	53599.1	6.40	14830.2
2006	3.34	84570.5	9.68	64394	5.125	20579
2007	3.12	102818	9.58	78978.5	4.97	24588

ANNEXURE 13

Joint Venture Banks

Year	Deposit Rate	Deposit Amount	Interest on L & A	Loan Amount	Investment Rate	Investment Amount
2001	4.76	52815.4	10.85	29588.1	7.52	8535.1
2002	4.43	54978.2	11.07	32247.3	6.64	15078
2003	4.18	63524	10.89	35443.8	6.16	19472.5
2004	2.99	71965.7	9.83	41734.5	5.57	21228.8
2005	3.24	75044.2	10.09	46551.7	6.40	22216.4
2006	2.84	87176.7	9.12	53286.5	5.125	34232.4

2007	2.71	94553	8.70	52956.2	4.97	33757.2

Public Banks

Year	Deposit Rate	Deposit Amount	Interest on L & A	Loan Amount	Investment Rate	Investment Amount
2001	4.70	76029	11.83	50487	7.52	12433.2
2002	4.48	73024.7	10.81	49513.5	6.64	11323.4
2003	4.25	74046	10.03	47525	6.16	16015.5
2004	3	76602.1	9.42	45923.4	5.57	14165.7
2005	2.8	78233.4	9.02	47450.4	6.40	22442.7
2006	2.81	81145.6	8.94	39955.8	5.125	26200.3
2007	2.57	88907.8	8.88	39172.9	4.97	29105.5

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