INTEREST RATE IMPACT ON DEPOSIT AND LENDING OF NEPALESE FINANCIAL MARKET

A THESIS

Submitted By:

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VIVA VOCE SHEET

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

Deepak Kunwar

Entitled

"Interest Rate Impact on Deposit and Lending of Nepalese Financial Market"

And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for

Master's Degree in Business Studies (M.B.S.)

Viva- Voce Committee

Chairperson Research Committee	:	…….
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RECOMMENDATION

This is to certify that the thesis:

Submitted by:

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Entitled

"Interest Rate Impact on Deposit and Lending of Nepalese Financial Market"

Has been prepared as approved by this department in the prescribed format of the faculty of management. This thesis is forwarded for examination.

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Campus Chief

Date:

DECLARATION

I hereby that the thesis entitled “Interest Rate and Its impact on Deposit and Lending of Nepalese Financial Market” Submitted to the office of dean, faculty of management, Tribhuvan University is my own work which is prepared as the partial fulfillment of the requirement of degree of Master of Business Studies (M.B.S) under the guidance and supervision of Prof. Dr. Bihari Binod Pokharel Head of the Research Department and Madan Kumar Luitel, Nepal Commerce Campus T.U.

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LIST OF DIAGRAM

LIST OF ABBREVIATION

A.D	=	Anno Domoni
ADB	=	Agriculture Development Bank
BFSCO	=	Bhajuratna Finance and Saving Company Limited
B.S	=	Bikram Sambat
CPI	=	Consumer Price Index
d.f	=	Degree of Freedom
etc	=	Etcetera
e.g.	=	Example
FIFO	=	First in First out
Fig	=	Figure
FY	=	Fiscal Year
GDP	=	gross Domestic Product
i.e.	=	That is
LIFO	=	Last in First out
Ltd.	=	Limited
NBL	=	Nepal Bank Limited
NFI	=	Nepalese Financial Institutions
NFM	=	Nepalese Financial market
NGO	=	Non Government Organization
NRB	=	Nepal Rastra Bank
Opeit.	=	Previously Credit
No.	=	Number
p.	=	Page
p.p	=	Pages
Pvt.	=	Private
Rs.	=	Rupees
TU	=	Tribhuvan University
T-Bill	=	Treasury Bills
Viz	=	Namely

CHAPTER-ONE

INTRODUCTION

1.1 General Background of the Study

Nepal is a small and economically weak country situated between two densely Populated and developed countries India and china. Nepal striving to develop and modernize her economy rapidly on rational and socially desired footing. But the structure of the economy has still remained primarily agricultural with very small manufacturing base. So it is essential to divert and modify agro based economy. Nepal has adopted mixed and liberal economic policy with the implicit objective to help the state and the private sector on the ground of open and liberal eco system.

After the restoration of the democracy the concept of the liberalization policies has been incorporated as directive principle and state policies. The continuing thrust to the development of nation has helped in establishing many companies, Banks, Financial institutions, manufacturing industries. Thus this establishment helps the country for its development in some level but for actual economic development. Capital formation and utilization are the two major things that should be essential for the investment in a country. The formation and utilization of capital are shaped by many factors like prosperity of country, lending, deposit pattern and interest rate and so on. In modern economy Banks and financial institution plays the major role for capital generation and utilization. In other words they take part actively in funds mobilization keeping other factor constant. Interest rate also plays the dominant role in borrowing and lending

Financial institution collects funds mainly from deposits (fixed and saving deposits) which are ultimately used as a part of capital investment in country. Thus the problem of

inadequate of capital formulation is somehow wiping out by collecting more deposits from the savers (business, household and government). More precisely personal saving is the part of disposable income, which is not consumed. Saving equals income minus expenditure. The people having more income save more than people having less income do. In general, Household saves more than that of business and government. For household, saving equals to current income minus current expenditure. For business sector savings include current earnings retained inside business firms after payment of taxes, stockholders dividend and other expenses. Government saving arise where there is a surplus of current revenue over expenditure. To include more saving, financial institution can play a vital role by providing attractive interest rate and other offer a different scheme. The people of the least developed countries are not much concerned about saving as most parts of earnings are spent in hand to mouth consumption. Even if some people are able to save their money , they show Their interested to invest such surplus funds on non productive sectors like gold, land, vehicles and so on . Banks and financial companies as intermediaries can attract savers to save more by providing them attractive interest rate and accept the deposit.

Financial institution provides loan to borrowers who are in need of money from the money accumulated in from of deposit and capital of financial institution while granting loan. Financial institution charges a certain percentage of interest to the borrower and borrower has to pay the interest for using financial institution money. Interest on loan also varies according to the nature of loan, whether loan is of short term or long term. An appropriate interest rate structure greatly affects the collection of deposits, mobilization of saving (only in productive sector) and profit position of any financial institution, which in turn, affects the economic up liftmen of the whole country.

1.1.1 Concept of Interest Rate

Interest rate is one of the important variables in economics and financial system of the country. It plays the dominant role in borrowing and lending. Simply, interest is a payment for the use of money so when savers deposit their savings in banks that time bank pays a certain amount of interest on saving amount because of use this money to

lend other customers. The interest rate is the price charged a borrower for the loan of money. This price is unique because it is a price of credit but unlike other prices in the economy. The rate of interest is really a ratio of two quantities. The money of cost of borrowing divided by the amount of money actually borrowed. Usually expressed on an annual percentage basis the cost of borrowing money Measured in rupee per year borrowed is the interest rate (Samuelson & Nordhus. 2003 P. 469) when we examine how money affects economic activity. We will focus on the interest rate. Which is often called "The price of money " Interest is rent paid for the use of money .In other words people must pay for opportunity to borrow money. Financial institutions as financial intermediaries collect funds from savers in the form of deposit and provide that for business sector in the form of loan. These institutions pay the interest to the depositors for the money borrowed from and charge interest from the borrower for money lend to them. As any price is determine, theoretically, by the interplay of demand and supply in a market economy, the price of money- the interest rate- plays a vital role in the allocation of resources and in the decision making of consumers and business For example, an increase in the interest rate provides additional incentives to individuals and others to postpone current consumption (save) and thereby free resources for investment. Interest rates send price signals to borrowers, lenders and savers. Higher interests rates generally bring forth a greater volume of savings and stimulate the lending of fund i. e. substitution effect. Lower rate of interest, on the other hand, tends to reduce the volume of borrowing and capital investment and lower rates stimulate borrowing and investment spending (Rose peter s. '1997' 6th Edition). Investment is function of interest rate. The impact of interest rate is on both the saving and investment in the economy, Further the borrowing and savings are always influenced by the interest rates. The cost of production, which depends upon the function, is influenced by the interest rate. Since the credit is also one of the components of production process. The income and expenditure of the variable sectors of the economy result in excess savings or excess investment in each of the sectors (Vaidya '1990' p. 17)

1.1.2 Introduction of Financial Institution of Nepal:

Nepal Bank Limited (NBL):

Nepal Bank Limited is the first bank to commerce its business inn Nepalese economy. After the enactment of "Nepal Bank Law" in B.S. 1994, this bank was established in 30 Kartik, 1994 B.S. Most of the banking functions in Nepalese market are on track after the establishment of this bank. At the time of establishment, beside commercial functions, this bank performed all the other functions that should be done by Central Bank of the country except issuing notes (money). But after the establishment of central bank, Nepal Rastra Bank, this bank transformed itself as a pure commercial bank. The government of Nepal has 41% share and general public have 59% shares on this bank. Now this bank is passing within many twists and turns in present competition market. This bank is also one of the governments owned having 153 branches (NRB Bulletin 2008, Mid – July) all over the country. This bank is now in the process of recovery.

Agriculture Development Bank (ADB/N)

ADB/N was established in 1968 under the Agriculture Development Bank Act 1967. The bank inherited the assets and liabilities of the cooperative bank, which was established in 1963, in 1973 the Land Reform and saving Corporation, a similar institution established in 1996 was merged with the bank. ADB/N is an autonomous organization under the supervision of the ministry of Finance of Nepal Government. The bank has been working as a premier rural credit institution since last three decades contributing more than 80% shares in meeting institutional credit in Nepal. Under the ADB/N act, the bank is entrusted with the responsibilities of initiating effective approaches for the development of agriculture. The bank is committed to rise in easy and smooth manner. The subsequent amendments of the act empowered the bank to finance small farmers on group liability and expand its scope of financing to promote cottage industries. The amendments of the Act also permitted the bank to engage in commercial banking activities for the mobilization of domestic resources. The ADB/N is only development bank in Nepal which has been adopting as "Three window system" to operate its activities in (a) Development Financing Sector, (b) Target group sector through small Farmers Development Program, (c) Commercial banking sector.

Bhajuratna Finance and Saving Company Limited (BFSCO)

Bhajuratna Finance and saving Company Limited was established in 25 poush 2052 B.S. under the finance company Act 2043, with an authorized capital of NRs. 7 Carode, paid up capital of NRs. 3.5 carode and issued capital of NRs. 3.5 Carode. Its head office is situated at kanthipath Kathmandu and Registered office in Birgunj. The prime objective of this finance is to render banking services to the different sectors like hire purchases, Agriculture, Industries, Traders, Housing, and those people who need banking services. It has been able to provide excellent services to its clients.

United Finance Limited

United Finance Limited was established in 2049 B. S. under the finance company Act 2043 B. S. its head office is situated at Darbarmarg Kathmandu. The main promoters of this company are Chaudhary Group and Morang Auto works, they have 60% share as promoter remaining 40% with general public. The prime objective of this finance is to render banking services to the different sectors like Industry, business, Agriculture, Commercial, etc. It has been able to provide excellent services to its customers.

1.2 Focus of the Study

The observed and the most focusable part of the study is the effect of interest rate on lending and the deposit, as we know that there is a reverse relation between lending and deposit in the case of interest rate, when the interest rate is increase deposit will increase and when the interest rate is decrease lending will increase and vice versa. Interest rates send price signals to borrowers, lenders, savers and investor. For example, higher interest rates generally bring forth a greater volume of saving and stimulate the lending of funds, Lower rates of interest on the other hand tend to dampen the flow of savings and reduce lending activity but increase the demand for loan , Higher rates tend to reduce the volume of borrowing and capital investment and lower rates stimulate borrowing and investment spending (Rose, 1997,p. 124).Hence economic growth depends upon circulation of money and financial system facilities it.

We know that inflation is also important factor in the financial market. All countries in the world have some magnitude of inflation. While this study is being conducted, the

existing inflation rate in our country is around 5 %.According to Irving Fisher "Inflation rate is added to real rate of return to determine the market interest rate. So higher the inflation, higher will be the interest rate." In real situation, the aforementioned theory may not come true. Especially for developing county like Nepal because, most of the theories of financial countries like U.S.A., Great Britain and so on. So it is quite necessary to develop some ideas about the interest rate and its impact upon deposits, credit and inflation in the Nepalese context. This study is also considered to be useful to various parties such as further researcher, students, teachers, financial institutions, general individuals etc.

1.3 Statement of the Problems

Interest has direct relation with economics growth and development. According to economics theory (other things remain constant), low interest is impetus for high investment. And this high investment leads to high production, high employment, more income and ultimately growth in economy. So by this study it is going to explore: Does decline in interest rate increases the landing activities? Or what is the actual condition owns his regard in Nepalese financial market place? If the condition is not as per theory than what are the possible causes for such effects / Focusing on the Nepalese context, the investment is low in productive sectors due to unavailability of sufficient finance, security and other factors. Nepal's main export is basically raw materials. It means that Nepal is exporting raw materials instated of producing goods and services from these. If cheap financing is available, many factories could be established to reap benefits from utilization of resources, which would increase the employment, standard of living and status of country economy.

In same manner, market interest rate is the sum of real rate plus inflation premium. But this way or may not occur in real practice. So this study is going to identify: is there any positive relation of interest rate and inflation as per theory? Similarly, high interest rate is stimulus for high savings (deposits) but this may not the case in real world as people use to deposit more even in less interest rate due to security, Convenience and other reasons. Thus through this thesis, it is going to discover: what is the relation of deposit and interest rate? Or does substitution effect is truly applicable in Nepalese context.

More specifically, this study seeks to solve the answer for following questions.

Does substitution effect is practical in the context of Nepal or not? In other words what is the effect high interest rate on savings (deposits).
Are borrowers of Nepalese markets sensitive to the interest rate of credit?
Alternatively, what is the relationship between interest rate and borrowing amount?
What is the magnitude of correlation between interest rate and inflation? In other words, does inflation has high positive or negative relation with interest rate in Nepalese context?

1.4 Objective of the study

The specific objective of this study is to identify the structure of the interest rates of the Nepalese financial institutions and its impact on deposit and lending. This can be divided as follows:

- To examine the interest rate structure on deposit and lending of Nepalese financial institutions.
- To study and analyze the relationship of interest rate on deposit amount of Nepalese financial institutions.
- To evaluate the relationship of interest rate on lending amount of Nepalese financial institutions.
- To find out and examine the position of interest rates of with inflation of Nepalese financial institutions in different period of time.
- To suggest for the improvement on the basis of findings of study.

1.5 Significance of the study

Financial sector plays a vital role for the country economic development and considered as a pre-requisite for the economy. This study will try to help analyze the interest rate structure of financial institution in Nepal and try to develop some ideas to know whether it influences deposits and lending. This topic being an important aspect for the economic development of the country has not much been emphasized that means very few number

of research work has been found in this topic. Hence, it is hoped that the findings of the study to some extent will help the policy makers to make strong policy regarding interest rate charged on deposit and lending in Nepalese context. Similarly, it can be fruitful resource for teachers, students, researchers and academicians in abstracting some information about interest rate, depositor and lending.

1.6 Limitation of the study

The study is conducted with certain Limitation. The main limitation is time and resources constraints and others are as follows:

- This study includes only four Nepalese financial institutions and its data as a sample for this study.
- This study covers only seven fiscal years.
- The reliability of this study depends upon the information provided by concerned financial institutions and published data.
- Most of the data used in study are of secondary type.
- There are many factors that affect the deposit amount and lending amount of Nepalese financial institution however this study is focused on the interest rate.
- This study is done for partial fulfillment for M.B.S degree in management; therefore it is not a comprehensive study.

1.7 Organization of the study

This research has been divided into five parts. Which are as follows?

Chapter-1 Introduction

The first chapter consist introduction of the study, background of the study, objective of the study, statement of the problem, significant, limitation, of the study with a brief description of sampling financial Institutions.

Chapter -2 Review of Literature

This chapter Includes review of literature which was obtained during the review of Books, articles, Journals, reports, and other relevant materials

Chapter -3 Research Methodology

This chapter deals on research design research questions, population and sample size sources of data collection and processing techniques, analysis of tools,

Chapter-4 Presentation and Analysis of data

This chapter attempts to analyze and evaluate data with the help of analytical tools and interpret all the results into the unit of Empirical findings and results.

Chapter-5 Summary Conclusion and Recommendation

This chapter covers on the results and findings and recommend some suggestion.

CHAPTER-TWO

REVIEW OF LITERATURE

2.1 Introduction

Review of literature means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted.

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

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

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

- What research has been done in the subject?
- What others have written about the topic?
- What theories have been advanced?
- The approach taken by other researcher
- Areas of agreement or disagreement

- Whether there are gaps what you fill through the proposed research

2.2 Theoretical Review

2.2.1 Meaning of Interest Rate

The rate of Interest is the price a borrower must pay to secure scarce loanable funds from a lender for an agreed – upon time period. It is the price of credit. The rate of interest is the ratio of two quantities. Money cost of borrowing divided by the amount of money actually borrowed. Usually expressed on an annual percentage basis. Interest rate sends price signals to borrower's .Lenders, savers and investors. For example, higher interest rates generally bring fourth a greater volume of saving and stimulate the lending of funds. Lower rate of interest, on the other hand, tend to dampen the flow of saving and reduce lending activity. Higher interest rates tend to reduce the volume of borrowing and capital investment, and lower interest rates stimulate borrowing and investment spending

2.2.2 Function of the Interest Rate in the Economy

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

- It helps guarantee that current savings will flow into investment to promote economic growth.
- It rations the available supply of credit, generally providing loanable funds to those investment projects with the highest expected returns.
- It brings the supply of money into balance with the public's demand for money.
- It is an important tool of government policy through its influence on the volume of saving and investment. If the economy is growing too slowly and unemployment is raising the government can use its policy tools to lower interest rates in order to stimulate borrowing and investment. On the other hand, an economy experiencing rapid inflation has traditionally called for a government Policy of higher interest rates to slow borrowing and spending and encourage more saving.

2.2.3 Theories of Interest Rate

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

2.2.3.1 Classical Theory of Interest Rates

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

Saving by Household

Most saving in modern industrialized economics is carried out by individuals and families. For these households, saving is simply abstinence from consumption spending. Current savings, therefore, are equal to difference between current income and current consumption expenditures.

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

Although income levels probably dominate saving decisions, interest rates also play an important role. Interest rates affect an individual's choice between current consumption and saving for future consumption. The classical theory of interest assumes that in dividable have a definite time preference for current over future consumption. A rational individual, it is assumed, will always prefer current enjoyment of goods and services over

future enjoyment. Therefore, the only way to encourage an individual or family to consume less now and save more is to offer a higher rate of interest on current savings. If more were saved in the current period at a high rate of return, future consumption would be increased For example, if the current rate of interest is 10% and a household save $100 instead of spending it on current consumption, it will be able to consume $100 in goods and services a year from now.

The Classical theory considers the payment of interest a reward for waiting the postponement of current consumption in favor of greater future consumption. Higher interest rates increase the attractiveness of saving relative to consumption spending, encouraging more individuals to substitute current saving for some quality of current consumption. This too called Substitution Effect calls for a positive relationship between interest rates and the volume of savings. Higher interest rates bring forth a greater volume of current savings.

Saving by Business Firms

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

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

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

Saving by Government

Governments also save, though less frequently than households and businesses. In fact, most government saving (i.e. a budget surplus) appears to be unintended saving that arises when government receipts unexpectedly exceed the actual amount of expenditure. Income flows in the economy (out of which government tax revenues arise) and the pacing of government spending programs are the dominant factors affecting government savings. The total supply of funds is sum of above three elements as SS on figure no. 2-1

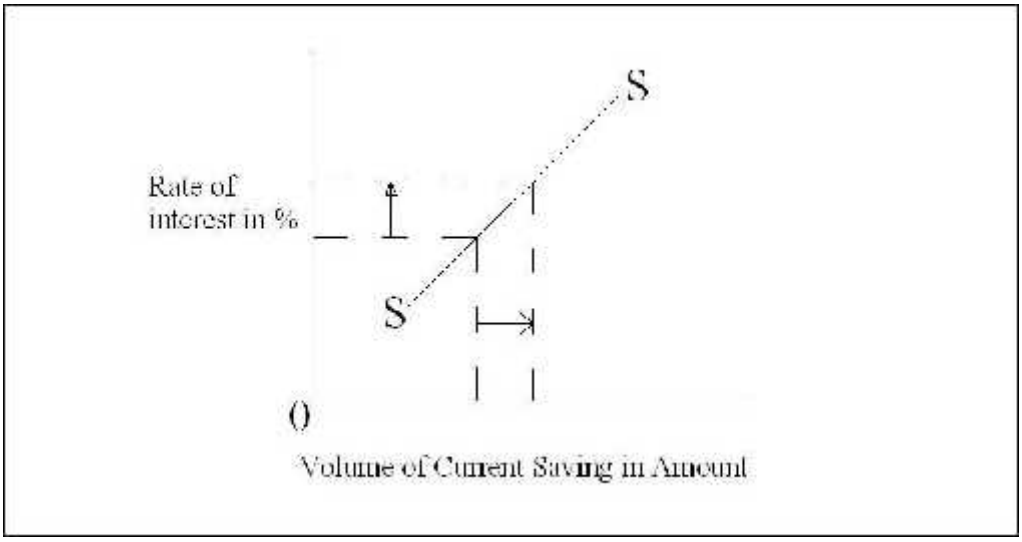


Fig. No. 2-1 the substitution effect relating saving & interest rates

The demand for investment funds

The savings made by business, government and households are important determinants of interest rate but they are only one side of determinants. The factor is investment spending made by business firms government and in some case households. Business requires huge

amounts of funds each year to purchase equipment, machinery and inventories and to support to construction of new buildings and other physical facilities. The majority of Business expenditures for these purposes consist of what economists, call replacement investment. But according to the classical economists, interest rate and invest able fund have inverse relationship. at low rate of interest more investment project become economically viable. On the other hand, if the rate of interest rises to high levels. Fewer investment projects will be pursued and fewer funds will be required from the financial market as figure no. 2-2.

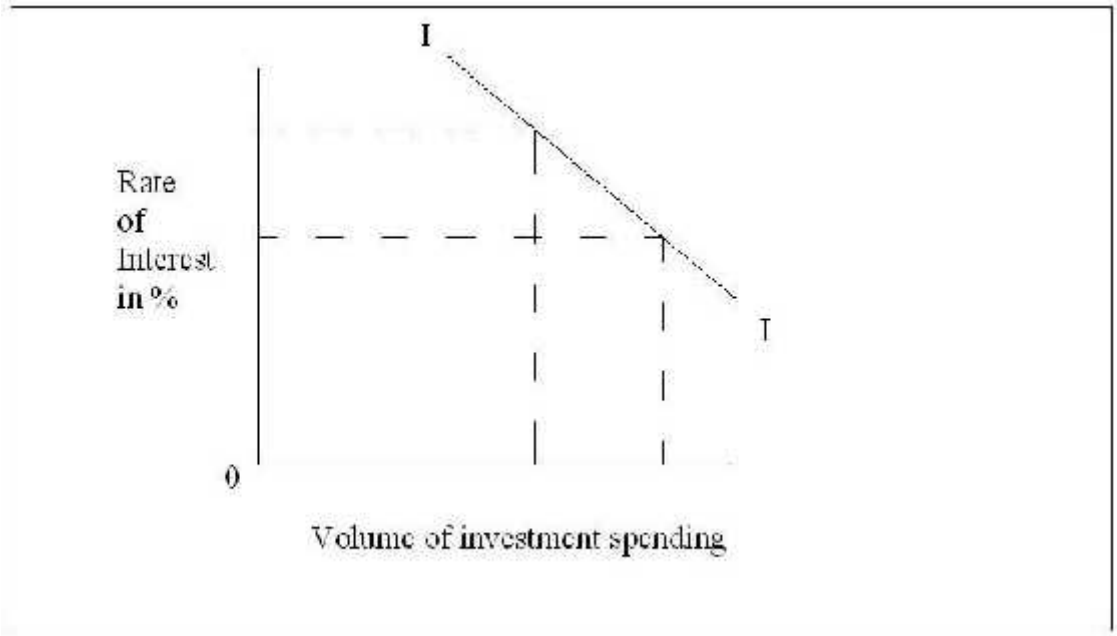


Fig. No. 2-2 the Investment Schedule

The Equilibrium Rate of interest in the Classical Theory of interest

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

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

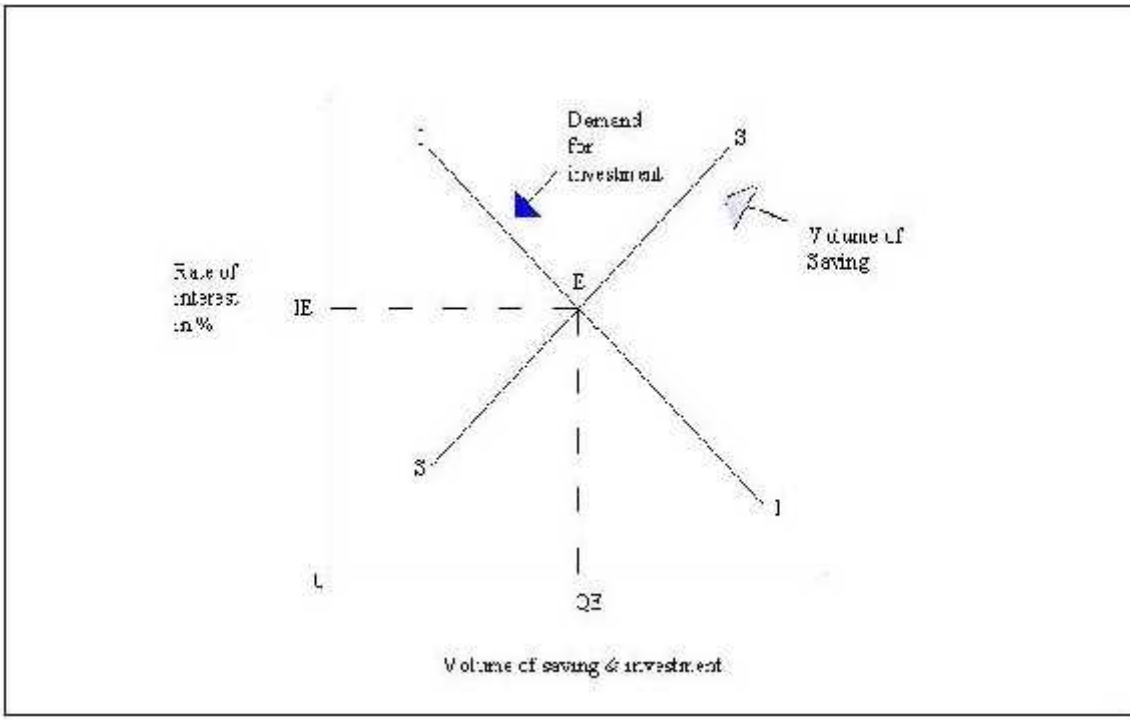


Fig. No. 2-3 the Equilibrium Interest Rate in classical Theory of Interest Rate

2.2.3.2 Liquidity preference or Cash Balance Theory of Interest Rates

During the 1930s, British economist Jhon Maynard Keynes (1936) developed a short-term theory of the rate of interest for that he, argued, was more relevant for policymakers and for explaining near- term changes in interest rates. This theory is known as the liquidity preference (or cash balances) theory of interest rates.

The Demand for Liquidity

The rate of interest is really a payment for the use of scarce resource money. Business and individuals prefer to hold money for carrying out daily transaction and also as a precaution organized future cash needs even though money's yield is usually low or even nonexistent. Investors in fixed income securities, such as government bonds, frequently desire to hold money or cash balances as a haven against declining assets prices. Interest rates, therefore, are the price that must be paid to induce money holders to surrender perfectly liquid assets and hold other assets that carry more risk. A time the preference for liquidity grows very strong unless the government explains the money supply, interest rate will rise.

In the theory of liquidity of preference, only two outlets for investor funds are considered bonds and money or cash balances. Money provides perfect liquidity. Bonds pay interest work but cannot be spend until converted into cash. If interest rate rise, the market value of bonds paying a fix rate of interest falls the investor would suffer a capital loss if though bonds were converted in cash. On the other hand, a fall in interest rate results, higher bond prices: the bond holder will experience a capital gain if his or her bonds are sold for cash.

Motives for Holding Money

Public demands money for three difference purpose.The transaction motive represents the demand for money to purchase goods and services. Some money also must be held as a motive for precautionary because future is uncertain and we cannot predict exactly what expenses of investment opportunities will raise in the future. The third motive is speculative motive that stems from uncertainty about the future prices of bonds.

Total Demand for Money

The total demand for money or cash balances in the economy is simply the sum of transaction, precautionary and speculative demands because the principal determinations of transaction and precautionary demands is income, not interest rate, these money demands are fixed at a certain level of national income. In the figure 2.4, DS is the aggregate demand for the economy.

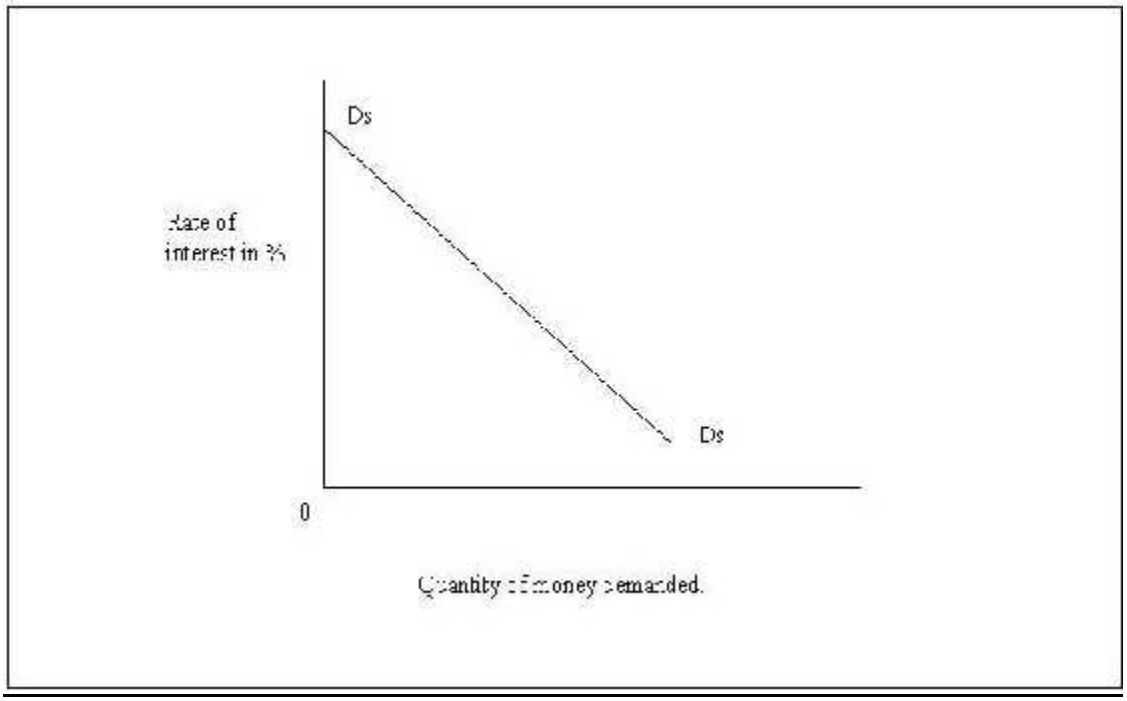


Fig. No. 2-4. The total Demand for Money

The Supply of Money

The other major element determination interest rate in liquidity preference theory is the supply of money. In modern economics, the money supply is controlled or at least closely regulated by government because government decision concerning the size of the money supply presumably are guided by the public welfare, not by the level of interest rate, the supply of cash balances is in inelastic to the rate of interest. Supply of money MS is shown in the figure 2.5 below.

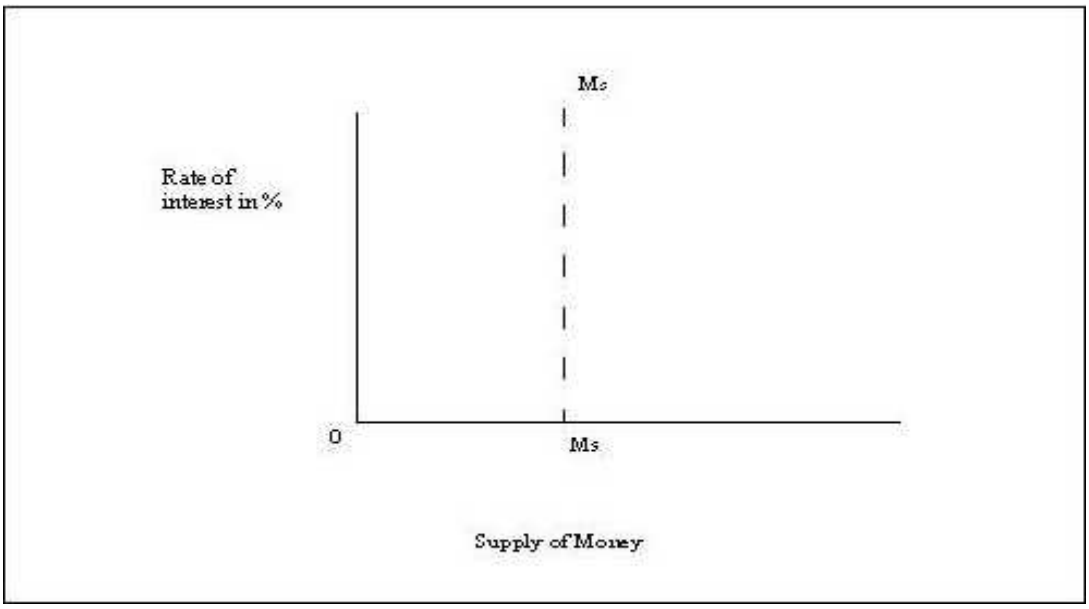


Fig. No. 2-5 the Supply of Money in Liquidity Preference Theory.

The Equilibrium Rate of Interest in Liquidity Preference Theory

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

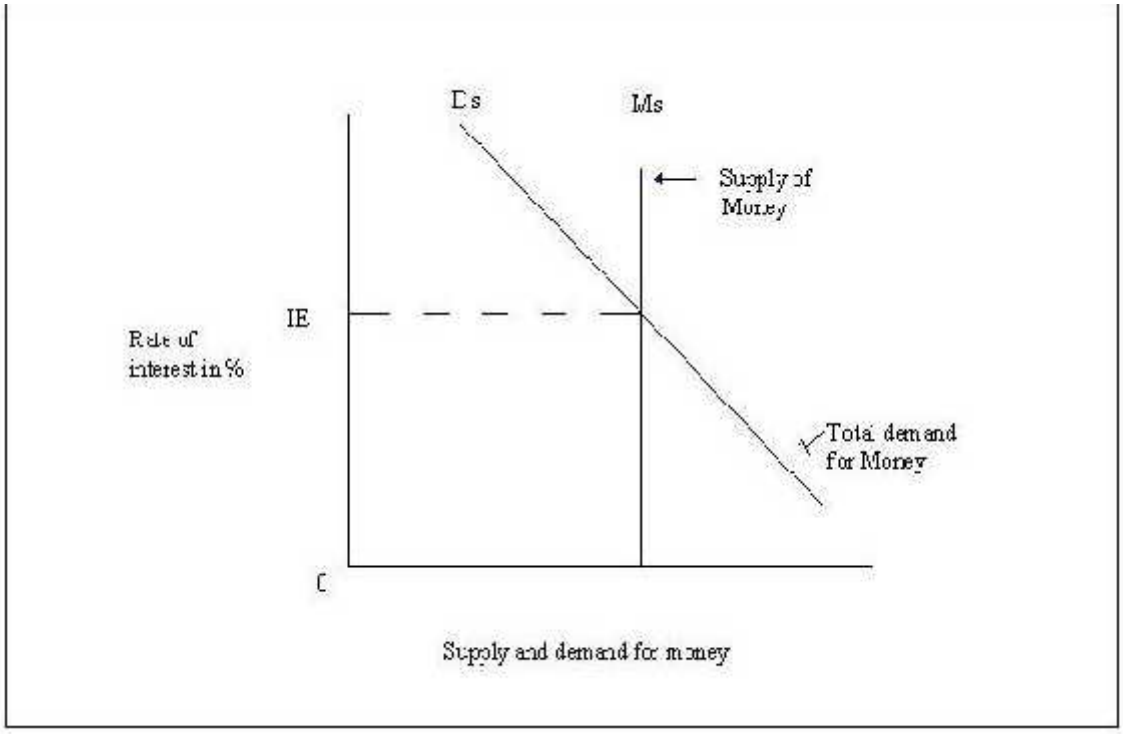


Fig. No. 2-6. The Equilibrium Rate of interest in the Liquidity Preference Theory

2.2.3.3 The Loanable Funds Theory of Interest

The loanable funds theory is the most popular interest rate theory among practitioners. It argues that the risk free interest rate is determined by the interplay of two forces: the demand for and supply of credit (loanable funds). The demand for loanable funds consists of credit demands from domestic business, consumers, and government, and also borrowing in the domestic market by foreigners. The supply of loanable funds stems from two sources domestic saving and new Money.

The Demand for Loanable Funds

Consumer (Household) Demand for loanable funds

Domestic consumers demand loanable funds to purchases a wide variety of goods and services on credit. Recent researches indicate that consumers are not particularly responsive to the rate of interest. When they seek credit but focus instead principally on the non price term of loan, such as the down payment, maturity and size of installment payment.

Domestic Business Demand for Loanable Funds

The credit demands of domestics businesses generally are more responsive to changes in the rate of interest than in consumer borrowing. Most business credit is for such investment purposes as the purchase of inventories, new plant and equipment. The quantity of loanable funds demanded by the business sectors increases as the rate of interest falls.

Government Demand for Loanable Funds

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

Total Demand for Loanable Funds

The total demand for the loanable funds is the sum of domestic consumers, business and government credit demands. These demand curves slopes downward and to the right with respect to the rate of interest. Higher rate of interest lead some businesses, consumers and government to curtail their borrowing plans, lower rates brings forth more credit demand. The total demand for loanable funds is shown in the following figure. 2.7 Where DT is total demand.

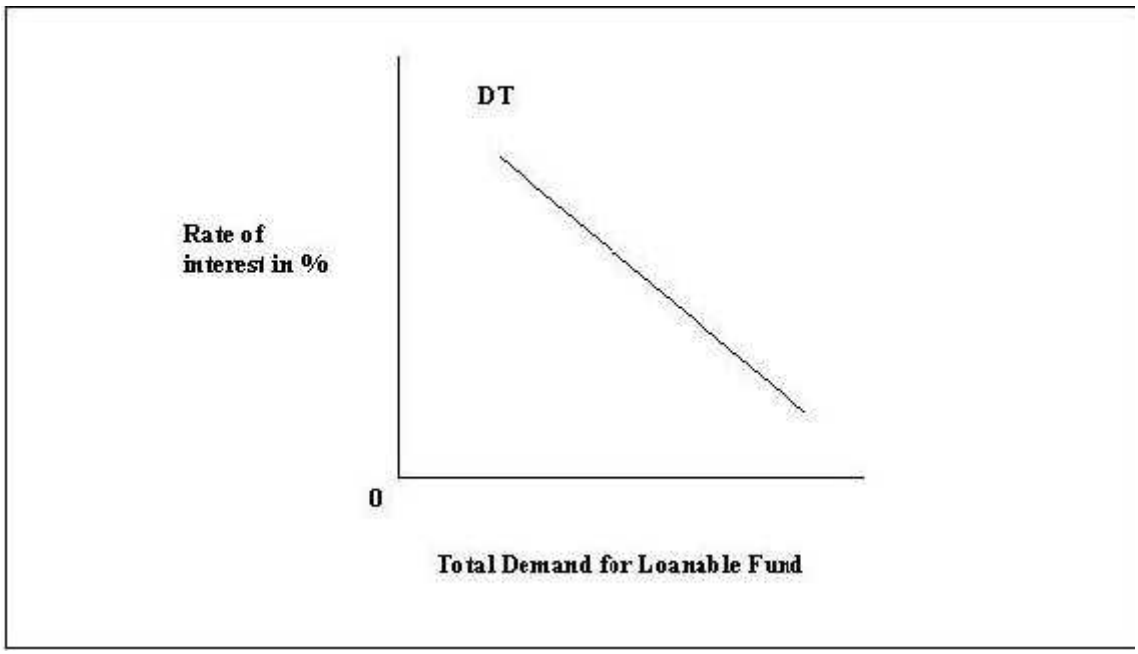


Fig. No. 2-7. The Demand for Loanable Fund

Supply of Loanable funds

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

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

Domestic Saving

Saving refers to the postponement of current consumption. The decision to save is the decision to forget current consumption in order to have a larger quantity of consumption in the future. Individual or household save for a variety of reason but there is little evidence to suggest that the quantity of loanable funds supplied through saving is clearly influenced by the level of the interest rate. A higher interest rate represents a greater reward to saver for postponing current consumption and thus might be expected to produce a higher quantity of saving for some individuals. In general case, the quantity of saving supplied by individuals is principally determined the level of income and it is influenced to lesser degree by the level of interest rates. Business saving refers to the net income after taxes of the firm, less any cash dividends i.e. retained earnings. There is little reason to believe that the volume of saving at business firm is strongly influenced

by the level of interest rates. For government, the volume of saving is defined as the difference between revenues and expenditures such that saving exists when revenues exceeds expenditures (A budged surplus).

Creation of New Money

Although the volume of saving is the principal sources of loanable funds in the financial markets, the supply of the loanable funds may be increased through the creation of new money beyond the amount made possible by current saving. The amount of new money created is determined jointly by the action of the financial institution system and the central bank. Financial institutions use any excess reserves to make loan and purchases securities and create money through the credit creation process. However, the ability of the financial institution to create money is limited by the central banks through the use of its monetary policy tools like open market operations, reserve requirement changes and discount rate changes.

Total Supply of Loanable Funds

The total of loanable funds, including domestic saving, foreign lending, dishonoring of money and new credit created by the domestic financial institution system in the following figure 2.8, the total supply loanable fund is given where ST is total supply.

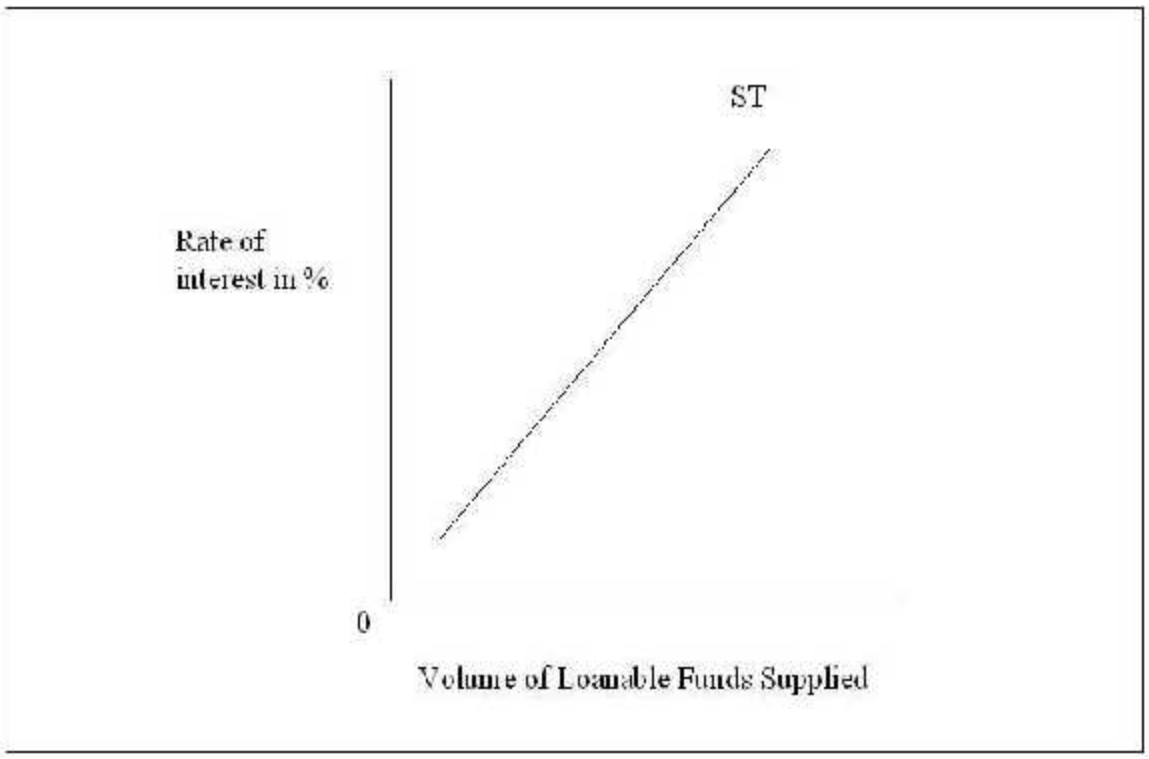


*Fig. No. 2-8. The supply of loanable Funds (Credit***)**

The Equilibrium Rate of Interest in the loanable funds Theory

The two forces of supply and demand for loanable funds determine not only the volume of lending and borrowing going on in the economic but also the rate of interest. The interest rate tends toward the equilibrium point at which the supply loanalbe funds equals the demand for loanable funds. This point of equilibrium is shown in the following figure 2.9 where IE is equilibrium rate of interest rate and OE is volume of loanable funds (Credit).

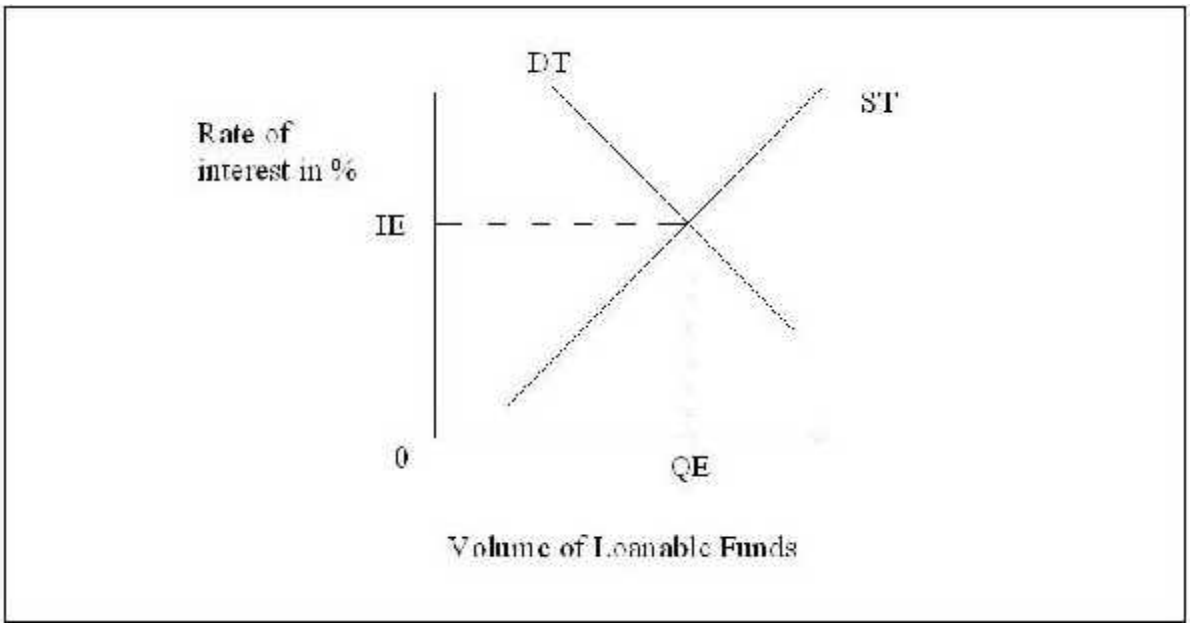


Fig. No. 2-9. The Equilibrium Rate of interest In Loanable Funds Theory.

2.2.3.4 The Rational Expectations Theory

The rational expectation theory is new for the financial markets and institutions. This theory builds on growing body of researches evidence that the money and capital market are highly efficient institutions in digesting new information affecting interest rates and security prices. This theory builds on a growing body of research evidence that the money and capital markets are highly efficient institutions in digesting new information affecting interest rates and securities prices. This expectation theory assumes that business and individual are rational agents who from expectations about the distributions of future assets prices and interest that do not differ significantly from optimal forecasts made from using all the available information that the market place provides rational agents attempt to make optimal use of the resources at their disposal to maximize their return. Moreover, rational agents will tend to make unbiased forecasts of future asset prices, interest rate, and other variables.

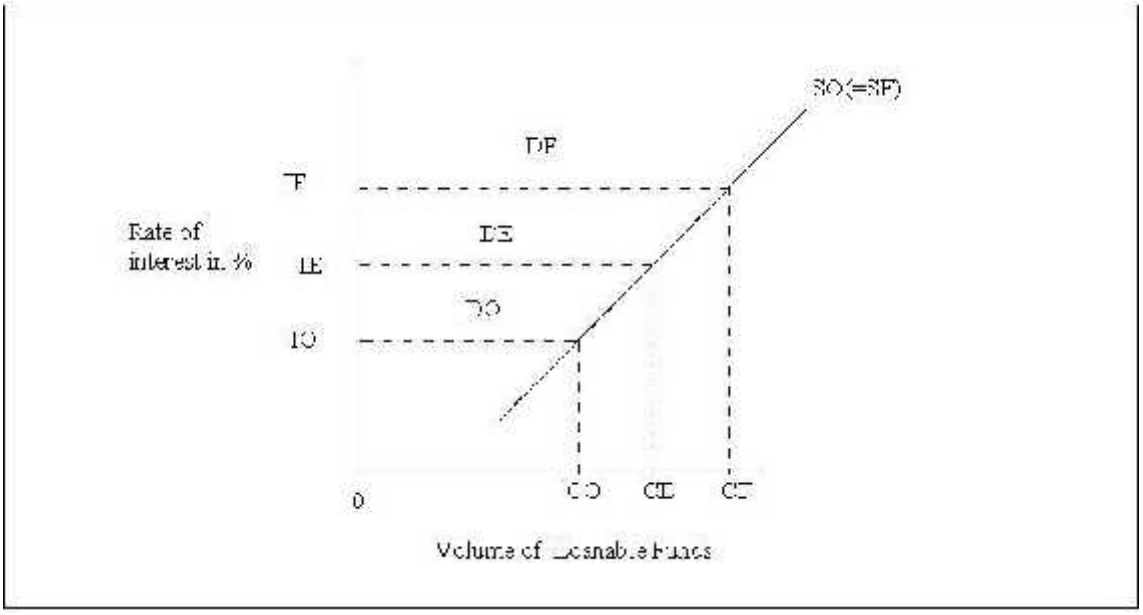


Fig. No.2-10, the Expected Demand and Supply of Loanable funds under the Rational Expectation Theory

Suppose in the above figure 2.10, so represent the actual supply and demand for loan able funds in the current period, while DF reflects the actual demand for loanable fund that will prevail in the next time period. The supply of loanable funds is assumed to be the same in both time period (SO=SR)

Now imagine that during the current periods, the government makes an unexpected announcement of its increased need to borrow more money in future period F due to an unusually large budget deficit. The result is now expected demand for loanable fund curve DE, projected to prevail in the next period F but as viewed by borrows and lenders today in time periods 0. In the case, the equilibrium interest rate in the current period will not be IO, but rather IE, where the expected demand curve (DE) intersects the actual supply curve SO. The equilibrium quantity of loanable funds traded in the current period then will be CE no CO. This is because, according to the rational expectations theory, borrowers and lenders will act as rational agents, using all the information them posses to assets today. When the future period arrives, the equilibrium interest rate will rise to rate IF and the quantity of the loanable funds traded will be CF. The equilibrium rate moves upward because the demand for loanable funds in periods F is more that the expected future loanalbe funds demand as seen by market participants, in period 0.

2.2.4 Interest rate change and its effect on assets price

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

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

The figure 2.11 shows demand and supply curves for both the rate of interest and the price of securities. The supply of loanable funds curve (representing lending) in the interest rate diagram is analogous to the demand for securities curve (also representing lending) in the price of securities diagram. Similarly, the demand for loanable funds curve (representing borrowing) in the interest rate diagram is analogous to the supply of securities curve (also representing borrowing) in the price of securities diagram.

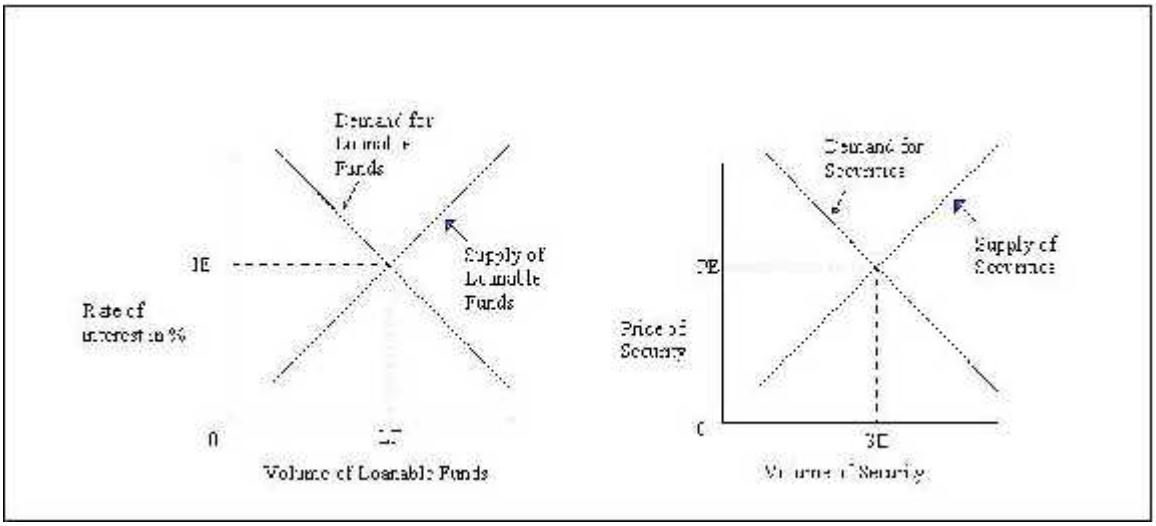


Fig. No. 2-11 and 2-12 The Equilibrium Security prices and Rates (Yields)

We note in figure 2.11, that borrowers are assumed to issue a larger volume of securities at a higher price and that lenders will demand more securities at a lower price. In figure 2.11, on the other hand, borrowers demand a smaller quantity of loanable funds at a lower interest rate. The equilibrium interest rate in figure 2.11 is determined at point IE, where the demand for loanable funds equals the supply of loanable funds equals the supply of loanable funds. Similarly, in figure 2.12, the equilibrium price for securities lies at point PE, where the demand for and supply of securities are equal. Only at the equilibrium interest rate and equilibrium securities price will both borrowers and lenders be content with the volume of lending and borrowing taking place within the financial system.

2.2.5 Factors affecting interest rates

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

Marketability

One of the most important considerations for an investor is whether a market exists for those assets he /she would like to acquire can an asset be sold quickly or most the investors wait some time before suitable buyers can be found? This is the questions of marketability and financial instruments traded around the world vary widely in terms of the ease and speed with which they can be converted into cash. Marketability is positively related to the size (total sales or total assets) and reputation of the institution issuing the securities and to the numbers of similar securities outstanding. No surprisingly, stocks and bonds issued in large blocks by the largest corporations and governmental units tend to find acceptance more readily in the global financial markets, and a consistent market price can be established. In fact, there is negative relationship between marketability and yield. More marketable assets generally carry lower expected returns then less marketable assets, other being equal. Punchers of assets that can be sold

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

Liquidity

A desirable quality of assets that are to be part of a precautionary reserve is liquidity. An asset is liquid if it can be turned into cash quickly without loss. 'Liquidity has two aspects. One is marketability. An asset is marketable if it can be sold quickly and low interaction cost. The second aspect might be called a well behaved price. Even if an asset is marketable, it is not liquid if selling it immediately, rather than waiting to sell, involves an expected loss. Marketability is closely related to another feature of financial assets that influences their interest rate or yield: their degree of liquidity. A liquid financial asset is readily marketable. In addition, its price tends to be stable overtime and it is reversible, meaning the holder of the asset can usually recover his/her funds upon resale with little risk of loss. Because the liquidity feature of financial assets tends to lower their risk, liquid assets carry lower interest rates than illiquid assets.

Default Risk

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

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

Call Privileges and Call Risk

Some corporate bonds mortgages, municipal revenue bonds, and federal government bonds carry privilege. This provision of a bond contract (indenture) grants the borrower the option to retire all or a portion of a bond issue by buying back the securities in advance of maturity. Bondholders usually are informed of a call through a notice in a newspaper of general circulation, while holders of record of registered bonds are notified directly. Normally, when the call privilege is exercised, the security issuer will pay the investor the call price, which equals the securities face value plus a call penalty. The size of the call penalty is set forth in the indenture (contract) and generally varies inversely with the number of years remain to maturity and the length of the call deferment period. In the case of a bond, one year's worth of coupon income is often the minimum call penalty required.

Prepayment Risk

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

Servicing Cost

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

Exchange Rate Risk

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

Taxability

The final factor influencing the change in interest rate is taxability. Financial claim income is typically subject to taxation. Since the value of a financial claims based on its anticipated cash flow, taxation acts to reduce those cash flows. No all incomes are taxable equally.

2.2.6 Deposit

2.2.6.1 Concept of Deposit

Deposit is a sum of money lodged with a bank, discount house or other financial institutions. Deposit is nothing more than the assets of an individual which is given to the bank for safe – keeping with an obligation to get something (interest) from it. To a bank these deposits are liabilities. Commercial Bank Act 2031 defines "deposits" as the amount deposited in a current, savings or fixed accounts of a bank or financial institutions. The deposits are subject to withdrawals by means of Cheques or on a short notice by customers. There are several restrictions on these deposits regarding the amount of deposit, number of withdrawal etc. They are used more as investments and hence they

earn some interest. The rate of interest varies according to the nature of deposits. The bank attracts deposits from customers by offering difference rates of interest and different kinds of facilities. Though the financial institution play an important role in influencing the customer to part with his funds and open deposit accounts with it, it is ultimately the customer who decides whether he/she should deposit his surplus funds in current deposit a/c, saving deposits or fixed /time deposits a/c. financial institutions deposits arise in two ways, when institutions receives cash, it credits the customer's account, it is known as a primary or a smile deposit. People deposit cash in the banking system and there by convert one from of money, cash, into another from, bank money. They prefer to keep their money in deposit accounts and issue cheques against them to their creditors. Deposits also arise when customers are granted accommodation in the form of loans. When a financial institution grants a loan to a customer it doesn't usually pay cash but simply credits the customer’s account with the amount of loan.

2.2.6.2 Types of Deposit

There are mainly three types of deposits in financial institutions in practice. They are as follows:

Current deposit: A current deposit is a running account with amounts being paid into and drawn out of the account continuously. 'These accounts are also called demand depositor demand liabilities since the banker is under an obligation to pay money in such deposits on demand. The account never becomes time barred, because the limitation does not run until a demand is made by the customer on the bank for the payment of deposit. These accounts are generally opened by business houses, public institutions, corporate bodies and other organizations whose banking transactions are numbers and frequent. As these deposit are payable on demand, banker is obliged to keep larger cash reserves than are needed in the case of fixed and savings deposits. This type of account is just a facility offered by the bank to its customers. So such deposit doesn't yield and interest return.

Saving Deposit: According to commercial Bank Act2031 saving account means "An account of amount deposited in a bank for saving purposes" The saving deposit bears the features of both of the current and fixed period's deposits. Saving accounts are mainly

meant for non trading customers who have some potential for saving and who don't have numbers transactions entering their account. While opening the account the minimum compensating balance differ according to the banks rule. The fixes the minimum and maximum amount of withdraw able through a cheque from this deposit. if the bank goes into liquidation, priority is given to the saving deposit than current and fixed deposits while repaying the liabilities.

Fixed Deposit: Under the commercial bank Act 2031, "Fixed account means an account of amounts deposited in a bank for certain period of time." The customers opening such amount deposit their money in the account for a fixed period usually, only the person or institution who wants to gain more interest opens such type of account. High interest rate is paid to this deposit as compare to saving deposits. The bank and the customer can take benefit from this deposit. The bank invests this money on the productive sector and gains profit and the customer too can be made his/her financial transaction stronger by getting more interest from this deposit. The principal amount with interest must be returned to the customer after expiry of fixed time. Bank generally gives loan up to 90% of the deposit against the security of the deposit. For this bank charge some interest higher than the interest allowed on the deposit.

2.2.6.3 Importance of Deposit.

An individual's income is divided into consumption and saving. Deposit arises from saving. S/he deposits the saved part of income in the bank and gets interest from it. Banks in turn lend this money and earn profit by charging high interest rates. And the borrowers from banks, invests, this fund in productive sectors yielding more return than the borrowed interest. This investment leads to create new employment opportunity in the economy. Ultimately due to new employment the purchasing power of the economy increases and finally GDP of the country occurs. It means that the deposit has very important role in the economy. There is a direct relationship between deposit of banks and the investment in the economy. If the volume of deposit is low, the investment in the economy also lags behind due to lack of resources. The deposit of banks is the accumulated capital which can directly be invested. There is a great need of such deposit

in the developing countries. Deposits include the idle money of the public, bank being the inter-mediator to adept this sort of money and help to channelize this in productive sector. So the importance of banks and financial intermediaries is larger in present context.

2.2.6.4 Life Cycle Pattern of Saving

Some people have purchasing power now but want purchasing power later. Other expects to have purchasing power later but want purchasing power now. This type of trade is called diversity. In the figure one's income is shown initially it will rise rapidly, reaching a plateau in middle age than it will drop when you retire.

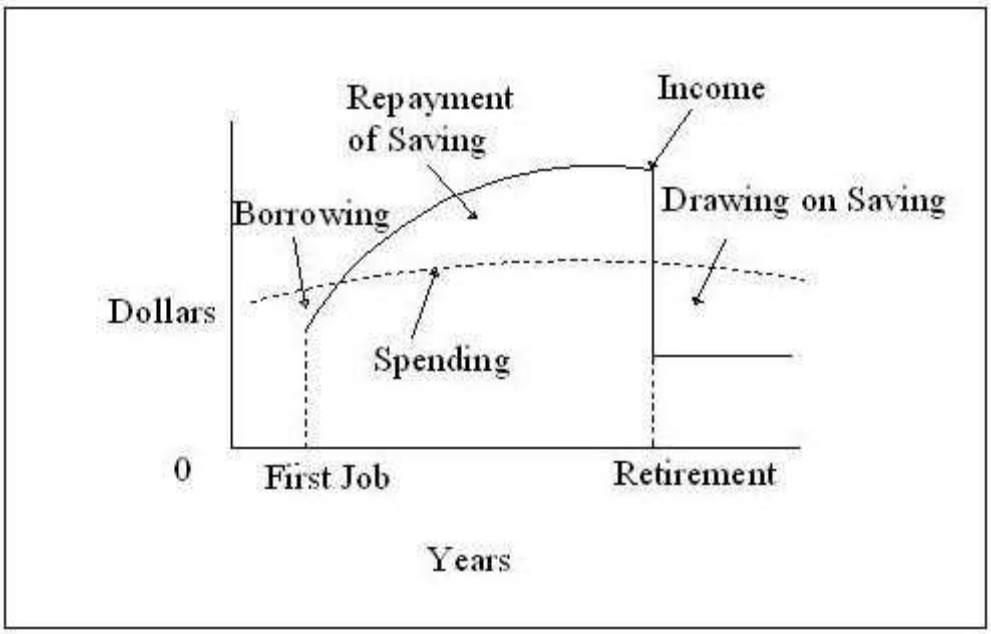


Fig. No. 2-13, The Life Cycle pattern of Saving

Above figure shows the path you're spending will take over your life time. As you can see, it differs substantially from then path of your income you will likely spend more than your income while you are young borrowing the difference. During your peak earning years, you will repay what you have borrowed and some for your retirement. After you retire, you will spend more that your income, drawing on your savings. This pattern of borrowing saving and drawing on savings, which is very typical, is called the life cycle pattern of saving.

2.2.7 Lending (Credit)

2.2.7.1 Concept of Lending

The word 'credit' means 'trusting'. In credit transaction the lender (or banks) must have confidence in the borrower that s/he will be able to repay the money. In credit transactions, the creditor turns over to the debtor to repay an equivalent amount usually money in future plus as added sum called interest. In other words the financial institution earns profit by lending the amount in terms of loan or credit and in return it gets interests. Financial institutions loan are classified as: (1) loans and advances (2) Overdrafts (3) Cash credit (4) Discounting of bills and so on. But besides this, the other forms of credit are: Bills Exchange, cheques, Drafts, Promissory Note, Letter of credit (LC), Travelers Cheque, Treasury bills (T- Bills), Book credit etc.

If credit is made to the government the credit is known as public credit and if credit is transacted by the private for his own purpose the credit becomes private. There are certain distinctions between public and private credit. Financial institutions credit refers to the credit taken by the financial institutions. Financial institution is major sources of credit to both private and public debtors. Sometimes financial institution also takes credit. There is another type of credit know as investment credit and commercial credit. Which can be divided according to the purpose of using credit? The former refers to the credit which is used for investment and the later for trade purposes. Similarly, other classification is consumer's credit and producers' credit.

2.2.7.2 Factor affecting the volume of credit

The volume of credit within a country depends upon different factors.

- **Credit Rate:** If the financial institution rate is very high then, the volume of credit expansion is less and vice versa. It means that volume of credit and interest

rate of credit has inverse relation. People invest very little in productive sectors when the interest rate is high in the market economy.

- **Rate of Return:** If the rate of return is high people inclined to invest more. People earn more profit and they become able to afford higher rate of interest along with timely repayment of loan.
- **Investment Opportunity:** If the investment opportunity within the country is high, the volume of credit becomes high, the basic thing for investment stimulation is easy and cheap credit etc.
- **Pace of Financial Development:** If there is enough financial institution facilities to provide loans in easy terms, the volume of credit may be high. It is due to the lack of cheap money lenders that rural people are deprived of loan. If the financial institution facility within the nation is expanded, the volume of credit rises.
- **Basic Infrastructure:** Like transportation, marketability, availability, of raw materials also plays an important role in raising the volume of credit in the country.
- **Political Condition**: Political condition, especially political instability, is also one of the major causes of low volume of credit. In such a case none would like to risk his/her capital in new venture. The present condition of the country is the glaring example of this.

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

2.2.8 Financial Institution Industry

The dominant privately owned financial institution in the world is the commercial bank. This institution offers the public both deposit and credit services, as well as a growing list of newer and more innovative services, such as investment advice, security underwriting, selling insurance, and financial planning. The name commercial implies that banks devote most of their resources to meeting the financial needs of business firms. In recent decades, however, financial institutions operating hundreds or thousands of branch offices, the U. S. system is dominated by thousands of small financial institutions. It is

financial departmental stores of the financial system. They offer a wider array of financial services than any other financial institution, meeting the credit, payments and savings needs of individuals, businesses and government.

2.2.9 Interest Spread

Interest spread is the difference between weighted average rate of interest on lending on interest earning assets and weighted average rate of interest on interest paying liabilities. According to Nepal Rastra Bank the interest spread should not exceed 5% currently. It can be calculated as follows:

Interest Spread = Interest Income /Earning Assets – Interest exps/ Interest paying liabilities.

2.3 Review of Thesis

Before this study, there are few thesis and research papers submitted to the libraries of TU and its wing collages on the same topics or to the similar topics. The Review and the conclusions from them are presented in this section.

A study in entitled "Money, Interest rate & Financial Development in Nepal"

Conducted by **Guru Prasad Neupane in 1997** Mr. Neupane is of the view that interest rate is one of the most important devices for resource mobilization and interest rate plays a major role in the financial development in Nepal. HE view that institutional interest rate are lower in our country. This caused implances between credit demanded and supplied. This fact derived proper people from getting enough credited facilities. On the other hand, financial institutions are providing credit facilities only for trade and commercial purpose. Finally he makes the conclusion that to mobilize the resources and to divert them into productive work; institutional interest rate should be higher.

Narendra Bahadur Rajbhandari was conducted a study on "The interest rate structure of commercial Banks in Nepal" in1978. The objective of his study was to show the relation of interest rate which saving and fixed deposits, with loans and advanced, and with interest earning (i.e. interest received on loan minus interest paid on deposit).

His analysis concludes that the time deposits are positively and significantly correlated with interest rates. There is significant correlation between the saving deposits and the rate of interest. Fixed deposit is more sensitive to the interest rate revision done by NRB. The correlation between the growth of fixed deposits and the interest rate particularly from 1974 -1977 is most significant. The net interest earnings is depended upon interest coverage. The total interest received and the total interest paid significantly correlated in the case of both of the banks i.e. Nepal Bank Limited and Rastriya Banizya Bank, the sample organization of the study. He is in view that NRB can well monitor the credit flow and profits of the commercial banks in Nepal by manipulating the rates of interest. It can also manipulate the demand and supply of money.

Deepak Raj Bhandari (1978), in his study entitled "The Impact of Interest Rate Structure on Investment Portfolio of commercial Banks of Nepal", has concluded followings:

- Rate of commercial banks has been fluctuating. Deposits and lending rates were increased immediately after liberalization of the interest rate on August 31, 1989 but, however, started to decline which have helped in increasing the credit flow.
- Interest rate structure has direct influence on profitability of commercial bank. Decreasing lending rate helps to increase the profitability through increasing the credit.
- Deposits are more interest rate conscious and positively correlated.
- Loans and advance of commercial banks have been found to be continuously increasing with the decline in interest rates.

Rameshwori Pandey in 1979 was conducted a study on "Money Supply, Level of Price and Interest Rate Structure" taking objective to show the relationship among money supply, price level and interest rate structure. She has analyzed the factor affecting money supply and price level. But she has explained the interest rate history showing what NRB had done to interest rate rather than showing the relationship of interest with price level

and money supply. It might be relevant because interest rate, at that time, was fully controlled by NRB.

Kishor Khatri in 1980 was conducted a study titled "Interest Rate Structure and its Relation with deposits Inflation and credit in Nepal" The objective of his study was to show the relationship between interest rate and other economic variables like deposits, inflation and credit flow. His study concludes the followings:

- Keeping other variables constant, the institutional interest rate is the important explanatory variable to influence the volume of deposits in Nepal. This means that upward movement in the interest rate on deposits increases the volume of deposit.
- The relationship between income and interest rate and between inflation and interest rate could not come significant.
- He found that the price level of Nepal is linked with Indian prices and also found very high inflation (10 to 17 %) during his study period.
- He also finds out the negative relationship between credit flow and loan rate.

His suggestion to commercial Banks is to fixed the concessional interest rate in order to promote the cottage and small scale industries, and to monetarists to consider the rate of inflation while determining the interest rate on deposits.

Another study conducted by **Neeta Dongol** in 2003 on the" Impact of Interest Rate on financial performance of commercial Bank" concludes:

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

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

Yam lal Bhoosal, carried out a study entitled "An Analysis of Causes of Inflation in Nepal" in 1995. He has shown the relationship of Inflation with various factors like growth rate, Indian Inflation and price level, income level, cost of holding money,
Deficit financing. But all of these, he did not mentioned any relationship of inflation with interest rate.

A study made on the topic, "Determinants of Interest Rates in Nepalese financial market" By **jhabindra pokheral** in 2004 also gives some ideas about the interest rates in Nepalese financial markets. Though, this thesis tried to identify the factors that shape the interest rate in Nepalese markets, it also tried to explore the relationship between the interest rate, deposits, credit rates and inflation. Some objectives of this study are as follows:

- To show the relationship between the liquidity position and interest rate on deposit and lending
- To identify the effect of inflation on interest rate charged and offered by various Nepalese financial institutions.
- to identify the different methods use by Nepalese financial Institutions to calculate interest on lending
- How the interest rate offered on deposit affected by maturity period and other economic factors.
- To identify the other major quantitative factors determining the interest rate charged and provided by Nepalese Financial Institution.

According to the research, the major findings are: The correlation coefficient between interest rate on deposit and amount of deposit collected of all sample organizations were highly negative. It means that, deposit amount of all sample banks are found to increase even if the interest rate of the deposit, the attracting factors for deposit, is decreasing this is against the theory. According to theory, there must be positive relationship. Similarly in case of lending rate and lending amount, Mr. Pokharel found the result as suggested by the theory. It means, the correlation coefficient between amount loaned and interest rate on lending of 10 sample bank is found to be highly negative. In other words, negative coefficient of other organizations means that more amounts is demanded at lower interest which means that when demand increases, price (interest rate on lending) also increases. In the same manner, the researcher explored that the relation between interest rate on deposit and inflation rate is little positive. Theoretically there should be positive correlation between these two variables.

Another study made by **Mr. Sanjeev Parajuli** on the topic, "Interest Rate and Its Relation with Deposit, Lending and Inflation in Nepal", in 2005. His main objectives of the study were as follows:

- To explore the relation of interest rate with deposit amounts (existence of substitution effect) in Nepalese market.

- To identify the sensitivity of interest rate to the investment (borrowing).

- To find out the relationship of interest rate with inflation in Nepalese market.

According to the researcher the interest rate on both deposit and lending of all sample banks are found to be in decreasing trend. Theoretically there is positive relationship between saving amount and saving interest rate but here negative relationship has found. It states that there is no substitution effect in Nepalese Financial Market. Analysis of fixed deposit amount and fixed interest rate shows negative relationship except RBB and NBL. Theoretically, there is negative relationship between lending interest rate and lending amount. In this study for the 5 sample banks, it is found that all sample banks

expect NBL have negative correlation between these two variables. The relationship between interest rate on deposit and inflation rate is positive. Similarly, the correlation between interest rate on lending and inflation rate is found to be moderately positive. He also concluded that the spread between deposit interest rate and lending interest rate is in decreasing trend.

2.3.1 Review of Journals and News Papers

Board of Directors of NRB, **Prof. Dr. Parthibeshwar Prasad Timilsina** (NRB News Volume 3rd, March 2007:6) Interest is the cost of borrowing and the interest rate is the rate expressed as a percentage of the total sum borrowed, for a stated period of time. All business organizations or individuals are responsive to interest rate of banks and financial Institutions in one way or another. A variety of interest rate risk exists in the financial markets. However, in the context of Nepal, interest rate is regulated by the central bank during the early stage of financial market development taking the period from 1955 to 1965. But, the country's central bank namely Nepal Rastra Bank gradually began to liberalize the determination of interest rate on a phase- wise basis according to compatibility of the banks and the financial institutions that have developed in the country. In the early mid 1980's the country has adapted liberal economic policy. Number of finance companies and commercial banks began to develop and government made the liberal policy in maintaining the interest rate structure .Liberalization in determining market interest rate wore encouraged for commercial banks, established under joint venture in association with foreign banks in private sectors. Similarly deregulation of interest rate was applied to under financial companies established finance company acts. Likewise other financial institutions like development banks, micro financial institutions. NGOs and licensed cooperative under, NRB were also made competitive in the determination of interest.

NRB Directives and interest rate in Nepal (NRB News Volume 2nd, February 2007:6)

The central bank is sole and whole institution authorized to determine the interest rate as per NRB act for a large number of years. There are full discretions to NRB in determining interest rate structure of banks and financial institutions taking from the period 1960 to 1975. still NRB is empowered in the fixation of interest rate which

commercial banks and financial institutions have to follow although they can provide higher rate after fulfilling the minimum interest rates set by Nepal Rastra Bank.

On 16 November 1984 government had provided autonomy in offering the interest rate on saving and time deposit of the extent of 1.5% and 1% points respectively above the prevailing rates. In 1986, financial institutions got freedom in fixing her interest rate in the deposits and loan. In addition, there was also, limitation on the interest rate amounts different loans on preferred to the productive an priority and full deprived sector

However, there was limitation imposed on certain sectors of lending such as the rate of maximum of 15% on the priority sectors loan. And for other kinds of loans financial institutions were given freedom to maintain. The interest rate structure. In this way government provided freedom as well as limitation on the determination of interest rate.

On August 22, 1992, Nepal Rastra Banks issued some directive to commercial banks and financial institutions to clearly spell out the interest rate on deposits. Nepal Rastra Bank also instructed the bank and financial institutions to limit their interest rate spread on deposit and credit at 6% within the mid December 1993. A further instruction to banks and financial institutions was issued in 2002, and now the interest rate spread required to be maintained by commercial banks and financial institutions has also been removed. The following chart shows development of interest rate in the Nepalese Financial markets.

2.4 Research Gap

The Review of relevant literature is supposed to contribute to enhance the fundamental understanding and knowledge, which is required to make the study meaningful and positive. There has been very few research work done on the interest rate Impact on deposit lending of Nepalese financial market. Most of them have used old or outdated data and therefore there research works has a very little applicability in real life. Further, importance of graphical analysis has been hugely neglected. The objective of this study is not only to analyze the relationship among interest, deposit and lending but also to evaluate the credit policy of Nepalese financial market and its effectiveness. This thesis

has covered the period of study till 2008 where as the previous thesis work covered only up to 2006. Effort has been made to employee the latest data as far as possible giving more importance on graphical presentation. It is found that the previous studies used only five years data where as in this research work seven year's data have been used.

CHAPTER-THREE

RESEARCH METHODOLOGY

3. Introduction

Research Methodology is a systematic way to solve the research problem. in other word, research methodology describes the methods and process applied in the entire aspect of the study . Research Methodology refers to the various sequential steps (along with a rational of each steps) to be adopted by researcher in studying a problem with certain objectives in view (Kothari. 1994. p. 9). Thus the overall approach to the research is presented in this chapter. This chapter consists of research design. Sample size and selection process, data collection procedure and data processing techniques and tools. So suitable research methodology according to the demand of the study is presented below.

3.1 Research Design

A research design is a specification of methods and procedures for acquiring the information needed. It is the overall operational pattern of frame work for the project that stipulates what information is to be collected. From which sources and by what procedures (Paul & Donald. 1999, p. 134). Thus a research designs in a plan for the collection an analysis of data. For research there exists a different type of research design like: Historical research, Descriptive research, Case study research, Field study research, analytical research, and True experimental research and so on. This study mainly concerned with historical research. If applicable, sometime descriptive and analytical approach may also be used. But generally, to show the relationship of interest rate with deposit amount and inflation rate, past historical data are used. The relevant and needed data has been collected from various publications of different financial institutions and Nepal Rastra Bank data are used. The relevant and needed data has been collected from various publications of different Financial Institutions and Nepal Rastra Bank.

3.2 Research Hypothesis

Testing of hypothesis is one of the most important aspects of the research study. It is quantitative statement about the population parameter. In other words, it is an assumption

that is made about the population parameter and than its validity is tested by testing the hypothesis .We can find out whether it deserves the acceptance or Rejection of the hypothesis. The acceptance of hypothesis means there is no any sufficient evidence provided by the sample to reject it and does not necessarily imply that it is true. The main goal of testing of hypothesis is to test the characteristics of hypothesized population parameter based on sample information whether the difference between the population parameter and sample statistic is significant or not (Sharma & Chaudhary, 1998, p. 229).

The hypotheses formulated for this study are as follows

First Hypothesis:

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

Alternative hypothesis H_1: $\rho \neq 0$ that is Population correlation coefficient is not equal to zero. In other words, the variables (deposit interest rate and deposit amounts) are correlated in Nepalese financial market.

Second Hypothesis:

Null hypothesis H_0: $\rho = 0$ that is population correlation coefficient is zero. In other words, the variables (credit interest rate and credit or loan amounts) are not correlated in Nepalese financial market.

Alternative hypothesis H_1: $\rho \neq 0$ that is population correlation coefficient is not equal to zero. In other words, the credit interest rate and credit or loan amounts are correlated in Nepalese financial market.

Third Hypothesis:

Null hypothesis H_0: $\rho = 0$ that is, population correlation coefficient is zero. In other words, there does not exist any correlation between interest rate on deposit and interest rate on lending.

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

Fourth Hypothesis:

Null hypothesis H_0**:** $\rho = 0$. Population correlation coefficient is zero. In other words, the variables in population (inflation and interest rate on deposit) in Nepalese financial market are not correlated.

Alternative hypothesis H_1: $\rho \neq 0$ that is the variables in population (inflation rate and interest rate on deposit) in Nepalese financial market are correlated.

Fifth Hypothesis:

Null hypothesis H_0: $\rho = 0$ that variable in population (inflation rate and interest rate on lending) in Nepalese financial market is not correlated.

Alternative hypothesis H_1: $\rho \neq 0$ that is the variables in population (inflation rate and interest rate on lending) in Nepalese financial market are correlated.

3.3 Population and Sample

The term population or universe for research means the universal of research study in which the research is based (Wolf & Pant, 2000: 75). Since research topic is about interested rate. All the lending and depository institution of Nepal are member of population study. The population for the study comprises 26 commercial banks, 58 Development banks, 79 Finance companies, 51 Saving and credit cooperatives, one employee provident fund and other 47 non-Government financial organizations. Among the total population only some selected institutions are taken as sample on random basis similarly due to unavailability of data from all the sectors. only 2 commercial banks and 2 finance company are chosen for this study. So precisely saying , all 26 commercial banks and 79 finance company are the population of this study and among them only 2 commercial banks and 2 finance company are chosen as samples from total population for selecting the samples, Simply random sampling method is used here among different

methods. Organizations under study are as follows whose general introduction and major objectives are presented in chapter one.

- Nepal Bank Limited (NBL)
- Agriculture Development Bank (ADB/N)
- Bhajuratna Finance and saving Company(BFSCO)
- United Finance Company(United)

3.4 Data Collection Procedure

Basically secondary data are used for the requirement of this study. These data are collected from the published source like annual reports, prospectus, internet search, balance sheet, newspaper, journal and other sources. Beside this some of the data are collected from direct interview and observation, Some of the data published on annual report like, interest rate, amount as well as their organization profiles are collected from their web sites, some secondary data are comparatively studies and collected from Nepal Rastra Bank.

3.5 Data Processing and Presentation

The information or data obtained from the different sources are in raw from that information. Direct presentation is not possible. So it is necessary to process data and converts it into required from after than only the data are presented for this study. This process is called data processing. For this study only required data are taken from secondary source (banks and finance co. publication) and presented in this study. For presentation different tables are used, similarly, in some case graphical presentation is also made for reference, the photocopies of raw data are attached in the last portion of this thesis. So far as the computation is concerned, it has been done with the help of scientific calculator and computer software program.

3.6 Data Analysis Tools

In order to get the concrete results from this research, data are analyzed by using different types of tools. As per topic requirements, emphasis is given on statistical tools rather than financial tools. So far these studies following statistical tools are going to use.

Arithmetic Mean

It is the sum of all the observations divided by the number of observations. In such a case all the items are equally important (Pant & Chaudhary, 1999:.91). As arithmetic mean is most common and popular tools for data analysis, here in this study also arithmetic mean is used. It is computed by using following formula:

Mean ($\bar{X}$) = $\frac{\sum X}{n}$ Where $\bar{X}$ = Mean

$\sum X$ = Sum of variable X

n = Total variable

Standard Deviation

The standard deviation is the best tools to study fluctuation in any data. It is usually denoted by the letter sigma (σ). Karl Pearson suggested it as a widely used measure of dispersion and is defined as the positive square root of their arithmetic mean of squares of the deviation of the given observations from their arithmetic mean of a set of value (Gupta, S. C '2000':380). It can be computed by using following formula.

S.D (σ) = $\sqrt{1/n \sum (X - \bar{X})^2}$

There will be higher fluctuation when the Magnitude is greater and vice versa.

Coefficient of Correlation

By this statistical tool, the degree of relationship between to variables is identified. In other words this tool is used to describe the degree to which one variable is linearly related to other variables. Two or more variables are said to be correlated if change in the value of one variable appears to be linked with the change of other variables. The correlation analysis refers the closeness of the relationship between the variables (Sharma, P. K.'2000' p. 420). Correlation may be positive or negative and range from -1 to +1. Simple correlation between interest rate and credit or lending amount and interest rate (both deposit rate and lending rate) and inflation is computed in this thesis. For

example, let's say that the correlation between interest rate and inflation is positive. It indicates that when inflation increases, interest rate also increases in same direction and vice versa. For our study following reference is used (Pant, & Chaudary, 2053, p.360).

- Correlation may be positive or negative from -1 to +1, When r = +1, there is positive perfect correlation; when r = -1, there is perfect negative correlation; when r = 0, there is no correlation and when r < 0.5 then there is low degree of correlation.
- When r lies between (0.7 to -0.999), there is high degree of positive (or negative) correlation.
- When 'r' lies between 0.5 to 0.6999, there is a moderate degree of correlation.

The simple correlation, 'r' is calculated by using following formula.

Correlation Coefficient (r) = $$\frac{n\sum X_1X_2 - \sum X_1 \sum X_2}{\sqrt{\sum nX_1^2 - (\sum X_1)^2}\sqrt{\sum nX_2^2 - (\sum X_2)^2}}$$

Alternatively, r = $$\frac{Cov(X_1X_2)}{\sigma X_1 \sigma X_2}$$

Where

Covariance (X_1, X_2) = $$1/n\sum(\bar{X}1 - X_1)\sum(\bar{X}_2 - X_2)$$

n = Total number of observations.

X1 and X_2 = two variables, correlation between them are calculated.

Multiple Correlation Coefficient ($R_{1.23}$) =

$$\sqrt{\frac{r_{12}^2 - r_{13}^2 - 2r_{12}r_{13}r_{23}}{1 - r_{23}^2}}$$

Where:

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

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

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

Multiple correlations are used for the measure of degree of association between one variable and a group of other variables as the independent variable. It lies between 0 and 1, the close it is to '1' the better linear relationship between the variables. The closer it is to '0', the worse is the linear relationship (Gupta, 2000, p. 115).

Coefficient of Multiple Determinations

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

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

t- Test for significance of sample correlation coefficient:

If ' r' is the observe sample correlation coefficient of 'n' pairs of observation from bi-vibrate normal population, the test statistics for significance of correlation under Null hypothesis is given by.

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

Here, (n-2) = Degree of freedom (d.f)

n= sample

t= t- distribution

i.e. t follows t- distribution with n-2 degree of freedom 'n' being the sample. If the calculated value of the't' exceed to $t_{0.05}$ for (n-2) d.f: the value of 'r' is significant at 5% level. If $t' < t_{0.05}$ the data are consistent with the hypothesis of an uncorrelated population.

CHAPTER- FOUR

PRESENTATION AND ANALYSIS OF DATA

4. Introduction

This is an important section where calculated data are presented and analyzed. This is the one of the major chapter in this study because it includes detail analysis and interpretation of data from which concrete result of Nepalese market can be obtained. Without this the study becomes incomplete. In this chapter, the relevant data and information necessary for the study are presented and analyzed keeping the objectives set in mind. This chapter consists of various calculation made for the analysis of interest rate and its effects on deposit amount lending amount, and inflation rate for the sample banks and financial institutions. To make our study effective and precise as well as easily understandable, this chapter is categorized in three parts; presentation, analysis and interpretation section data are presented in terms of table, graph chart of figures, according to need. The presented data are then analyzed using different statistical tools mentioned in chapter three. At last the results of analysis are interpreted. Through there is no distinct line of demarcation for each section (like presentation section, analysis section & interpretation section) but the arrangement of writing is made by aforementioned wary.

Similarly it is also noted that almost all data used for analysis are of secondary type. In order to find out from the study the presented data are in tabular and in chart from according to the need of the study and they are analysis with suitable statistical tools, then after fully analysis interpretation is made in order to develop effective suggestion for the study. Similarly, presentation analysis and interpretation of data are made according to the nature. In other word, at first relationship of deposit and interest rate and credit (lending) amount is made. Lastly the relationship between interest rate and inflation is presented. While analyzing, different statistical tools like correlation coefficient, coefficient of determination, t-statistics for significance are employed.

4.1 Analysis of Lending, Deposit and Interest Rate

In this section, detail study is made about deposit amount, lending amount and interest rate of various banks, for this study only saving and fixed deposits are considered because current deposit doesn't earn any interest. Lending is second are of the analysis where mainly the relationship between lending interest rate and its effect upon lending amount is measured. Generally, when there is higher interest rate (esp. lending or credit rate) in the economy, people normally borrow lesser amount than the period when lending interest rate is low. According to theory, when there is low lending rate, then there should be higher amount of borrowing. Higher amount of borrowing indicates higher investment in the country or higher transaction in trade. This is necessary for the growth of the economy. So this study tries to explore the relationship between lending rate amounts in Nepalese context.

4.1.1 Nepal Bank Limited (NBL)

4.1.1.1 Interest Rate and Its Impact on Deposit on NBL

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

Interest rate structure on deposit of NBL as on Mid- July

Table no. 4-1

Deposit	2002	2003	2004	2005	2006	2007	2008
Saving	5.50%	5.00%	4.75%	2.50%	2.50%	2.00%	2.00%
Fixed							
7 days	2.00	2.00	2.00	-	-	-	-
14 days	2.50	-	-	-	-	-	-
1 month	3.50	3.50	3.25	2.50	2.25	2.00	2.00
3 months	4.00	4.00	3.75	3.00	3.00	2.25	2.25
6 months	5.00	4.50	4.25	3.50	3.25	2.50	2.25
1 year	6.75	6.00	5.75	4.00	3.75	3.00	3.00
Above 2 year	7.00	6.25	6.00	-	-	3.50	3.50
Whole Mean	4.53	4.46	4.25	3.10	2.95	2.54	2.50
Fixed deposit Mean	4.39	4.37	4.17	3.25	3.06	2.65	2.60
Std.deviation	0.839%						

Source: Banking and Financial Statistics, No: 38-43, NRB

Table no. 4-1 shows the Deposit interest rate of NBL in 7 different fiscal year. For this study 2002 is taken as initial year and 2008 as final year. The table portraits the interest rate that was prevailed in the Nepalese financial markets during last past 7 fiscal year the data shows the decreasing tendency of interest rate. The interest rate on saving deposit in the beginning year was 5.5% and decreased to 2% in 2008. This is 63.63% reduction during the 7 years period. In same manner, the bank used to quote the interest rate of fixed deposit in different short-term period like 7 days, 14 days, 1 month, 3 months, and and so on. For the graph purpose in this study the average of 7 days to 3 months is taken to make the figure clearer. For other periods also the fixed deposit rate was in decreasing trend. During the 7 years period the decline percentage is 43.75%, 50%, 55.55% and 50%

respectively. For 3 months, 6 months, 1 year and 2 years period. The decreasing tendency is high for longer period interest rate. If the mean is taken of all (both fixed and saving) then average interest rate on deposit was 4.53% for 2002, 4.46% for 2003, 4.25% for 2004, 3.10% for 2005, 2.95% for 2006, 2.54% for 2007 and 2.50% for 20208. Similarly, if average of fixed deposits of different period is taken then the result is almost similar with "Whole Average". It means the average interest rate for fixed deposit only was 4.39%, 4.37%, 4.17%, 3.25%, 3.06%, 2.65% and 2.601% respectively for the year, 2002, 2003, 2004, 2005, 2006, 2007, and 2008. The average figure also shows the decreasing tendency in interest rate. All the above described matters can be shown on figure 4-2 as follows.

Correlation coefficient, coefficient of Determination and t- statistics of NBL relationship between Interest rate and Deposit amount of NBL

Table no. 4-2

Year (1)	Saving Deposit Interest Rate (2)	Saving Deposit Amount (3)	Fixed Deposit Interest Rate (4)	Fixed Deposit Amount (5)
2002	5.50	20281.60	4.39	9921.80
2003	5.00	19851.50	4.37	9731.80
2004	4.75	21534.50	4.17	8396.90
2005	2.50	22063.00	3.25	7481.00
2006	2.50	22671.80	3.06	6269.26
2007	2.00	23547.90	2.65	5790.90
2008	2.00	26425.40	2.60	5393.20
Correlation	r_{23} =-0.82		r_{45} = 0.9756	
Coefficient of Determination	r^2_{23} = 0.6724		r^2_{45} = 0.9518	
t-statistics	t-cal=3.219, t-tab=2.571 Significant		t-cal=9.936,t- tab=2.571 Significant	

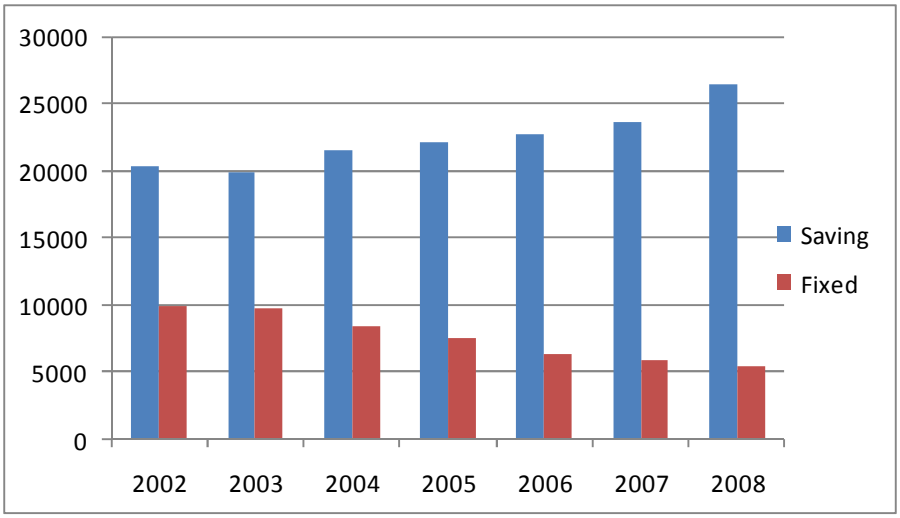
Source: Banking and Financial Statistics, No: 38-43, NRB

The table 4-2 shows the total amount of fixed deposit and saving deposit, and interest rate offered on such deposits by NBL on seven fiscal years starting from FY 2002 to 2008.

The table portrays that the both interest rates has been decreased by greater magnitude. Deposit amount has been increased by more than 1.3 times during the study period. It means they move in opposite direction i.e. decrease in interest rate increases the amount of deposit and vice versa. Therefore they should have negative relationship. It can be quantified by calculating correlation coefficient between them this relationship can also be shown in graph as shown in figures 4-1 and 4-2

Deposit Amount of NBL during different FY

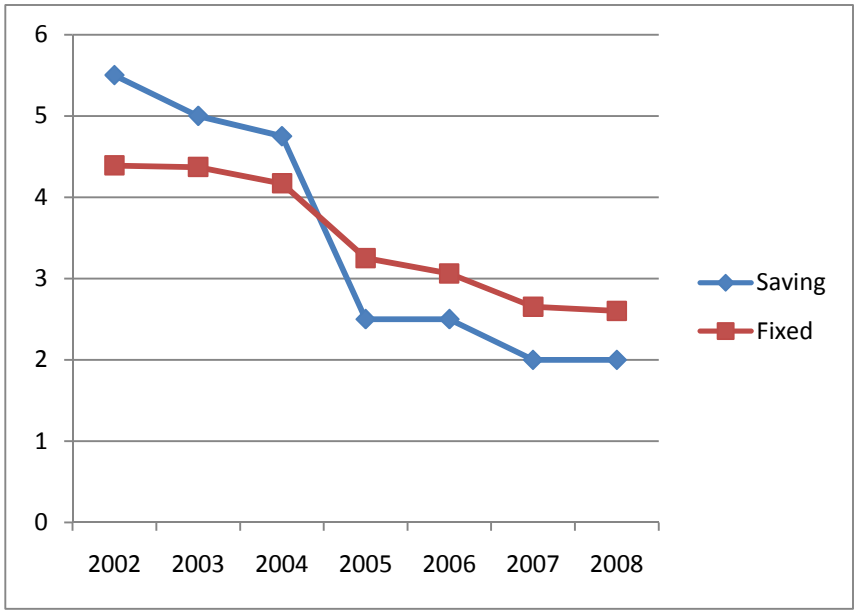
Figure No: 4-1



Fiscal Year

Interest rates of NBL on Saving and Fixed Deposit

Figure No: 4-2



Fiscal Year

According to table no 4-2, the interest rate on saving deposit has been decreased from 5.50% to 2% during seven FYs. The declining tendency is little. In same period the deposit amount was Rs. 20281.60 million but this amount increases to Rs.26425.40 million. It means interest rates fell by 63.63%, where as deposit amount rise by 30.29% within the period of seven years.

Similarly, for fixed deposit the table 4-1 shows that total amount of fixed deposit and interest rate on fixed deposit offered by NBL on seven consequent FY started from 2002 to FY 2008. The table reveals that average fixed interest rate has been decreased drastically during the seven FYs. At the FY 2002 the average interest rate was 4.39% on fixed deposit But later on every year this interest rate started to decrease by 0.02%, 0.2%, 0.92%, 0.19%, 0.41% 0.05% per annum. On effect of this decline, the amount of fixed deposit declined the amount of fixed deposit also started to decrease in some respect. The substitution effect holds true in the case of fixed deposit.

To verify the above trend, It is necessary to calculate the correlation coefficient and t-statistics. If correlation coefficient is calculated for saving deposit interest rate and deposit amount, then it is(r_{23}) = -0.82. This high negative correlation coefficient indicates that they have inverse relationship among each other. Decrease in interest rate is followed by an increase in saving deposit amount and vice- versa. This shows that the substitution effect in case of NBL for saving account is not applicable. The coefficient of determination between these two variables is r^2_{23}= 0.6724. This means that total variation in dependent variable (saving deposit amount) has been explained by independent variable (interest rate) to the extent of 67.24% and remaining is the effect of other factors. The t- value for testing the significance of the correlation coefficient between variables is -3.219% (/t/=3.219). Since the tabulated t-value at 5% level of significance for 5 degree of freedom (t-tab=2.571) is less than calculated value (t-cal=3.219). The correlation coefficient is significant. This means, the variables mentioned (interest rate on saving deposit and amount of saving deposit) for NBL are significantly correlated and an increase (decrease) in the amount of deposit brings a decrement (increment) in interest rate on saving deposit. In the same manner, the correlation coefficient between interest rate on fixed deposit and fixed deposit amount (r45) is 0.9756; this means that these two variables are moderately co-correlated when interest rate on fixed deposit decreases (increases) the deposit amount also decreases (increases). This is exactly the matter what the theory (substitution effects) says.

The coefficient of determination between their two variables is r^2_{45}= 0.9518, which means 95.18% of total variables in dependent variables (deposit amount) is explained by the independent variable (deposit rate) and reaming is due to the effect of other factors. Similarly, test of significance of correlation coefficient between deposit rate and deposit amount gives the value of t-9.936. The tabulated value at 5% significant level with D.F. 5 is 2.571 (i.e. t-tab = 2.571). Here t-cal > t-tab, as a result null hypothesis is rejected and alternative hypothesis is accepted. It means that the correlation coefficient is highly significant. Thus from the both study it reveals that substitution effect is not applicable for NBL.

4.1.1.2 Interest Rate and Its Impact of Lending on NBL

The sector where NBL grant its credit during last seven FYs and their corresponding interest rate, average interest rate and lending amount are presented in the table 4-3 below.

Lending rate on NBL on different sectors during seven FYs.

Table 4-3

Sector	2002	2003	2004	2005	2006	2007	2008
Overdraft	15.00	14.00	10.00	10.00	10.00	10.00	10.00
Export Credit	11.00	11.00	8.50	8.50	8.50	8.50	8.00
Import LC	11.00	11.00	8.50	-	-	-	-
Government Bond	8.00	7.00	7.00	-	-	-	-
BG/CG	10.00	10.00	8.75	8.75	8.75	8.75	7.00
Industrial Loan	14.00	13.00	13.00	-	-	-	-
Commercial Loan	14.50	13.50	13.50	-	-	-	-
Priority Sector Loan	14.00	13.50	10.50	10.50	10.50	10.00	10.00
Poor Sector Loan	10.50	10.00	8.00	8.00	8.00	7.50	7.50
Working Capital	14.00	13.00	10.00	10.00	10.00	10.00	10.00
Hire Purchases	14.00	14.00	11.00	11.00	11.00	10.50	10.50
Others	16.00	14.00	11.00	12.00	12.00	12.00	12.00
Average Int.Rate (1)	12.67	12.00	9.98	9.53	9.53	9.36	9.06
Lending Amount (2)	22062.30	20997.50	19266.10	19141.70	18530.60	12791.10	13750.60
Correlation(r_{12})	0.7723						
Coefficient of Determination(r^2_{12})	0.5965						
t-statistics	t-cal = 2.718		t-tab = 2.571			Significant	

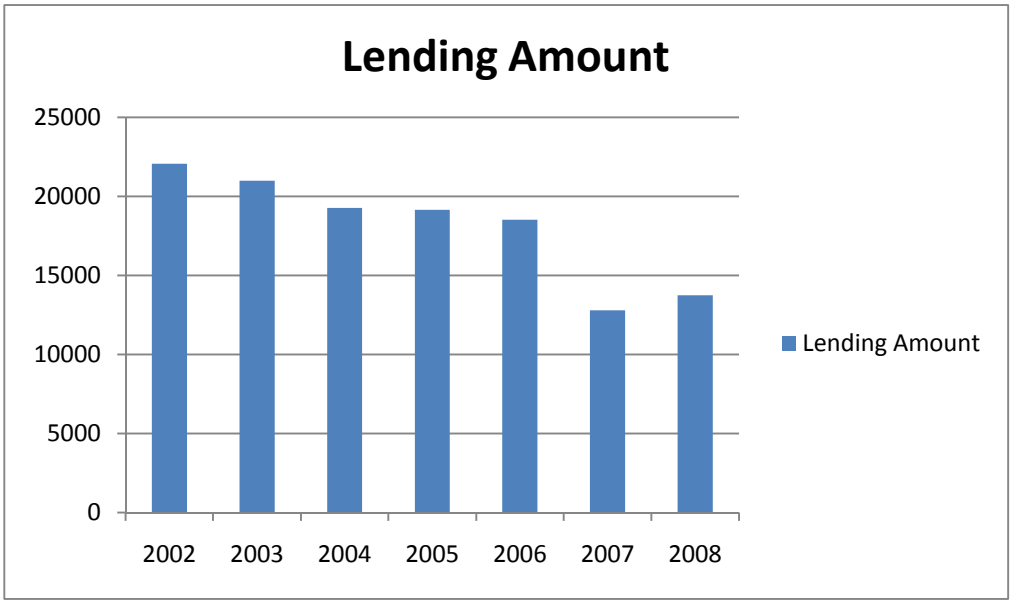
Source: Banking and Financial Statistics, No: 38-43, NRB

According to the Table 4-3, it is clear that all the lending interest rate fell by 1% to 5% within the seven FYs. During first phase of Seven FYs the average interest rate declined quite rapidly, with greater magnitude but in middle of the FY it remained stagnant. Again after middle year the momentum of speed rises up. During period especially hire purchases rate, against government bond rate, BG/CG rate, Import LC rate, and Overdraft

lending rate fell drastically, They fell by 3% to 5% average. Whereas other sector lending rate of NBL also fell but their magnitude was less. It means that commercial sector loan, Industrial loan rate were not decreased by large percentage. So it can be said that only non-productive sector loan rates were reduce drastically during the seven FYs as compare to productive sector loan. The study of lending amount shows that, it is also in decreasing trend. The trend shows that it is fluctuating. In other words, up to the FY 2003, the lending amount was in increasing tendency but after 2003 onward the amount seems to be decreasing. This may happen because after FY 2003, the interest rate declines by faster speed. The average interest rate of each FY and their corresponding lending rate can be exhibited in the figures4-4 and figure 4-6 as follows.

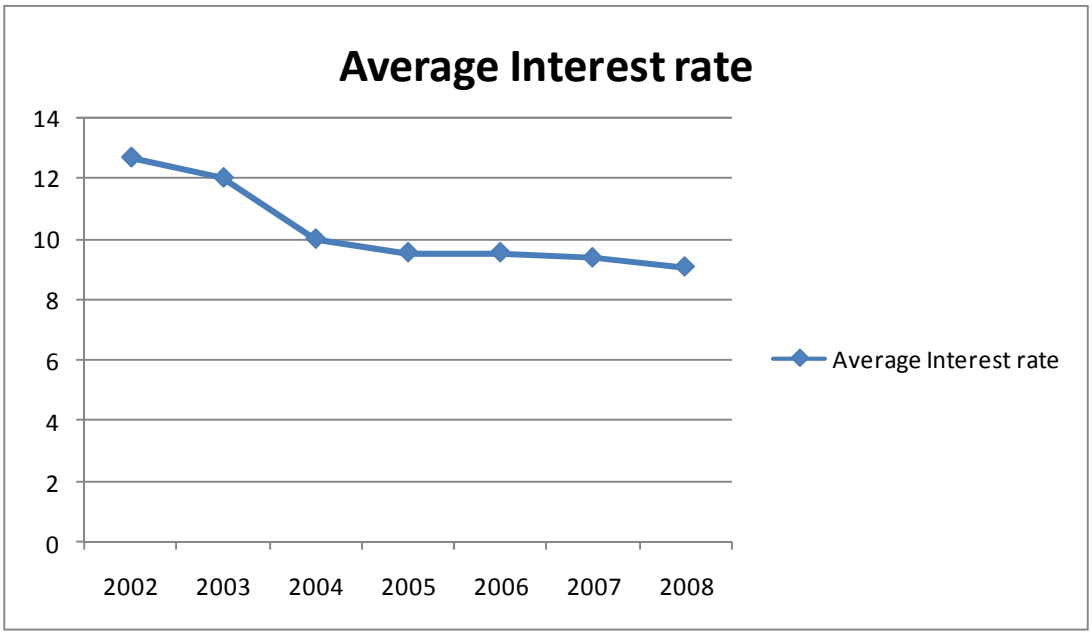
Lending Amount of NBL during different FYs

Figure no 4-3



Average Lending Rate of NBL during different FYs

Figure no. 4-4



Fiscal Year

Correlation coefficient, coefficient of determination and t-statistics of NBL.

To find the exact relationship between the lending interest rate and lending amount. It is necessary to use some of the statistical tools like correlation coefficient, coefficient of determination, similarly, to verify the correlation coefficient; student t-statistics is applied. For this case, the correlation coefficient between NBL's average interest rate and lending amount is 0.7723 (r12 = 0.7733). It means that according to our classification, this is low degree of positive correlation. Increase in one variable result the increase in other variables but in low magnitude. In other words, if one variable increases by one percentage then other variable increases by 0.77%. The result of correlation is against the theory because according to theory there should be negative correlation. In other word, decrease in interest rate should be followed by increases in lending amount. But this case doesn't happen for NBL. The coefficient of determination $(r12)2= 0.5965$, which means that the relationship between two variables (lending amount and rate) is defined up to 59.65% only. Similarly, the calculation of t-statistics gives the value to t as 2.718. The tabulated value for t at 5 D.F. And 5% level of significant is 2.571. Therefore, in this

case t-calculated is greater than t-tabulated. Hence null hypothesis is not accepted. It indicates that the relationship shown by correlation coefficient is significant.

4.1.2 Agriculture Development Bank Limited

4.1.2.1 Interest Rate and Its Impact of Deposit on ADB

The general interest rate structure of ADB/N for last fiscal years is given on the table 4-4. Through the ADB/N has transaction on both agriculture sector and non-agriculture (Commercial) sectors. Here for this study the interest rate of commercial sector is taken in consideration.

Interest rate structure on deposit of ADB/N on Mid-July

Table no. 4-4

Deposit	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Savings	6.25%	5.25%	5.25%	4.00%	3.00%	3.00%	3.00%
Fixed							
7 days	-	-	-	-	-	-	-
14 days	-	-	-	-	-	-	-
1month	-	-	-	2.50	2.25	2.00	2.00
3 months	-	-	-	3.00	3.75	2.50	2.50
6 months	-	-	-	3.50	3.25	3.00	3.00
1 year	7.75	6.50	6.50	4.75	4.25	3.50	3.50
Above 2 year	8.00	6.75	6.75	5.75	4.50	4.50	4.50
Whole Mean	7.33	6.17	6.17	3.92	3.50	3.08	3.08
Fixed Deposit Mean	7.87	6.63	6.63	3.90	3.60	3.10	3.10
Std. Deviation	1.63%						

Source: Banking and Financial Statistics, No: 38-43, NRB

The table 4-4 shows the interest rate structure of ADB/N on saving deposits and fixed deposits. The deposit rates are also in decreasing trends for saving deposit. It is found that

the interest rate has been declined by 5% during the last seven FYs. Each year there was around 1% declination but in constant rate. This can be illustrated on graph as figure no.4-5

Correlation Coefficient, Coefficient of Determination and t-statistics of ADB/N

Relationship between Interest Rate and Deposit amount of ADB/N

Table no 4-5

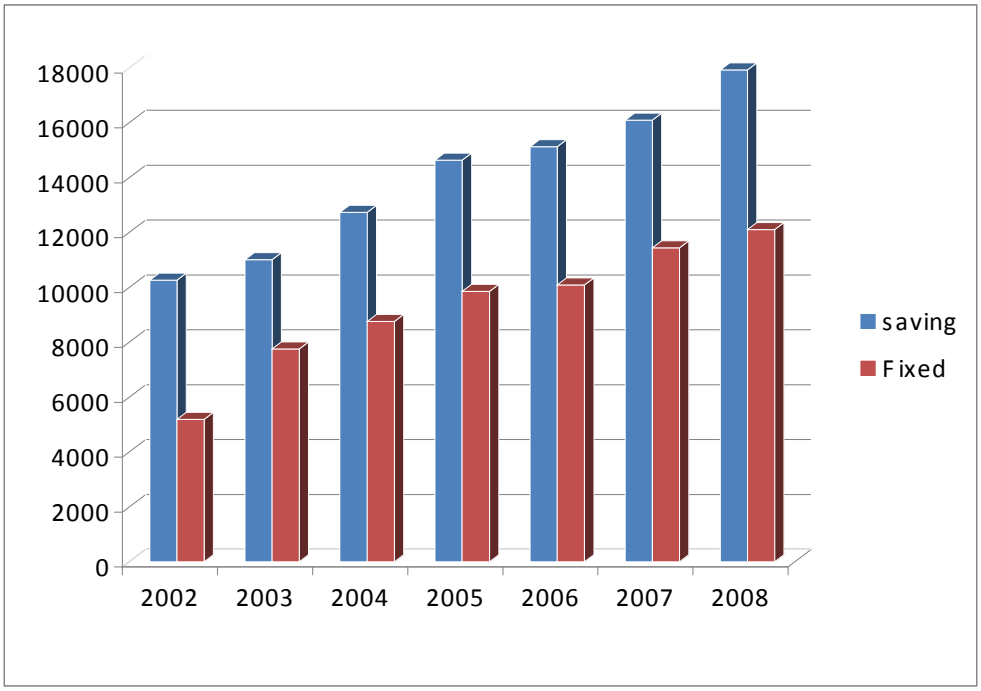
Year (1)	Saving deposit interest rate (2)	Saving deposit amount (3)	Fixed deposit interest rate (4)	Fixed deposit amount (5)
2002	6.25	10257.3	7.87	5182.3
2003	5.25	11002.9	6.63	7754.3
2004	5.25	12732.2	6.63	8756.2
2005	4	14632.6	3.90	9846.8
2006	3	15121.7	3.60	10087
2007	3	16087.9	3.10	11443.4
2008	3	17922.4	3.10	12102.5
Correlation	r_{12} = -0.9365.		r_{45} = -0.9366	
Coefficient of Determination	r^2_{12} = 0.8770		r^2_{12} =0.8772	
t- statistics	t-cal =5.9707 t-tab =2.571	Significant	t-cal = 5.9764 t-tab =2.571	Significant

Source: Banking and Financial Statistics, No: 38-43, NRB

Table no. 4-5 shows that interest rate and deposit amount are moving in opposite direction to get the exact relation it is necessary to calculate the correlation coefficient and t- test. Here the data shows that both saving and fixed deposits are out of substitution effect. To verify it the value or correlation and t-statistics is necessary. But prior to this it is effective if tabular value can be shown on graph as figure 4-5

Figure No. 4-5

Deposit Amount of ADB/N during different FY

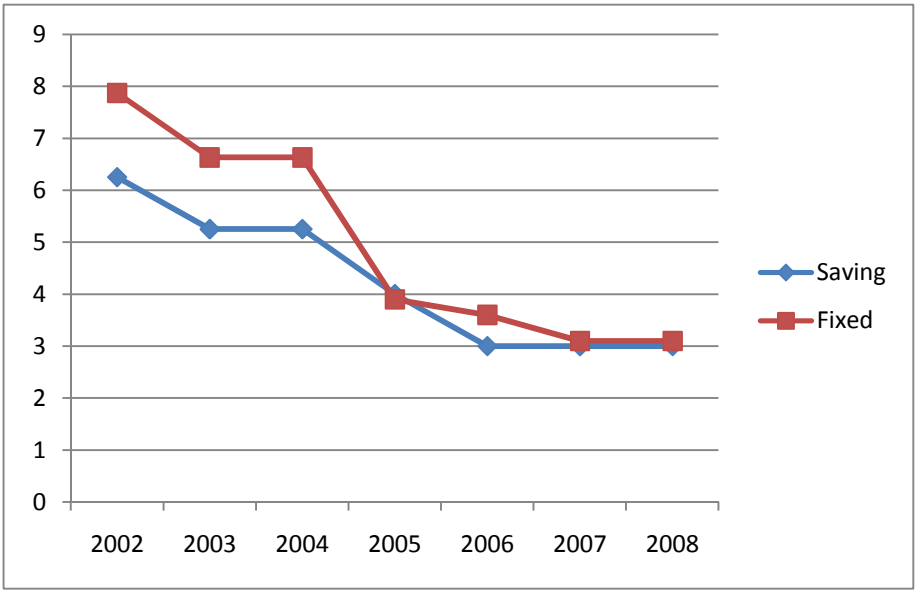


Fiscal Year

Similarly, the relationship between interest rate of saving and fixed deposit can be shown in figure no. 4-6 as:

Figure No. 4-6

Interest Rates of ADB/N on Saving and Fixed Deposit



Fiscal Year

The figure no.4-5 shows that the deposit amount of ADB/N is in increasing trend. The increasing tendency is high for saving deposit but for fixed deposit, the trend is increasing slowly. Similarly figure 4-6 shows that both the interest rate of fixed and saving deposits is in decreasing tendency. Their fluctuating pattern is almost similar which can be seen clearly on the graph no. 4-6

The correlation coefficient for saving deposit and its interest rate is found to be r_{23} = -0.9365. Which means that deposit amount and its interest rate have higher degree of negative correlation? It means increase in one variable. Similarly, the coefficient of determination r^2_{23} = 0.8770. This means that the value of dependent variables is dependent on independent variables to the extent of 87.70%. Similarly, the t-test for same shows that the calculated value of t is 5.9707 (t-cal = 5.9707). This value is very greater than the t-tabulated value (t-tab = 2.571) at 5 degree of freedom and 5% level of significance. Therefore when t-cal > t-tab, then H_1 or alternative hypothesis is accepted i.e. the variables are significantly correlated or their relationship is significant.

Similarly, for fixed deposit, the coefficient of correlation (r_{45}) is -0.9366, which is negative with high degree of inverse relationship. This is the extremely opposite case as

compare to the correlation coefficient of NBL. The t-statistics for fixed deposit shows that its calculated value for t ism 5.9764, which is higher than the tabulated value of t i.e. t-cal > t-tab. In such case alternative hypothesis is accepted and null hypothesis is rejected. This indicates that the two variables are correlated or their relationship is significantly correlated.

The analysis of ADB/N also shows that substitution effect is not applicable from bank. That is the case is similar for all two government owned banks. There is no substitution effect for all two banks NBL and ADB/N.

4.1.2.2 Interest Rate and Its Impact of Lending On ADB

As previously mentioned, ADB/N grants the loan broadly in two sectors: Agricultural, non-agricultural (commercial) sectors. But for this study only the lending of commercial sector is focused. The general lending interest rate. Lending area, average lending rate and lending amount during the seven fiscal years are presented in the table no.

Lending rate ADB/N on different sectors during seven FYs.

Table 4-6

Sector	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Overdraf**t**	18.00	17.00	17.00	16.00	15.50	15.50	15.50
Export credit	-	-	-	-	-	-	-
Import LC	-	-	-	-	-	-	-
Government bond	-	-	-	-	-	-	-
BG/CG	-	-	-	-	-	-	-
Industrial Loan	15.00	14.00	14.00	13.00	13.00	10.00	10.00
Commercial Loan	16.00	15.50	15.50	14.00	14.00	14.00	14.00
Priority Sector Loan	-	-	-	-	-	-	-
Poor Sector Loan	-	-	-	-	-	-	-
Working Capital	-	-	-	-	-	-	-
Hire Purchases	16.00	15.00	15.00	13.00	13.00	13.00	13.00
Others	16.00	15.00	15.00	13.50	12.50	12.50	12.50
Average Intt.Rate (1)	16.20	15.30	15.30	13.90	13.60	13.00	13.00
Lending Amount(2)	5700.50	6847.80	8794.70	9221.20	10746.40	11040.60	34225
Correlation (r_{12})	-0.7367						
Coefficient of Determination(r^2_{12})	0.5427						
t-statistics	t-cal = 2.436		t-tab = 2.571		Insignificant		

Source: Banking and Financial Statistics, No: 38-43, NRB

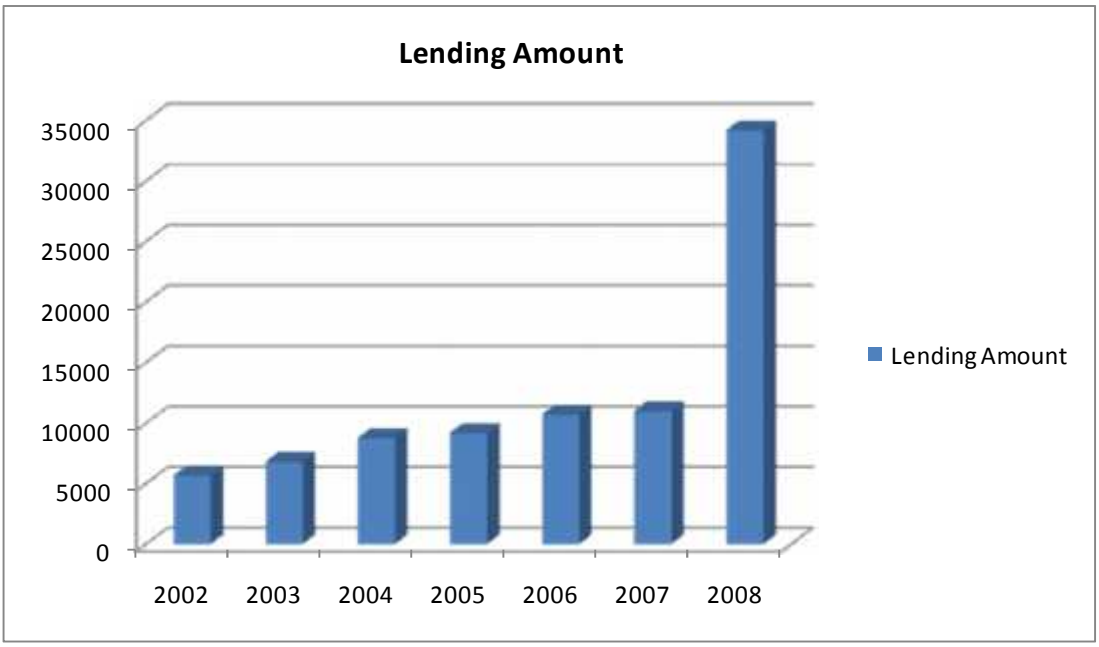
The table 4-6 shows the lending interest rate of ADB/N on different sectors in different FY. It is also notable matter that for commercial purpose, ADB/N had granted credit only on certain sectors in past FY. They are shown on the table 4-6. Comparing the lending rate of two banks, NBL and ADB/N it is found that ADB/N had the highest lending interest rate than NBL. Even though the interest rate on lending of ADB/N is high in first period of seven FYs. On later years interest rate gradually starts to decrease. Every year interest rate is decline by almost one percentage point. For the case of ADB/N in all sectors declining rate was similar. It means that there was equal fall in interest rate on each loan sector. But this is not the case for NBL because in this bank, there was rapid

fall on non-productive sector and less fall on productive sectors. In past seven FYs the highest interest rate was 18% on overdraft. This is the maximum rate among all. Later within seven FYs this rate fell to 15.50% p.a. when it approached to FY 2008. In same manner most of the rate fell by an average 3% from the previous lending rate. To see the position, it is better to give glance on average lending rate during last seven FYs. The average interest rate was 16.20%, 15.30%, 13.90%, 13.60% and 13%, in FY 2002, 2003, 2004, 2005, 2006, 2007 and 2008 respectively

In effect of decline in interest rate, the lending amount of ADB/N is found to be increasing drastically during the seven fiscal years. During the period of seven years, the lending amount was sixth time more. This is what the theory says, but to know the exact relationship. It is necessary to compute the correlation coefficient. Prior to all it is rational if the data on the table 4-6are presented on the graph no.4-7

Figure no. 4-7

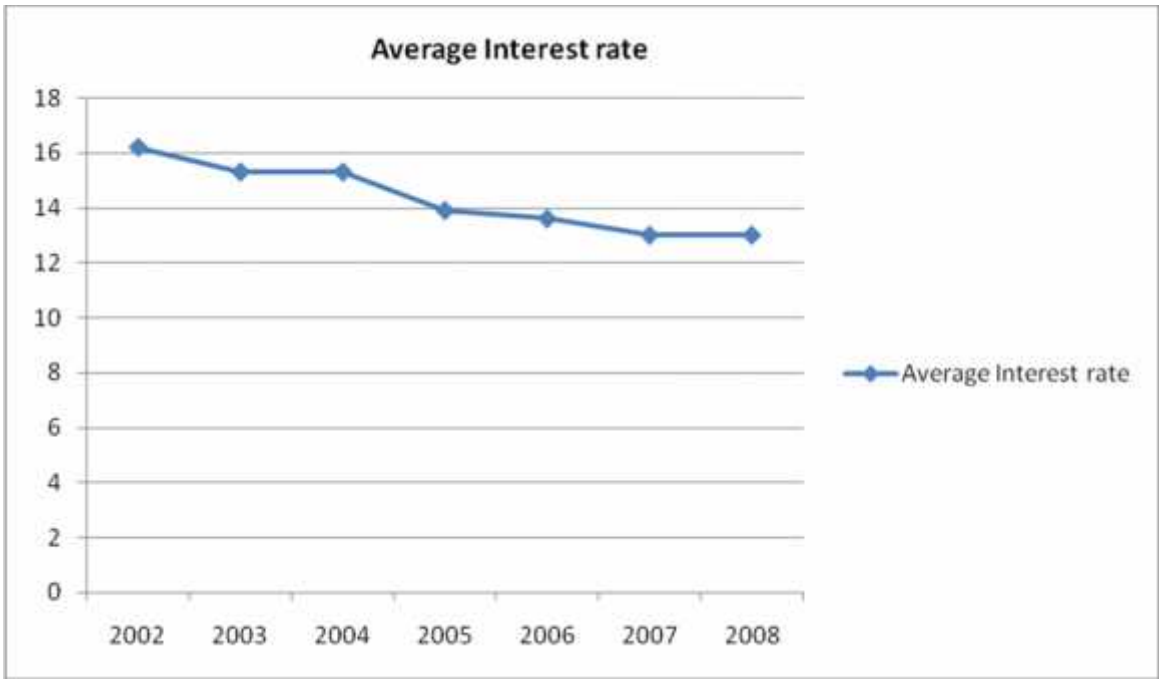
Lending amount of ADB/N during different FYs



Fiscal Year

Figure no. 4-8

Average lending rate of ADB/N during different FY



Fiscal Year

Correlation Coefficient, Coefficient of Determination and t-statistics of ADB/N

By using excel spreadsheet, correlation, coefficient, average standard deviation and other necessary statistics can be calculated. The correlation coefficient between lending rate and lending amount for ADB/N is -0.7367. This is very high degree of correlation. The negative sign indicates that, the two variables have opposite or inverse relationship, meaning decrease in on variable leads to increase in other variables. For this case, decrease interest rate stimulates the lending amount or vice-versa. The coefficient of determination for correlation coefficient is 0.5427. In other words, the relationship between one variable is defined by another is up to the level of 54.27%.

To verify the correlation coefficient statistically, it is better if t-statistics is used. The calculated value for t is 2.436 i.e. t-cal = 2.436. Similarly the tabulated value for t at 5 degree of freedom with 5% level of significance is 2.571 i.e. t-tab =2.571. Comparing t-cal and t-tab, it is found that t-cal < t-tab so in such case null hypothesis is accepted meaning the relation shown by the correlation coefficient is highly Insignificant. In other words, two variables are insignificantly correlated or the increase in lending amount is due to the decrease in lending rate. Lending rate is insignificant factor for that. From the analysis, it is verify that theory matches with the lending case of ADB/N.

4.1.3 Bhajuratna Finance and Saving Company Ltd (BFSCO)

4.1.3.1 Interest rate and Its Impact on Deposit of BFSCO

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

Interest rate structure on deposit of BFSCO as on Mid-July

Table no.4-7

Deposit	2004	2005	2006	2007	2008
Savings	7.25%	7.25%	6.00%	5.75%	5.50%
Fixed					
3 months	-	7.50	7.25	6.00	6.00
6 months	-	-	-	6.25	6.25
9 months	-	-	7.00	6.75	6.50
1 year	8.50	8.00	7.50	6.90	6.90
2 years	9.00	9.00	8.50	7.40	7.40
3 years	9.75	9.50	9.50	8.50	7.90
4 years	10.00	9.75	9.75	8.60	8.00
above 5 years	10.25	10.25	9.25	8.75	8.15
Whole mean	9.12	8.75	8.09	7.21	6.95
Fixed deposit mean	9.50	9.00	8.39	7.39	7.14
Std. Deviation	0.8425%				

Sources: Annual Report and company published Browser

From the table 4-7, it is clear that the interest rate on deposit of BFSCO is in decreasing trend. The whole average interest rate is 9.12% in 2004 but it was 8.75%, 8.09%, 7.21%, and 6.95% in FY 2005, 2006, 2007 and 2008 respectively. Similarly, the average fixed deposit rate is 9.50%, 9.00%, 8.39%, 7.39% and 7.14% in FY 2004, 2005, 2006, 2007 and 2008 respectively. It means that the decline speed of deposit interest rate of BFSCO slowed down each year. This phenomenon can be portrayed in the graph as figure no. 4-9

Correlation coefficient, coefficient of determination and t- statistics of BFSCO

relationship between interest rate and deposit amount of BFSCO

Table no. 4-8

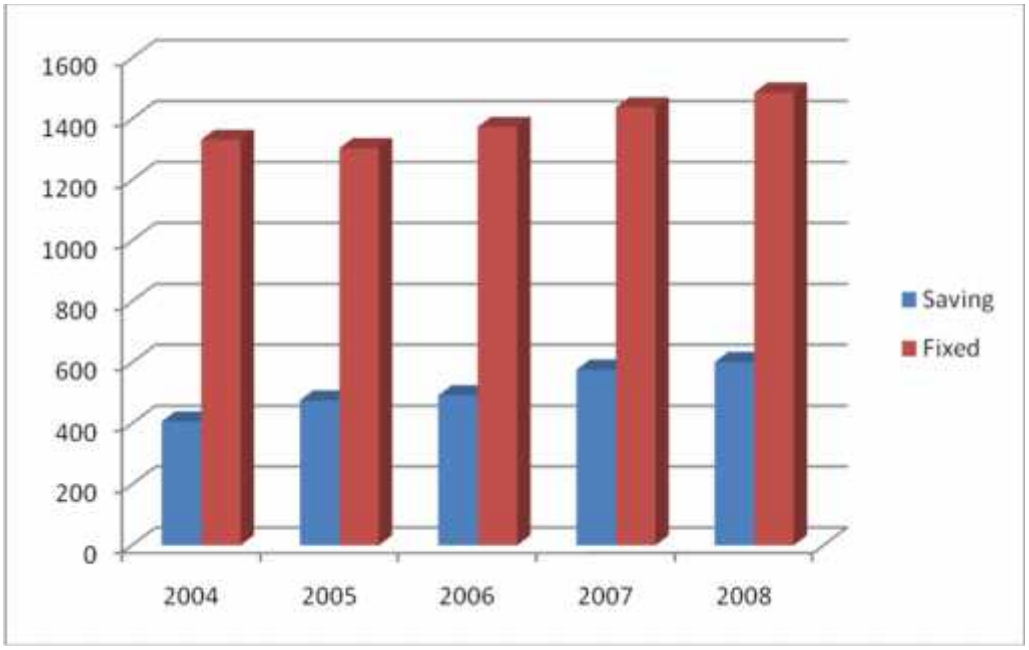
Year (1)	**Saving deposit intt.rate (2)**	**Saving deposit amount (3) (in lakh)**	**Fixed deposit intt.rate (4)**	**Fixed deposit amount (5) (in lakh)**
2004	7.25	406.2	9.50	1331.7
2005	7.25	475.7	9.00	1303.8
2006	6.00	491.9	8.39	1373.7
2007	5.75	576.5	7.39	1438.5
2008	5.50	601.7	7.14	1486.3
Correlation	$r_{23} = -0.8854$		$r_{45} = -0.9394$	
Coefficient of determination	$r^2_{23} = 0.7839$		$r^2_{45} = 0.8824$	
t-statistics	t-cal = 3.298, t-tab = 2.571, (significant)		t-cal =4.749, t-tab = 2.571, (significant)	

Sources: Annual Report and companies published Browser

The table shows the amount of saving deposit and its interest rate as well as amount of fixed deposit and its interest rate form five fiscal year. The table indicates that, in one hand deposit rates are declining where as in other hand deposit amount is increasing in each fiscal year. This suggest that, interest rate and deposit amount may have negative relationship, i.e. when one variable is found to be increased, other variable is found to be decreased and vice-versa. This situation can be revealed in graph as figure no. 4-9 in following ways.

Figure No. 4-9:

Deposit amount of BFSCO during different FY

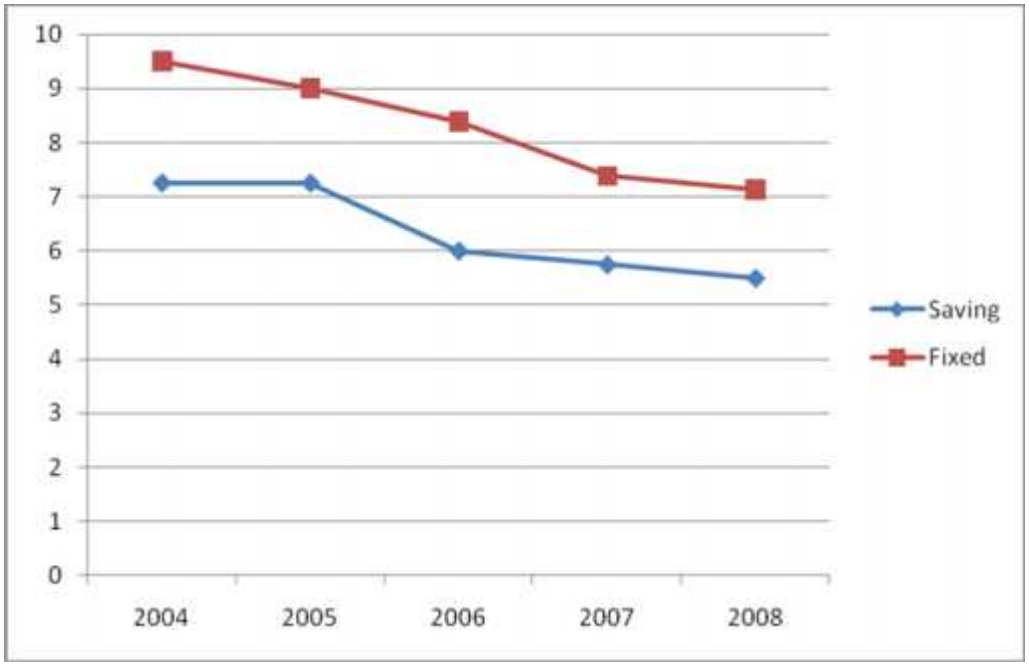


Fiscal Year

Similarly, the relationship between interest rate of saving and fixed deposit can be shown in figure no. 4-10 as

Figure No. 4-10:

Interest rate of BFSCO on saving and fixed deposit



Fiscal Year

The figure no. 4-9 shows that the deposit amount of BFSCO is in increasing trend. The increasing tendency is high for fixed deposit but for saving deposit. The trend is increasing slowly. Similarly figure 4-10 shows that both the interest rate of fixed and saving deposits are in decreasing tendency. Their fluctuating pattern is almost similar which can be seen clearly on the graph no. 4-10

The correlation coefficient for saving deposit and its interest rate is found to be r_{23} = -0.8854 which means that deposit amount and its interest rate have higher degree of negative correlation. It means increase in one variable result the decrease in other variables. Similarly the coefficient of determination, r^2_{23} = 0.7839 which means that the value of dependent variables is dependent on independent variables to the extent of 78.39 percent. Similarly the t-test for same shows that the calculated value of t is 3.298 (t-cal = 3.298). This value is greater than the tabulated value (t-tab = 2.571) at 5 degree of freedom and 5% level of significance. Therefore when t-cal > t-tab, then H_1 or alternative

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

Similarly for fixed deposit, the coefficient of correlation (r_{45}) is -0.9394, which is negative with high degree of inverse relationship. The t-statistics for fixed deposit shows that its calculated value for t is 4.749, which is higher than the tabulated value of t i.e. t-cal > t-tab. In such case alternative hypothesis is accepted and null hypothesis is rejected. This indicates that the two variables are correlated or their relationship is significantly correlated.

4.1.3.2 Interest rate and its impact of lending on BFSCO

BFSCO grant credit on different sectors like commercial loan, industrial loan, housing loan, hire purchases loan and so on. These rates on the different fiscal years are as follows.

Lending rate of BFSCO on different sectors during five FYs

Table no. 4-9

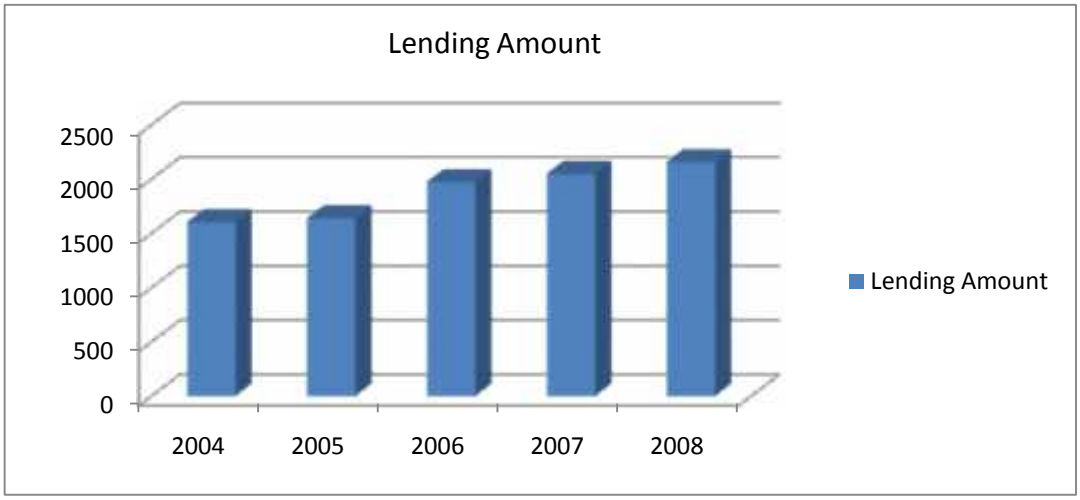
Sectors	**2004**	**2005**	**2006**	**2007**	**2008**
Housing loan	18.00	17.00	17.00	16.50	15.00
Hire purchases	17.00	16.50	15.00	15.00	14.00
Commercial l	15.00	-	15.00	15.00	15.00
Industrial	17.50	17.50	16.00	15.00	15.00
Agriculture l	16.50	16.50	16.50	15.00	15.00
Loan against share	11.00	11.00	11.00	10.00	10.00
Education	-	-	-	15.00	15.00
Others	16.00	16.00	15.50	15.50	15.50
Average intt. rate (1)	15.86	15.75	15.14	14.63	14.31
Lending amount (2)	1609.3	1644.5	1978.9	2055.7	2163.3
Correlation (r_{12})	-0.9802				
Coefficient of determination (r^2_{12})	0.9607				
t-statistics	t-cal = 8.564		t-tab = 2.571		Significant

Sources: Annual report and company published browser

The table 4-9 shows the interest rate of BFSCO on lending on five fiscal years granted in different sectors. According to the table 4-9 it shows that the interest rates on lending on different sectors are in declining stage. The table shows that the maximum interest rate is 18% in FY 2004 and minimum rate is 10% on FY 2008. This shows that the interest rate was decline slowly during the five FYs periods. Generally, the declining percentage for housing, hire purchases, industrial, agriculture, loan against share, and other loans are 3%,3%, 2.5%,1.5%,1% and 0.5% respectively. The average interest rate for FY 2004, 2005, 2006, 2007 and 2008 are 15.86%, 15.75%, 15.14%, 14.63% and 14.31% respectively. The average interest rate shows that the interest rate fell with little gap. During the last FY the lending amount rises by 1.35 times. This shows that the lending amount and interest rate have negative relationship. But to get the exact numerical result of relationship between lending rate and lending amount correlation should be necessary to calculate. The figure for changing trend of interest rate and lending amount is given on figure no 4-11 and figure no. 4-12

Figure No. 4-11

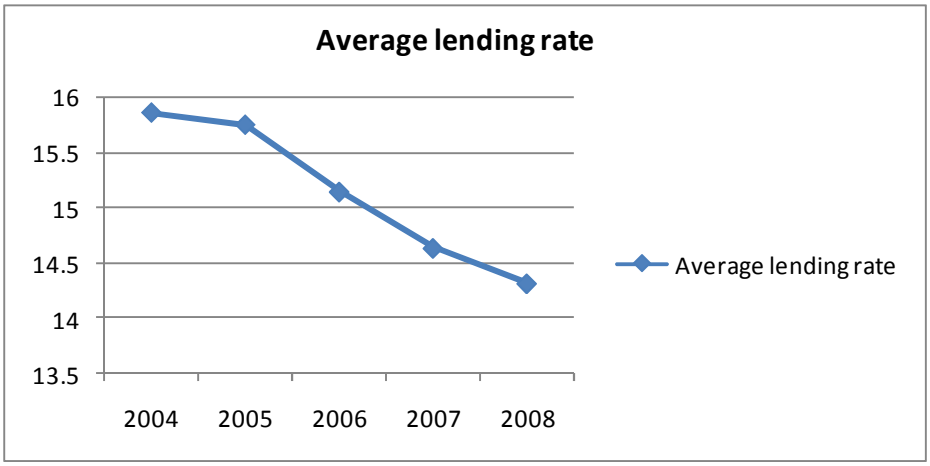
Lending Amount of BFSCO during different FYs.



Fiscal Year

Figure No. 4-12

Average Lending Rate of BFSCO during different FYs.



Fiscal Year

Correlation coefficient, coefficient of determination and t-statistics of BFSCO

The correlation coefficient of BFSCO between lending amount and lending rate is 0.9802. It is high degree negative correlation. It indicates that increment in one variable result the decrement in other variables or vice versa. Decrement in lending interest rate increases the lending amount because people preferred more credit from the commercial banks. When reduced the lending interest rate. This condition matches with the theory. Similarly the coefficient of determination between two variables (r212) = 0.9607. It means that the relationship between dependent variable and independent variable is defined up to the extent of 96.07%. The remaining percentage is due to other factors.

Similarly, the calculated value for BFSCO is 8.564 (i.e. t-cal = 8.564). The tabulated value of t-statistics at 5% level of significance with 5 D.F. is 2.571. Comparing the t-tab and t-cal, it is clear that t-cal > t-tab so alternative hypothesis is accepted and null hypothesis is rejected. It means that the relation shown by two variables lending rate and lending amount is strong. In conclusion the inverse relation of BFSCO on two variables is accordance with theory.

4.1.4 United Finance Company Ltd. (United)

4.1.4.1 Interest rate and Its Impact on deposit of United

As similar to previous part, it is better to present the general interest rate structure before entering to the main analysis. The interest rate structure for United on saving and fixed deposits for past five FYs are as presented on table 4-10

Interest rate structure on deposit of United as on Mid-July

Table no. 4-10

Deposit	2004	2005	2006	2007	2008
Savings	7.50%	7.50%	7.25%	7.00%	7.00%
Fixed					
3 months	7.00	6.90	6.75	6.25	6.25
6 months	7.50	7.00	7.00	6.50	6.50
9 months	-	7.25	7.10	6.75	6.75
1 year	8.50	8.25	8.00	7.35	7.35
2 years	9.00	8.75	8.50	7.65	7.65
3 years	9.50	9.25	8.75	7.75	7.75
4 years	9.75	9.50	9.00	8.00	8.00
Above 5 years	10.00	9.75	9.25	8.10	8.10
Whole mean	8.59	8.24	7.95	7.26	7.26
Fixed deposit mean	8.75	8.33	8.04	7.30	7.30
Std.deviation	0.53%				

Sources: Annual Report and company published browser

The table shows the interest rate of the United finance during the last five FYs. The trend of interest rate shows that it is in decreasing trend. The interest rate on saving deposit shows that it was 7.50% during the period of 2004 and 2005. In 2006 and 2007 decreased percentage is 0.25% and 2008 not changed. In the same manner, the finance company

used to quote the interest rate of fixed deposit in different short term period like 3 months, 6 months, and 9 months and so on. The interest rate on fixed deposit was also in decreasing trend during the five fiscal years. The table shows that average rate on saving and fixed deposit were 8.59% for the year 2004, 8.24% for the year 2005, 7.95% for the year 2006, 7.26% for the year 2007 and 2008. Similarly, if average of fixed deposit of different period is taken then the result is almost similar with " Whole Average" it means the average interest rate for fixed deposit was 8.75%, 8.33%, 8.04%, 7.30%, for the year 2004, 2005, 2006, 2007 and 2008 respectively. The average figure also show the decreasing tendency in interest rate expect in the year 2007 and 2008. This phenomenon can be portrayed in the graph as figure no. 4-13.

Correlation coefficient, coefficient of determination and t-statistics of United

Relationship between interest rate and deposit amount of United

Table No. 4-11

Year (1)	**Saving deposit intt. rate (2)**	**Saving deposit amount (3)**	**Fixed deposit intt. rate (4)**	**Fixed deposit amount (5)**
2004	7.50	993.8	8.75	2473.9
2005	7.50	1068.8	8.33	2257.8
2006	7.25	1249.3	8.04	3028.4
2007	7.00	1232.3	7.30	3710.2
2008	7.00	1826.4	7.30	4237.6
Correlation	r_{23} = -0.7612		r_{45} = -0.9733	
Coefficient of determination	r^2_{23} = 0.5794		r^2_{45} = 0.9473	
t-statistics	t-cal = 2.033, t-tab = 2.571 (insignificant)		t-cal = 7.343, t-tab 2.571 (significant)	

Sources: Annual report and company published browser

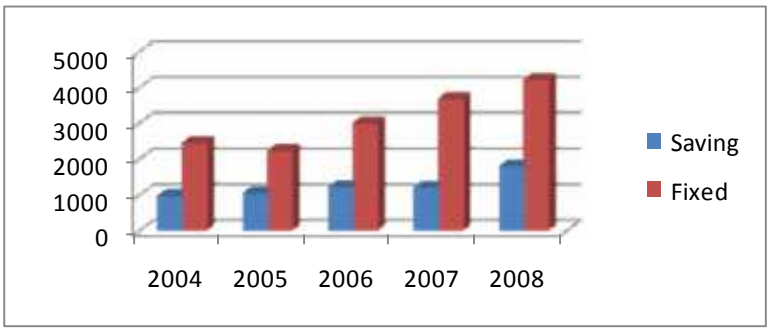
The table 4-11 shows the amount of saving deposit and its interest rate as well as amount of fixed deposit and its interest rate for five fiscal year. The table shows that, the total deposit amount is in increasing pattern in spite of interest rate offers on deposits is in

decreasing . It means that they move in opposite direction i.e. decrease in interest rate, increased the amount of deposit and vice versa. Therefore, there is a negative relationship between deposit interest rate and deposit amount of United finance.

It can be quantified by calculating correlation coefficient between them. This relationship can also be shown in figure 4-13

Figure No. 4-13

Deposit amount of United Finance during different FY

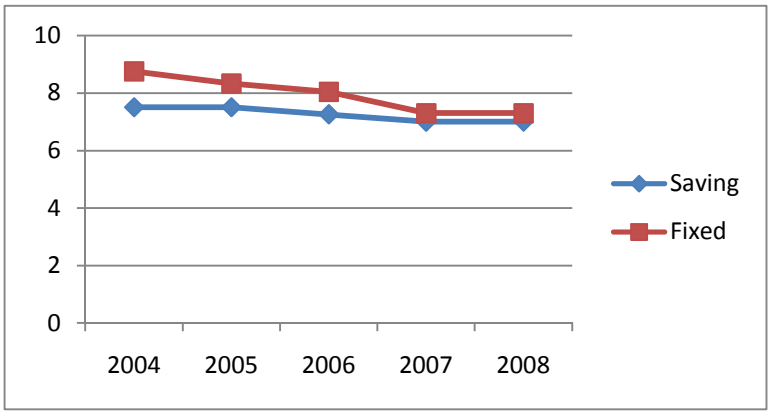


Fiscal Year

The graph 4-13shows saving deposit amount and fixed deposit amount is seems to grow each year with same fluctuation. It means that there is rise and fall for fixed deposit amount. Similarly, the interest rate of fixed deposit and saving deposit can also be shown on figure 4-14 as:

Figure No. 4-14

Interest rate of United Finance on Saving and Fixed deposit



Fiscal Year

To verify the above trend, it is necessary to calculate the correlation coefficient and t-statistics. The calculation of correlation coefficient between saving deposit interest rate and deposit amount shows (r_{23}) = -0.7612. This is high negative correlation coefficient indicates that they have inverse relationship with each other. Decrease in interest rate is followed by an increase in saving deposit amount and vice versa. This shows that the substitution effect in case of united for saving account is not applicable. The coefficient of determination between these two variables is r^2_{23} = 0.5794 which means 57.94% total variation in dependent variable (Saving deposit amount) has been explained by independent variable (Interest rate) and remaining is the effect of other factors. The t-value for testing then significance of the correlation coefficient between variables is t-cal = -2.033 (/t/ = 2.033). Since the tabulated t-value at 5% level of significance for two tails at 5 degree of freedom (t-tab = 2.571) is greater than the calculated value (t-cal = 2.033), the correlation coefficient is insignificant. This means the variables mentioned (interest rate on saving deposit and amount of saving deposit) for United Finance are insignificantly correlated and null hypothesis (H0) is accepted which means there is relationship between interest rates on fixed deposit and fixed deposit amount of United Finance

In the same manner, the correlation coefficient for fixed deposit interest rate and fixed deposit amount r_{45} = - 0.9733. This indicates that the two variables have very high negative relationship. In other words, when increment occurs on one variable occur then there occur decrement on other variables. To identify the significance or insignificance of this correlation, it is necessary to calculate the value of t-statistics. The calculated value of t is 7.343. Similarly, the tabulated value for t is 2.571, which is less then calculated. As a result null hypothesis is rejected and alternative hypothesis is accepted. It means that the correlation coefficient is highly significant. Thus from the both study it reveals that substitution effect is not applicable for United Finance.

4.1.4.2 Interest Rate and Its Impact on lending of United.

In this section, the relationship between lending interest rate and lending amount is presented and analyzed. Generally, when there is higher interest rate (lending or credit rate) in the economy, people normally borrow lesser amount than the period when lending interest rate is low. Theoretically, there is inverse relationship between lending interest rate and lending amount i.e. when there is low lending rate, then should be higher amount of borrowing by the user of fund and vice versa. Higher amount of borrowing indicates higher investment in the country or higher transaction in trade. This is necessary for the growth of the economy. So, this study tries to explore the relationship between lending rate and lending amount in Nepalese economy. This is necessary for the growth of the economy. So, this study tries to explore the relationship between lending rate and lending amount in Nepalese economy.

United Finance grants credit on different sectors like housing, hire purchases commercial industrial and so on. The lending rates on different sectors differ during different fiscal years. The table 4-12 shows the interest rate, average lending interest rate, and correlation coefficient, coefficient of determination, t-value and standard deviation of United Finance during last five fiscal years.

Lending Rate of United Finance Limited on different Sectors during five FYs.

Table No. 4-12

Sector	2004	2005	2006	2007	2008
Housing	18.50	17.00	17.00	15.00	14.50
Hire purchases	18.00	16.50	15.00	14.50	14.00
Commercial	16.00	16.00	16.00	15.00	15.00
Industrial	17.00	16.50	15.50	15.00	15.00
Agriculture	16.00	16.00	15.50	15.00	15.00
Loan against share	13.00	12.00	12.00	12.00	12.00
Education	-	-	14.00	14.00	14.00
Others	15.00	15.00	14.50	14.50	14.50
Average interest rate (1)	16.21	15.57	14.94	14.37	14.25
Lending amount (2)	3144.9	5433.4	5882.05	8159.7	9845.9
Correlation (r_{12})	-0.9582				
Coefficient of determination (r^2_{12})	0.9181				
t-statistics	t-cal = 5.799		t-tab = 2.571		Significant

Sources: Annual Report and company published browser

The table shows the lending interest rate on different sector is in decreasing trend. The table shows that the maximum interest rate is 18.50% in FY 2004 and minimum rate is 12% in FY 2008. This shows the interest rate declined drastically during the five FYs period. Generally, the productive sector loan rate (like commercial, industrial, agriculture and so on) declines less in magnitude than non- productive sector loan like hire purchases,

housing, loan against share and so on. In the same manner, the declining magnitudes were 4%, 4% and 1.5% for housing, hire purchases and others. The declining percentages for productive sectors were 1%, 2%, and 1% in commercial industrial and agriculture loan rate respectively. According to theory, in order to induce the investment in the country or expansion of trade, the productive loan should be available at cheaper rate. But the figure shows that these sectors loan were somewhat costlier than other non productive loan. If the average of each fiscal year is taken, then it shows that average lending interest rate is in decreasing trend i.e. 16.21%, 15.57%, 14.94%, 14.37% and 14.25% in FYs 2004, 2005, 2006, 2007, and 2008 respectively. The lending amount of united Finance is also seen to be in decreasing tendency where as the lending amount is increasing. The fluctuation in lending interest rate and lending amount can be seen in the following figures.

Figure No. 4-15

Lending amount of united Finance during different FYs

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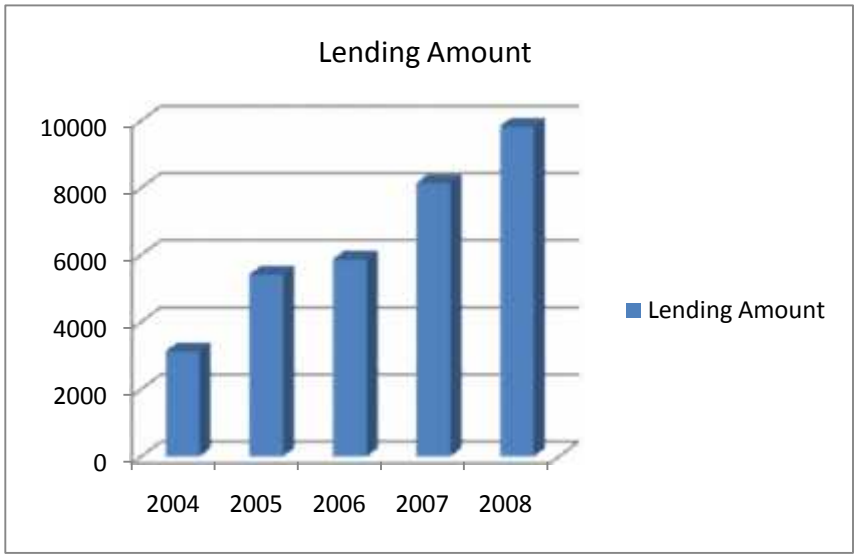
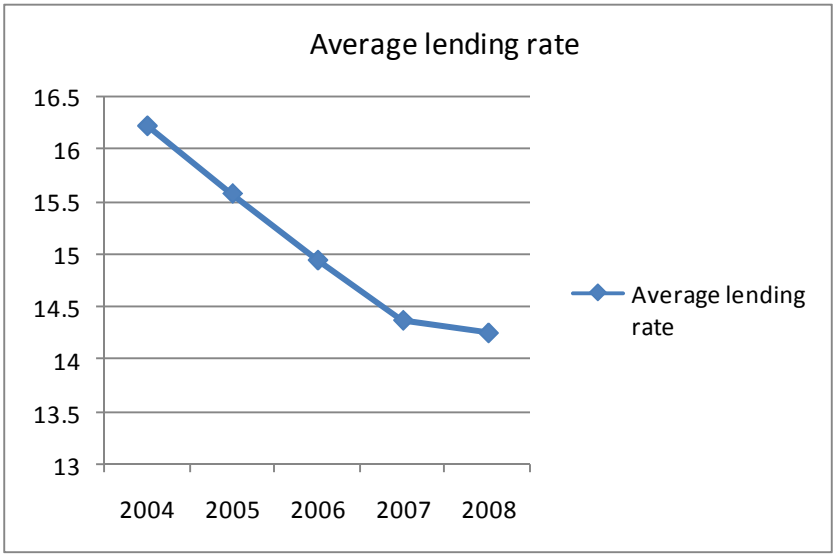


Fiscal Year

Figure No. 4-16

Average lending rate of United Finance during different FYs.



Fiscal Year

The above figure no. 4-15 shows that the trend of lending interest rate of United Finance during different fiscal year. Lending amount is increasing in each year. Similarly, figure no. 4-16 shows lending interest rate is in decreasing trend each year.

Correlation coefficient, coefficient of determination and t-statistics of United Finance

From the table no. 4-12, the correlation coefficient between lending rate and lending amount (r_{12}) is -0.9582. According to our classification, this negative correlation is of "high degree" which indicates that there is inverse relationship between lending interest rate and lending amount. It means they move in opposite direction i.e. decrease in lending rate result increase in total lending amount. This situation matches with the actual theory. According to the theoretical concept of lending rate and lending amount, people prefer or use more money when the market interest rate is low in the market. Similarly, the coefficient of determination is (r^2_{12}) is 0.9181 when total lending amount is taken as dependent variable and lending rate as independent variables, then 91.81% of total variation in dependent variable is explained by lending rate and reaming percentage of 8.19% is due to the effect of other variable in the economy. The test of significance of

correlation coefficient between lending rate and lending amount also verify the fact. The calculate value of t-statistics is 5.799. This value is greater than tabulated value, t-tab = 2.571 at 5 D.F. on 5% level of significance. In this condition, H_1 is accepted. It means that there is significant correlation between the two variables. In other words, their relation is significant.

4.1.5 Analysis of Primary Data

The primary data are collected through structured questionnaire the entire presentation of respondent answers is cited below;

Table no. 4.13

Analysis of Respondent Answer:

Question Number	Number of Respondent				
	Option of Answer				
	Yes	No	A	B	C
1			8	5	0
2	9	4			
3	11	2			
4			9	0	4
5			3	8	2
6	7	6			
7			7	5	2
8			8	5	0
9			2	6	5
10			5	5	3
11			0	11	2
12			13	0	0
13	10	3			

(Source: Detail of questionnaires See Annex)

Except some exception, there seems to be homogeneity in answer for the questionnaire. All the answers of respondents are categorized in different groups for analysis purpose as below:

a) **Present Condition of Nepalese Financial Market:** Set of questionnaires is distributed for officer staffs of sample Organizations. According to answer of total

13 respondents 62% are good, 38% are satisfactory and none of is poor about present condition of Nepalese financial market.

b) Interest rate of Financial Institutions attract the Investor and Depositor: There is mixed answer about the interest rate structure of the financial institutions is appropriate to attract the investors and depositors. According to answer of total 13 respondents 69% are agree with The above statement and, 31% of respondents are not agree.

c) **Lending rate in productive sector and non-productive sector:** Lending rate in Productive sector is low than non-productive sector, 85% of the respondents replies Yes and 15% of respondents' replies no.

d) Saving in the Banks and Finance: People are feeling comfortable and safe to deposit their saving in banks and finance. I asked 13 respondents about its answer, 69% of respondents highly safe and comfortable, 31% Medium and none is low about this question.

e) **Interest rate Effectiveness:** Respondent gave mixed answer about the interest rate on deposit and lending of the financial institutions is effective inn Nepalese financial market, 23% said that effective, 61% said satisfactory and 14% respondents said non effective.

f) **Saving and Fixed Deposit:** 54% of respondents said, saving deposit scheme is effective than fixed deposit and 46% of respondent said saving deposit scheme is not effective than fixed deposit.

g) **Open boarder India:** Open boarder of India affect the interest rate on borrowing and lending; According to the respondent gave mixed answer. 54% of respondent said affected highly, 38% of respondent said normally affected and 8% of respondent said not affecting at all.

h) **Violence and insecurity:** According to answer of total 13 respondents 62% said people deposits more in the situation of violence and insecurity, 38% of respondents said people withdraw more in the period of violence and insecurity and none said no effect.

i) **Rules and Regulation of NRB of Financial market in Nepal:** Respondent gave mixed answer about the rules and regulation of NRB of Nepalese financial

market; 15% Said that NRB‘s rule and regulation is good, 46% said that satisfactory and remaining 39% said Inadequate.

j) **Generate Profit:** 38% of respondents said financial institutions are not able to utilize the deposits in terms of loans to generate profit due to interest rate, 38% respondents said due to political situation and remaining 24% of respondents said due to the other factors

k) **Lending amount and Lending rate:** Lending amount is decrease with decrease in lending rate; 0% of the respondents agree with the above question, 85% of respondents disagree and 15% of respondents said may be.

l) **Economic Development:** All the respondent put consent on sound financial system contributes in economic development. Above the role of financial market in economic development, 100% of respondents argued that the financial market play the important role in economic development, financial market is fundamental need for economic development ,

4.1.6 Major Findings of the study

After presentation and analysis of relevant data of sample banks under study; using various analytical tools, some major findings of this study as evaluated & found in analysis are summarized. Based on the analysis of both primary and secondary data in this chapter n, different facts are found, they are as follows.

Finding from Secondary Data

- According to the theory, deposit rate & deposit amount should have positive relationship. But the analysis of substitution effect for both fixed and saving deposit shows that substitution effect do not exist for all sample banks. It may be due to the inverse in liquidity position of people as well as commercial banks. As people have less investment opportunity, they put their money in banks and other financial institutions rather than to hold, also financial institutions are safe to put money.

- Lending interest rate and lending amount should have inverse relationship as per the theory. From this study, it is found that ADB/N has inverse relationship but not NBL. The increment in demand of loanable fund for ADB/N is not due to the decline in lending rate because its t-value is less. This relationship proved statistically insignificant. But for NBL lending amount is decreasing and lending rate also decreasing but may be other factors. Its t-value is highly significant.
- It is found that deposit rate and lending rate of sample banks are moved into same direction. There is positive correlation between deposit rate and lending rate which indicates that the change in one variable causes to change in other variable in the same direction but decreases in deposit interest rate is more than decreases in lending rate which is constraint for investment. Lending rate of sample banks is highly affected by deposit rate.
- For saving deposits it is found that both sample banks have negative correlation & for fixed deposit ADB/N has negative & NBL has positive correlation. Similarly, all t-statistic value is significant.
- Deposit rates, interest on loans (lending rate) of two finance companies under study period are in decreasing trend means that every year interest rate either in deposit or in lending has been decreasing.
- The correlation coefficient between deposit rate & deposit amount of two institutions comes highly negative but comparatively the higher correlation of these variables of BFSCO is computed. Hence the real theory which says with the increase/decrease in deposit rate; deposit amount increase/increase does not match the analysis (increase in deposit rate decrease deposit amount and vice-versa)
- The correlation between lending rate and lending amount (loan) of sample institutions are negatively correlated. Both companies correlation are highly negative. This analysis match to the real theory i.e. increase in interest rate decrease the loan amount & vice-versa. Hence it can be concluded that the customer's institutions are interest conscious.

- Test of significance for correlation coefficient between deposit rates and deposit amount of these institutions are shows the significance relationship between them.
- Test of significance for correlation coefficient between lending rate & lending amount of two financial companies comes significant. Hence it can be concluded that lending rate & lending amount are correlated each other.

Findings from Primary Data

- The customers are not equally satisfied with the interest rate of Nepalese financial market.
- In first observation the customers are not equally satisfied with the condition of the commercial bank and finance in the competitive market.
- Regarding the service of Nepalese financial institutions the customer are not equally satisfied.
- Nepalese financial system is moderately developed now. Argo-based economy is the main barrier in Nepalese Financial market development and then civil war.
- The customers are not equally satisfied with the Popularity of Nepalese financial market.
- The customers are not equally satisfied with the good strength of Nepalese financial institutions.
- The customers are not equally satisfied with the stability and growth of Nepalese financial institutions in Nepal.
- The customers are not equally satisfied with role of Nepalese financial institutions for economic growth in the country.

CHAPTER –FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5. Introduction

This is a last chapter for the study it include all the briefing of the whole study and extracts of all the previous chapters. This chapter is the important chapter for the research. This chapter consists of mainly three parts: Summary, Conclusion and Recommendation. In summary part, revision or summary of all four chapters are made. In conclusion part the result from the research is summed up and in recommendation part, suggestion and recommendation is made. Similarly by comparing and analysis the theoretical aspect conclusion is made and finally based on the result of the conclusion required suggestion and recommendation made for the improvement of the current situation of interest rate structure.

5.1 SUMMARY

Nepal is a underdeveloped country various resources are unutilized and remain unused due to lack of the technical and financial development. So for the utilizing and mobilization of these phenomena liberalization policy play a vital role, as result various financial institutions are spread and functioning in the different parts of the country. Financial intermediaries transfer saving to the nearby investor which helps to utilization of educates funds among various productive sectors. This helps to the economic development and the rise the living standard of the peoples. The basic policy for the financial institution is to charge the higher interest in lending and lower interest for deposited funds. As a result various these types of organization are lure for investment in order to gain maximum profit from the deposit and lending. It means that such organization survive by making profit through an interest spread on deposit and lending. The proper decision made to charge and provide interest on lending and deposit affects the profit position of the organization. Depositors are generally attracted by offering the higher interest rates. Similarly, high interest rates demotivate the investors as a result investment in the country shrinks down. As focus on the above explanation the studying

has covered on the study of interest rates regarding its impact on deposit and lending by seven years data and mainly concerns the below issues:

- To examine the interest rate structure on deposits and lending of Nepalese Financial Institution.
- To study and analyze the relationship of interest rate on deposit amount of Financial Institution.
- To evaluate the relationship of interest rate on lending amount of Financial Institution.
- To find out the examine the position of interest rate of Financial Institution in different period of time.

Though there are various factors in the economy that affects the deposit amount and lending amount, interest rate is one of the major factor that affect deposit and lending amount. With the major objective of showing relationship between deposit rate and deposit amount i.e. substitution effect, lending rate and lending amount, inflation and interest rate, this study is undertaken.

After the liberalization policy, NRB slowly loosen the rigidness to fix the interest rate that financial intermediaries charge and offer. Therefore, in past few years back, various banks and financial institutions came into existence with a hope to play important role in the development of financial system of the country. These institutions get freedom to quote the interest on deposit and lending which creates the competition in the Nepalese economy. In this sense, this study is conducted to identify whether some of the theories of finance and economics are applicable or not in the Nepalese financial markets. Theses major theories are like substitution effect, fisher effect and inverse relationship between interest rate and lending amount. For this purpose, brief introduction about Nepalese economy, interest rate, sample organizations, statement of the problem, significance of the study, research hypotheses and so on are made in the first chapter of this dissertation.

In second chapter, theoretical review as well as review of previous research has been made. Different views about interest, function, theories of interest, factors affecting interest rate and so on are reviewed. On the theories of interest, mainly four theories – The classical theory, Liquidity Preference theory, Loanable fund theory and Rational

Expectation theory are reviewed. Similarly, the factor affecting interest rate like default risk, marketability risk, exchange rate risk, and so on is explained. Similarly, in order to identify the relationship no interest rate inflation, fisher effect, Harrod-Keynes effect are also studied in this chapter.

Research design used is mainly analytical. Out of the total financial system, two commercial banks and two financial companies are chosen for sample purpose. This is mainly based on secondary data used for the analysis. These all are made on third chapter. Secondary data are collected from NRB's economic reports and annual reports of related institutions. Lastly on fourth chapter, collected data are presented in tabular and graphic from and analyzed using various financial and statistical tools like mean, standard deviation, correlation coefficient and t-statistics.

5.2 Conclusion

It is a fact that globalization of banks is a reality. The growth and increasing integration of the world economy has been paralleled by expansion of global banking activities in Nepal. Through a developing country could not deny the fact that the banks have growing potentiality which is responded by extending loan and developing new and highly innovative financial techniques that lay the foundation for totally new approach to the provision of banking services. On the basis of entire presentation and analysis of relevant data of sample institutions using various analytical tools, the major findings have been deduced in the following table.

Particular		Commercial Bank		Finance Company	
		NBL	ADB/N	BFSCO	United
Relation between deposit rate & deposit amount	(SR & DA) r	-0.82	-0.9365	-0.8854	-0.7612
	(FR & DA) r	0.9756	0.9366	-0.9394	-0.9733
	(SR & DA) r^2	0.6724	0.8770	0.7839	0.5794
	(FR & DA) r^2	0.9518	0.8772	0.8824	0.9473
	(SR & DR) t-cal	3.219	5.9707	3.298	2.033
	(FR & DA) t-cal	9.936	5.9764	4.749	7.343
Relation between lending rate & lending amount	(LR & LA) r	0.7723	-0.7367	-0.9802	-0.9582
	(LR & LA) r^2	0.5965	0.5427	0.9608	0.9181
	(LR & LA) t-cal	2.718	2.436	8.564	5.799

Note: SR = Saving Rate, DA= Deposit Amount, FR = Fixed Rate, LR = Lending Rate LA = Lending Amount

- The interest rate on both deposit & lending of all sample financial institutions are found to be in decreasing trend. But, on the contrary to this deposit amount and lending amount is increasing every year except on fixed deposit and lending amount of NBL.
- The saving deposit amount and saving interest rate have inverse (negative) relationship of all the sample banks and finance company. The value of correlation between deposit rate and deposit amount of sample institutions under study is found as -0.82, -0.9365, -0.8854 and -0.7612 for NBL ADB/N, BFSCO and United. These value shows that there is high degree of inverse relationship. If one variable increases, other variable decreases and vice-versa. This case is against the theory of substitution effect. This may be due to the fact that, in last seven FYs, people accumulated most of their funds on saving accounts though they don't get appropriate interest on it. It may be just because of unavailability of other acceptable investment opportunity. Because the high supply of saving deposit reduces the cost of borrowing (interest rate of saving account)
- From the analysis of coefficient of determination for deposit amount ranging from 0.5794 to 8770 , it is found that the 57.94% to 87.70% of total variation in deposit amount of sample financial institutions is explained by the deposit rate

(independent variable) and remaining percentage are due to the effect of other factors in the economy.

- The t-statistic between saving deposit amount and saving deposit rate is significant except united finance. Which also clarify that the above two variables have strong negative correlation. Therefore, it is concluded that for saving deposit, there is no substitution effect.
- Analysis of fixed deposit amount and fixed interest rate shows negative relationship except NBL. The correlation coefficient for NBL is 0.9756, which is higher degree of correlation. According to correlation coefficient, the substitution effects occur for ADB/N, BFSCO and United have highly negative correlation i.e., -0.9366, -0.9394 and -0.9733 respectively. This negative correlation coefficient shows that people deposit more money even if the institution offer lower yield rate on fixed deposit.
- Even though the correlation coefficient of NBL for fixed deposit amount and fixed deposit interest rate is positive, the t-statistics clarify that their relationship is not strong. The calculated value of t is found to be higher than the tabulated value of t, so t-test indicates that there is no significant relationship between those two variables. Thus the decrease in deposit is not due to the decrease in interest rate but due to the other factors. Therefore, it is concluded that for fixed deposit also, there is no substitution effect at all.
- One of the variables that affect the demand of fund in the case of lending activity is lending interest rate. Theoretically, there is negative relationship between lending rate and lending amount. In this study, it is found that all sample institutions have negative correlation except NBL. Commercial bank has moderate degree of correlation and financial institution has highly negative relationship.
- Though NBL and ADB/N have moderate degree of correlation between lending rate and lending amount. The t-value of ADB/N is insignificant which means that there is no relationship between lending rate and lending amount in the case of ADB/N and NBL t-value is significant relationship. So, increasing in the lending amount is not due to the decrease in lending interest rate but due to the other

reason. But for finance company the t-value is significant meaning that the variables have relationship and one of the factors to increase the lending amount is decline in interest rates. So, it can be concluded that lending interest rate is also an important factor for expansion or contraction lending amount.

- The above conclusion can be clarified by testing t-statistic. The t-value of the NBL bank is moderate significant and finance company t-value has highly significant which tells that the variables have strong positive correlation.
- It is also found that lending interest rate of the productive sector loan such as commercial loan, industrial loan trade credit, working capital loan were decreased lesser in magnitude in comparison to the non productive sector loan.

5.3 Recommendations

Based on the analysis, findings and conclusion, certain recommendation can be made here so that the concerned authorities, further researchers, academicians, bankers can get insights on the present condition of the above topics. It is considered that this research will fruitful for them to improve the present condition as well as for further research. This title focuses on some selected recommendations which are as follows:

- The financial institutions are suggested to quote higher interest rate on deposit which will generate more capital for the development of country so that it helps to generate more deposits which are needed to be collected by the financial institutions for the development of the economy.
- NRB is suggested to provide clear-cut policies and directives related to interest rates and lending rates to maintain the balance deposit and loan rates. NRB should take required measures if it finds that financial institutions are not maintaining rates to a desired level.
- While fixing lending rates, high rates should be charged in unproductive sectors and lower rates should be charged in productive sectors and small scale industries, if not possible then bankers can reduce the rate of all sectors proportionately. Commercial banks should emphasize on the repayment of loans and should provide different incentives to borrowers such as facilities, fine waivers, discount

etc to encourage paying loan and also competing with unorganized sector. Good repayment of loans ensures the strength of financial institutions.

- Though the interest rate in free market is determined by the interplay of demand and supply, the concerned parties who fixed interest rates are suggested to include the inflation premium as far as possible while fixing the interest rates. If the rate of inflation is not considered and real rate comes out to be negative then depositors may withdraw their money and utilize it on non productive sectors.
- Investment should be higher yield oriented for this they have to invest their fund in sector with high return as well as to introduce competitive customer oriented schemes. It will increase the profit position of financial institutions. Government should also make strict rules regarding the investment policy of financial institutions.
- From the experience of collecting the secondary data, it is suggested that NRB should pay special attention to publish detail information on timely. In same manner, the untimely publication of such information may cause negative impact on the efficiency of those whose workings are based these information.
- To collect maximum scattered savings and to utilize it according to the need of the people and nations, the deposit and loan rates should be fixed according to the need of the people and nations. A large number of depositors now are attracted by some unorganized hands. So, to attract more deposit other incentives i.e. insurance, prizes, other facilities etc should be offered. Officials and legal processes should be made simpler and shorter. Hidden cost i.e. service charges, fines, commitment fees should be lowered.
- Finance company and commercial banks should formulate and implement a client oriented service policy while fixing deposit rates and lending rates. It helps the both to face the cutthroat competition very boldly.
- As this research is made by highlighting only one variable – interest rate, it is suggested for further research.

APPENDIX

Research Questionnaires

Dear Sir/Madam,

I would like to introduce myself as the student of Tribhuvan University, MBS (Final Year). In order to fulfill the partial requirement of Master's Degree in Business Studies, I am conduction a research work entitled " A Study on Interest Rate Impact of Deposit and Lending on Nepalese Financial Institutions"

Your small effort can play a vital role in my research, Hence I would be very grateful if you kindly spare few of your busy and valuable time by filling this questionnaires necessary completion my research work, your views will be purely used for academic purpose only. I anticipate your co-operation and suggestions as soon as possible.

Deepak Kunwar
Nepal Commerce Campus
MBS Final Year
New Baneshwor, Kathmandu

Questionnaire

A survey on interest rate structure and its impact on deposit and lending of Nepalese financial market.

Name :-

Position:-

Institution:-

Address:-

1. How is the present condition of Nepalese financial market?

   (a) Good (b) satisfactory (c) poor

2. Does interest rate structure of the banks and finance is appropriate to attract the investors and depositors?

   (a) Yes (b) No

3. Is there high lending rate in non productive sector rather than productive sector?

   (a) Yes (b) No

4. Does the people are feeling comfortable and safe to deposit their saving in the banks and finance?

   (a) High (b) Low (c) Medium

5. Does the interest rate on deposit and lending of the banks and finance is effective in NFM?

   (a) Effective (b) satisfactory (c) non-effective

6. Do you agree that saving deposit scheme is effective than fixed deposit scheme?

   (a) Yes (b) No

7. To what extent open boarder with India affect the interest rate on borrowing & lending?

   (a) Highly (b) normally affecting (c) not affecting at all

8. In your experience, whether people deposits more or withdraw in the situation of violence and insecurity?

(a) Deposit more (b) withdraw more (c) no effect

9. What do you think about the rules and regulation of Nepal Rastra Bank?

(a) Good (b) satisfactory (c) inadequate

10. What are the reasons that financial institutions are not able to utilize the deposits in terms of loans to generate profit?

(a) due to interest rate (b) due to political situation

(c) due to other factors

11. Do you agree that lending amount decreases with decreases in lending rate?

(a) Agree (b) disagree (c) Don't know

12. Financial markets are playing important role in economic development of the country do you agree?

(a) Agree (b) Disagree (c) may be

13. Do you think that lending rate should be reduced to attract investor?

(a) Yes (b) No

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Calculation of Average Interest Rate on Deposit of NBL

Deposit	2002	2003	2004	2005	2006	2007	2008
Saving	5.50%	5.00%	4.75%	2.50%	2.50%	2.00%	2.00%
Fixed							
7 days	2.00	2.00	2.00	-	-	-	-
14 days	2.50	-	-	-	-	-	-
1 month	3.50	3.50	3.25	2.50	2.25	2.00	2.00
3 months	4.00	4.00	3.75	3.00	3.00	2.25	2.25
6 months	5.00	4.50	4.25	3.50	3.25	2.50	2.25
1 year	6.75	6.00	5.75	4.00	3.75	3.00	3.00
Above 2 year	7.00	6.25	6.00	-	-	3.50	3.50
Whole Mean	4.53	4.46	4.25	3.10	2.95	2.54	2.50
Fixed deposit Mean	4.39	4.37	4.17	3.25	3.06	2.65	2.60
Std. deviation	0.839%						

Mean($\bar{X}$) = $\frac{\sum \bar{X}}{n}$

Whole Mean = $\frac{\sum 5.5+2+2.5+3.5+4+5+6.75+7}{8}$ = 4.53

Fixed Deposit Mean = $\frac{\sum 2+2.5+3.5+4+5+6.75+7}{7}$ = 4.39

Standard Deviation for NBL

Year	Average Interest(X)	$(X- \bar{X})$	$(X- \bar{X})^2$
2002	4.53	1.05	1.1025
2003	4.46	0.98	0.9604
2004	4.25	0.77	0.5929
2005	3.10	-0.38	0.1444
2006	2.95	-0.53	0.2809
2007	2.54	-0.94	0.8836
2008	2.50	-0.98	0.9604
			$\sum(X - \bar{X})^2 = 4.9251$

S.D (σ) = $\sqrt{\frac{\sum(X- \bar{X})2}{n}}$

= $\sqrt{\frac{4.9251}{7}}$ =0.8388%

Calculation of Lending rate of NBL on different sectors during last seven FYs

Sector	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Overdraft	15.00	14.00	10.00	10.00	10.00	10.00	10.00
Export Credit	11.00	11.00	8.50	8.50	8.50	8.50	8.00
Import LC	11.00	11.00	8.50	-	-	-	-
Government Bond	8.00	7.00	7.00	-	-	-	-
BG/CG	10.00	10.00	8.75	8.75	8.75	8.75	7.00
Industrial Loan	14.00	13.00	13.00	-	-	-	-
Commercial Loan	14.50	13.50	13.50	-	-	-	-
Priority Sector Loan	14.00	13.50	10.50	10.50	10.50	10.00	10.00
Poor Sector Loan	10.50	10.00	8.00	8.00	8.00	7.50	7.50
Working Capital	14.00	13.00	10.00	10.00	10.00	10.00	10.00
Hire Purchases	14.00	14.00	11.00	11.00	11.00	10.50	10.50
Others	16.00	14.00	11.00	12.00	12.00	12.00	12.00
Average Int.Rate (1)	12.67	12.00	9.98	9.53	9.53	9.36	9.06
Lending Amount (2)	22062.30	20997.50	19266.10	19141.70	18530.60	12791.10	13750.60
Correlation(r_{12})	0.7723						
Coefficient of Determination(r^2_{12})	0.5965						
t-statistics	t-cal = 2.718		t-tab = 2.571			**Significant**	

Year	Lending Rate X_1	Lending Amt.X_2	X_1X_2	$X1^2$	$X2^2$
2002	12.67	22062.3	279529.341	160.53	486745081.3
2003	12	20997.5	25197.00	144	440895006.3
2004	9.98	19266.1	192275.678	99.60	371182609.2
2005	9.53	19141.7	182420.4	90.821	366404678.9
2006	9.53	18530.6	176596.618	90.821	343383136.4
2007	9.36	12791.1	119724.696	87.61	163612239.2
2008	9.06	13750.6	124580.436	82.084	189079000.4
Total	72.13	126539.9	1327097.169	755.465	2361301752

Correlation Coefficient (r_{12}) = $$\frac{n\sum X_1X_2-\sum X_1\sum X_2}{\sqrt{\sum nX_1^2-(\sum X_1)^2}\sqrt{\sum nX_2^2-(\sum X_2)^2}}$$

$$\frac{7x1327097.169-126539.9x72.13}{\sqrt{7x755.465-(72.13)2}\sqrt{7x2361301752-(126539.9)2}}$$

= 0.7723

Coefficient of Determination (r_{12}^2) = $(0.7723)^2$

= 0.5965

t-Statistics for Hypothesis Test

$$t=\frac{r}{\sqrt{1-r^2}}\,x\sqrt{n-2}$$

Calculation of t-Statistics for Lending Rate and Lending Amount of NBL

$$t = \frac{0.7723}{\sqrt{1-(0.7723)^2}} x\sqrt{7-2}$$

$$= 2.718$$

Note: In this dissertation, calculations are made by using both calculator (formula) and excel worksheet. So, for all case, every calculation are not shown here