# IMPACT OF INTEREST RATE ON SHARE INVESTMENT IN NEPAL 



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## RECOMMENDATION

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

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## DECLARATION

I hereby declare thesis entitled " Impact of Interest Rate on Share Investment in Nepal " Submitted to post Graduate campus, Biratnagar. Nepal faculty of management, Tribhuvan University, is my original work done in the form of partial fulfillment of the Masters Degree in Business Studies (M.B.S.) under the supervision of Prof. Dr. Yadav Raj Koirala.

Date: $\qquad$

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## Sushil Kumar Pyakurel

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## ABBREVIATIONS

| A.D | - | Anno Domino |
| :--- | :--- | :--- |
| ADB/N | - | Agriculture Development Bank |
| BOK | - | Bank of Kathmandu Ltd |
| BS | - | Bikram Sambat |
| CBs | - | Commercial Banks |
| CRR | - | Capital Reserve Ratio |
| CV | - | Coefficient of Variance |
| DRP | - | Default Risk Premium |
| HBL | - | Himalayan Bank Ltd |
| INT | - | Interest |
| IP | - | Inflation Premium |
| IPOs | - | Initial Public Offerings |
| Ltd. | - | Limited |
| MBS | - | Masters of Business Studies |
| NABIL | - | Nepal Arab Bank Ltd |
| NBBL | - | Nepal Bangladesh Bank Ltd. |
| NEPSE | - | Nepal Stock Exchange |
| NRB | - | Nepal Rastra Bank |
| ROC | - | Return On Capital |
| S\&Ls | - | Savings and Loans |
| SCB | - | Standard Chartered Bank Ltd. |
| SD | - | Standard Deviation |
| SEBO | - | Security Exchange Board of Nepal |
| SLR | - | Statutory Liquidity Ratio |
| SP | - | Spread |
| Vol | - | Volume |

## CHAPTER -I

## INTRODUCTION

### 1.1 BACKGROUND OF THE STUDY

Capital in a free economy is allocated through the price system. The interest rate is the price paid to borrowed capital, while in the case of equity capital investor's return come in the form of dividends and capital gains (Brigham, 1994; 63). Interest is the cost paid to the borrowing capital. This cost is affected by various factors. The most fundamental things that effects cost of money are production opportunity and time preference for consumption. The return available within and economy from investment in productive (cash generating) assets determines the cost of investment or borrowing. Similarly, the preference of consumer's for current consumption as opposed to saving for future consumption also determines the cost of borrowing or return on lending.
"Weston \& Brigham" in their $11^{\text {th }}$ edition has identified four fundamental factors affecting the cost of money which are a) production opportunities b) time preference for consumption c) risk d) inflation. They have added risk \& inflation too, as fundamental factors of determining interest rate. Risk is the borrower's ability to repay the loan. In financial market context, risk is the chance that financial assets will not earn the return promised.

Thus, we see that interest rate paid to savers depend in a basic way.
a) On the rate of return, producer expects to earn on invested capital.
b) On saver's time preference for current versus future consumption
c) On the risks of the loan and
d) On the expected future rate of inflation

Modern economy, gains much of their efficiency through the use of money. This is the medium of exchange. The money can be invested to earn more in future. The money received in the future may provide higher satisfaction in consumption. "The rate at which the citizen can trade current money for future money depends on the investment her or she makes and knows as the nominal return." (Sharpe, Alexander, Bailey, 1986; 367)

Study of interest rate is important in the viewpoint of either saver (investor) or user (borrower). The interest rate is determined either through market reaction or by regulatory body (legislative). Capital is allocated among firms by interest rate in market. Firms with most portfolio investment opportunities are willing and able to pay the most for capital, sot they tend to attract it away from inefficient firms. "Most capital in the US economy is allocated through the price system" (Brigham, 1994; 64). When the economy is expanding firms need capital, and this demand of capital pushes rates up. Inflation is high in the economic boom period while conditions are reversed during recessions; slacked business reduces the demand for credit, the rate of inflation falls, and the result is a drop in interest rate.

### 1.2 LEVEL OF INTEREST RATE

Various theories have been developed to examine why interest rates are high, low rising or falling. "Fisher classic theory is one of them. In 1930 Irving Fisher found that normal interest rates attend to rise and fall in one to one correspondence with the rate of inflation.

$$
\begin{aligned}
& r_{t}=r R_{t}+\sum \mathrm{q}_{\mathrm{t}} \\
& \text { Where } \mathrm{r}_{\mathrm{t}}=\text { Normal Interest Rate } \\
& \mathrm{rR}_{\mathrm{t}}=\text { Real Interest Rate } \\
& \sum \mathrm{q}_{\mathrm{t}}=\text { Expected Rate of Inflation }
\end{aligned}
$$

In 1923 A.D. Gibson proved that nominal interest rate follows large movement in the price level, both upward and downward. However, short term interest not correlated with the inflation. The other factors to determine the levels of interest rate are the business cycle, the federal resource's monetary policy etc." (Clark, J., 1986; 324-336)

### 1.3 DETERMINANTS OF INTEREST RATE

The rate of interest is the cost or price of credit. The cost of the borrower is called required rate. It reflects the level of expected returns. The different types of assets have different rates of interest. However, rates of interest change together according to time. In general quoted (or nominal) interest rate on a debt security, K is composed of a real risk free rate of interest, $\mathrm{K}^{*}$ plus several premiums that reflects inflation, the risk of the security and the security's marketability or liquidity). "This relationship can be expressed as follows:

Quoted interest rate $(\mathrm{K})+\mathrm{K}^{*}+\mathrm{IP}+\mathrm{DRP}+\mathrm{LP}+\mathrm{MRP}$
Where,
$\mathrm{K}^{*}=$ the real risk free rate of interest
IP= Inflation Premium
DRP= Default risk premium
LP= Liquidity or marketability premiums
MRP= Maturity Risk Premium
(Brigham, 1994, 63)
"The real risk free rate of interest is the rate of interest that would exist on default free US treasury securities if no inflation is expected. The interest rate on a security that is free of all risk \& includes rate of inflation is nominal risk free rate of interest. Similarly, inflation premium is the premium for expected inflation that investors add to the real risk free rate of returns. It is equals to inflation rate expected over the life of
security. The differences the quoted interest rate on a T-bond and other exacters is the default risk premium. Liquidity generally is defined as the ability to converts on assets to cash on short notice and reasonably capture the amount initially invested. A premium added to the rate on a security if the security cannot be converted to cash on short notice and close to the original cost is liquidity premium. In addition, a premium that reflects interest rate risk is maturity risk premium. Bond with longer marketability has greater interest rate risk." (Brigham, 1994; 63)

### 1.4 INTEREST RATE IN NEPAL

### 1.4.1 GOVERNMENT POLICY ON INTEREST RATE

Nepal is one of most economically backward country where per capita income is about $\$ 200$. More than $42 \%$ of the total populations are below poverty line (Tenth Plan). The background of the economy exist many characteristics of deprivation like monetary dualism and underdevelopment. One of the causes of pervasive poverty is the lack of economic resources for the growing population and slow rate of nation economic growth. In the mid of 1980 decade the country has adapted liberal economic policy. Number of finance companies and commercial banks are going to increase as government made the liberal policy in maintaining the interest rate structure. Liberalization is determining market interest rate for commercial banks, establishment of joint venture in association with foreign banks in private sectors, establishment of financial companies after the lunch of financial company acts, freedom to investment management to commercial banks, establishment of development banks, accelerated the number of financial institutions in the beginning of 1990's decade.

On 16 november 1984 government had provide autonomy in offering the interest rate on saving and time deposit to extent to $1.5 \%$ and $1 \%$ points respectively above the prevailing rates. In 1986, financial institution got freedom in fixing their interest rates in their deposits and loans. In addition there was also limitation on the interest rate amount the different loans that provided for the productive and poverty areas

There was also limitation given in the interest rate of lending amount. The rate of maximum of $15 \%$ on the priority sectors loan. And for other kinds of loans financial institutions had got freedom to maintain the interest rate structure. In this way government provided freedom as well as limitation on the determination of interest rate.

According to the Nepal Rastra Bank Act, 2001, principal objectives of the monetary policy are (a) price stability, and (b) maintaining necessary surplus in the balance of payments. To fulfill these objectives, the open market operations have been made effective as a monetary measure. (UNESCO, 2007)

Bank rate has been taken as the stand of monetary policy. At the beginning of the Plan, the bank rate was 5.5 percent but due to inflationary pressure this has been increased to 6.25 percent in the FY 2004/05. Similarly, compulsory cash deposit ratio at the beginning of the Plan was fixed at 7 percent for current and saving deposit, 4.5 percent for the fixed deposit, and 3.0 percent for keeping in the bank vault. In the fiscal year 2003/04, bank vault provision was eliminated and the compulsory cash deposit ratio was fixed at 6 percent of the domestic total deposit. It was further reduced to 5 percent in the fiscal year 2004/05 with a view to reduce intermediation cost and increase resources for investments (UNESCO, 2007).

### 1.4.2 NRB'sPOLICY ON INTEREST RATE

In the background of liberal economic policy followed by the country, financial policy and Monetary policy should also be liberal, able to create competitive and excellent environment for capital formation. There is the challenge not maintain economic stability with high economic growth in one side and to other it is necessary to concentrate on equal distribution of income and poverty alleviation by means of financial monetary policy of the nation. From the beginning of seventh economic plan (1985-1990) the monetary policy has been considers as the weapon to maintain economic stability and growth by following structural adjustment to maintain payment deficit, downfall in foreign currency balance, high price rise and increased government
finance deficit, Because of this strategy in the beginning of eighth plant there was no payment deficit.
"According to ninth plan one of the grievances of investors in higher interest rate. The interest rate taken by the financial insetting of Nepal is high comparing with the south Asian countries and the world too. The reasons for high interest rate are
a. High inflation rate
b. Poor financial management system
c. Higher interest rate on deposit and operation expenses

Due to these reasons the cost of capital for the investor is high. (Ninth Plan 132 HMG, NPC 2052 BS)

Hence the interest rate policy one of the most important tools to control and guide monetary as well as financial policy. So, Nepal Rastra Bank takes monetary policy as the most important devices. The relation of interest rate with investment and saving is more powerful to increases investment and to increase real income and employment

The change in interest rate changes the monetary policy.

Public hold their cash assets in banks and financial institutions under different Deposit schemes. Market interest rate reflects the domestic value of money. As stated above, the prices of goods and services, shares and real estate have been rising. However, interest rates on bank deposits have not increased in tandem to the inflation. As a result, real interest rate has remained negative for a long time. Interest rates could not increase on account of excess liquidity position. People holding their assets in the form of goods, shares and real estate have gained whereas people holding their assets in banks and financial institutions have borne loss in real term. This encouraged people to invest on goods, share and real estate which in turn raised the prices of these assets. This also adversely affected the efficient allocation and mobilization of financial resources. Though the significant rise in remittances and investors investing on goods, shares and real estate facilitated banks and financial institutions to have ample deposits for their transactions, financial resources have not been mobilized efficiently. In order to correct this situation, there is a need to adopt a tight monetary policy stance for 2008/09. (NRB, Monetary Policy 2008/09)

On studying the interest policy taken by NRB it is found high fluctuation interest rate. There is condition change in interest rate and other finance companies. However the impact of the change in interest rate on micro economic and financial variables is not considered well. In the beginning NRB offered and fixed the lower level of interest rate but after the establishment of Nepal Bank Ltd. (in 1990 BS separate from NRB in 2013 BS) and Rasitya Banijya Bank (IN 2036) interest rate policy worked in their monopoly strategies.

In 1975 AD , it had made some revision in interest rate. At the time, interest rate structure was set higher and flexible. Within their few periods, NRB reformulated interest rate again and again sometimes downward and sometimes upward. This was done without studying the impact of such fluctuation interest rate. NRB has made revision in interest rate in the year of 1971,1972,1974,1975, 1976, 1977, 1982 and in 1984 A.D. NRB gave freedom on determination of interest rate.

### 1.5 SHARE INVESTMENT

In general term, a share is a part of capital of a company." The company's capital is divided in many units and each unit is said share" (Nepal Company Act 2063, BS p. 1) Share investment is a factor of security investment and capital market. Capital market than constitutes both financial and money market is fundamental element for economic prosperity of state, society \& to individual too. Under the concept of capital market, the role performed by security market can never be ignored; rather it is given top priority in the light of present days achievement reaped in the field of trade, commerce and industry. It is because the security market upholds such entitles financially by ushering in the opportune of saving remained passive in different forms. Share investment can be done by two ways. The first way is to purchase share in the primary market and second one is to purchase in secondary market. The various companies' takes approval from company registers office as well as forms security Board of Nepal (SEBO) for initial public offerings (IPOS). After taking approval they issue the shares in the market. The secondary market carries on trading of security each day. Number of transaction is transacted each day month and year.

### 1.6 SECURITY MARKET IN NEPAL

In Nepalese context, the institutional set up of securities market began along with the security exchange center in 1997. Since than very many characteristics development have been witnessed in the spectrum of on mobilizing financial resource to the installation of varied organization. No economically productive activities can be brought toe the existence in the absence of adequate financial resources. These sorts of complexities can only be ignored out if people's participation in financing is perceived as steeping stone for sustainable development. Similarly financial constraints can also be to some extent obviated, if people at different levels are educated of and familiarized with the benefit to be reaped form investment and disinvestment of securities.

### 1.7 HISTORICAL BACKGROUNG OF SECURITY MARKET INEPAL

The issue of share to raise capital was carried unintentionally only offer the establishment of Biratnagar Jute Mills in 1993 BS Nepal Bank Ltd and other industries had also issued the shares to the public in that time. However, this process could not be carried on continuously. In 2033 BS Security Kharid Bikri Kendara was established (today it is known as security exchange board Nepal Ltd.). To regulate \& manage security market exchange, security transaction act 2040 was introduced in Nepal on 2040 BS. After this regulation, some syndromes of improvement was seen in the security markets activities as some joint venture bank were established and made issue to public. However, the optimally growing phase of security market in Nepal seen only in the period of eight economic plan when the government adapted liberal and pen economic policy in the country and made first amendment in security transaction act 2040 BS.

The primary objective for buying stock is to sell in subsequently at a higher price. In many cases, dividend will be aspect also. Dividends and price change are the principal ingredients in what investors regard as return or yield. If an investor had perfect information and insight about dividend and stock price over subsequent period, he will be will on his way to great riches. But the real world of investment is fall of economic, political social and other forces that we don't understand sufficiently to permit us to predict anything with absolute certainty. Forces intermix and flow at cross currents. Nothing is static.

So, investor always designs to obtain more and more return with minimal level of risk. Before investment is made in any form, a retinal investor analysis the various factors that will exist and influence his return in future. He develops various alternatives and chooses the one he thinks the best alternative. The investor may lay down its investing assets in the formal cash balance or he can make tit Bank Balance expecting some invests on it. In spite of this, there are other carious investment tools in the market where the investor can invest his funds. The other investment areas that can be investing investment funds may be government or corporate bond, lending, investment in shares debenture and preference share etc. The various market forces affect return from each types of investment and there have some degree of risk for each types of investment.

### 1.8 FOCUS OF THE STUDY

In this study focus will be on extracting information about impact of interest in share investment. There are various factors that influence investors to invest the fund in share. It is generally seen that there is fluctuation on share investment volume. In some years, the investment volume in secondary market slide down. In the same way the market interest rate (normally provided by banks and other financial institution in the deposits) also fluctuates as the time passed by. Thus, the study will be focused on whether there is any relationship between the market interest rate fluctuation and investment flowing share investment? It tries to examine how does investment in shares stimulates due to the downward or upward movement of interest rate. How far the interest on loan provided by commercial banks and financial institution, effect the share investment?
The study also throws a glance toward other possible factors that may affect share investment.

### 1.9 STATEMENT OF THE PROBLEM

It is necessary to flow the capital toward production sector for accelerating economic growth. Development and expansion of capital market can do it. The capital market had existed in 2033 B.S. In the name of Security Kharid Bikjri Kendara" However, there was no any program and plan for capital market up to sixth plan. In seventh economic plan capital market was introduced in national plan. Although the program related to capital market were included in the plan only in eight plans.

Hence, the development of capital market has very short history. As it is very important to develop capital market so that the investment environment can be brought in country and maintain strong economy of the nation. The capital market of Nepal yet has not become mature so that it can flow pertinent information to the investors easily. Hence, it is easy for investor to carry on their investment decision in shares or other financial assets. In this context the study focuses the impact of interest rate structure on share investment in Neal and attempt to answer the following question.
a) How interest is fixed in the market?
b) How does central banks monetary policy control over the interest rate structure?
c) What is the interest rate structure of Nepal in the past few years?
d) Do the changes in interest rate effect total deposit and loan of commercial banks and financial institution?
e) What is the volume of share investment in secondary market? Is there any relationship in interest rate change and share trading volume in the secondary market?
g) Does the price of share in the market go up and down together with the interest fluctuation?

### 1.11f) OBJECTIVE OF THE STUDY

The main objectives of the study are to analyze the impact of interest rate in share investment in Nepal,and the other following specific objective are also generated:-
(a) To identify the effect of interest rate on share investment in secondary market of Nepal.
(b) To identify the effect of interest rate on share investment in primary market of Nepal.
(c ) To determine deposit loans and advance situation with change in interest rate.

### 1.12 ORGANISATION OF THE STUDY

The first chapter is about introduction consisting of background, level of interest rate, determinants, government policy, NRB's policy, share investment, objective, and focus of study. The second chapter consists of reviews of literature comprises of conceptual framework, review of books, review of journals Articles and Publication and revision of dissertation and thesis. Likewise research methodology is described on chapter third. The presentation and analysis of data is kept in chapter four and summary of conclusion and recommendation observed during research is placed in fifth chapter.

## CHAPTER-2

## REVIEW OF LITERATURE

The previous chapter discussed about the fundamental concept of interest rates and share investment. Now, this chapter deals the related literature about interest rate and share market and previous finding about interest rates relationship with share investment. The first part of this chapter deals about the theories of interest rate and share market, second, third and fourth are to review the related books, journals, articles and previous dissertations.

### 2.1 CONCEPTUAL FRAMEWORK

This section describes about brief discussions of interest rate, its relationship with other factors, theories, related to interest rate, security market determinants of share price in the secondary market, interest rate's impact on capital market, tools of evaluation of interest impact on share market or on share investment.

### 2.1.1 CURRENT INTEREST RATE POLCIY OF NRB

Interest rate spread to be maintained at $10 \%$ with a view to maintain the weighted average interest rate spread between interest rate offered on deposit and interest rate charged on loan by commercial banks with in the $12 \%$ levels. NRB has made the following provision in calculating such spread.

1. The following procedures are to be followed for the calculation of interest spread.
(a) The calculation of interest spread is based in interest expenditure payable on the total domestic and foreign deposits held by the commercial banks as well as the interest income of the commercial bank received in domestic and foreign currency from loans and advances, money at call and balances held abroad.
(b) For any specific period, the weighted average deposit rate is to be calculated by dividing the sum of interest expenses on total deposits by monthly average deposits a
multiplying it by 100. Deposits, here, include the current deposits, saving deposits, fixed deposits, money at call and other deposits both in domestic and foreign currencies. Likewise, weighted average leading rate is to be calculated by dividing the sum of interest income by monthly average amount of loans and advances and investment, money at call and balance held abroad and then multiplying it by 100 . The inter-bank lending is not included in the calculation.
(c) Difference between weighted average lending rate and weighted average deposits rate is to be considered as the weighted interest scattered.
2. The interest spread is to be calculated and monitored based on the half yearly data (from august to January and February to July). These data is to be filled up in a prescribed format and dispatched after internal auditing, to the Banking Operation Department and to the Inspection and Supervision Department of the NRB within a period of two months. Commercial Banks are also required to send the prescribed data on monthly basis to the above departments.
3. If the interest spread of any commercial bank exceeds the stipulated spread limit the exceeding amount of interest income of that period should be deposited in a separate special reserve fund created for it. The distribution of dividend out of this fund is restricted. However, such special fund can be treated as supplementary capital for the purpose of calculating adequacy (NRB, 1998/99)

### 2.1.2 FINANCIAL OPERATION OF COMMERCIAL BANKS

For the operation of commercial banks balance sheet need to be prepared on the best possible way to generate transparency within organization and for its stakeholders. The balance sheet is prepared in the standard format for better understanding and ease approach of stakeholders. Dr. Raghab Dev Pant has simplified the Balance Sheet of Commercial banks as follows:

Account I

| Assets |  | Liabilities |  |
| :--- | :--- | :--- | :--- |
| 1.Required Reserve | A | 1. Loan able Fund <br> a. Time <br> b. Current <br> C. Others | D |
| 2. Excessive Reserve | B | 2. Capital Reserve \& Other Net <br> Liabilities |  |
| 3. Earning Assets | C |  |  |

## Account II

1. Interest earned $=F \quad$ Interest cost $=1$

Effective interest rate $=(\mathrm{F} / \mathrm{C}) / \mathrm{x} 100 \%=\lambda$ Effective interest rate $=(1 / \mathrm{d}) \times 100 \%=\beta$

Hence, he has determined effective interest rate as,

And,

Effective interest cost as,

$$
\frac{\text { Interest cost }}{\text { Interest paying liabilities }} \times 100 \%
$$

If the interest rate structure is change by Nepal Rastra Bank, the changed in interest rate will affect both supplies of deposit and demand for loans from commercial banks. Both earning assets and loan able funds may not change in the same proportion and this will affect excess reserve.

Position of banks, the rate of return on capital is $\lambda-\beta-\lambda$ (D-C)/C. This return will be positive only if $\lambda$ (1- (D-C)/C $\geq \beta$. This indicates that apart from margin between lending and deposit rate the change in both loan able fund and earning assets, which in turn, determine the excess reserve available to the banks, play major role to determine the profit position of the banks (Panta, 1990; 72-74)

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

Commercial Banks also have very diversified liabilities structures. Banks raised funds by issuing deposit in a variety form, such as checking accounts and time and saving accounts, which together represents three quarter of banks liabilities some banks rely on whole sale financing source such as negotiable CDs, report borrowings and fed funds.

The size of banks has a significant impact on its assets and liabilities structure smaller banks are more heavily invested in securities and loans to consumers and residential real estate. They also use little wholesale financing sources. Large bank is heavier business and international lenders and rely more on wholesale financing source (Kenneth, 1992; 247).
"Keeley (1990) analyzed the change in the value of bank charters resulting from deregulation and new forms of competition. He concluded that one factor contributing to the decline in the market value commercial banks equities relative to their book value was the decline in the of a bank charter resulting from increased competitive (Kenneth, 1992; 229).

### 2.1.3 THRIFT INSTITUTION

Saving banks, saving and loan associations and credit unions are refereed to as thrift institution. These institutions all began as mutual institution designed to serve individuals by providing saving deposits service and in the case of savings and loans
credit unions mortgages and consumer loans, respectively, These specialized roles were codified in law and regulation un the 1930.
" Today, saving and loans associations (S\&Ls) and saving banks still concentrate their investment in the residential mortgaged market, while credit unions devotes most of their lending to consumer loans, their narrow financial roles persist despite the broader charters they received as a result of the financial deregulation of the 1980s. (Kenneth, 1992; 250).

### 2.1.4 OTHER FINANCIAL INSTITUTIONS

There is order various types of financial institutions. Some of them are discussed as follows
(a) Investment banking firms- They provide variety of financial service. In fact as a group, they provide just about every financial service except taking deposits. The following is a list of their primary activities.
(1) Originating and distributing stocks and bonds.
(2) Acting as a security broader for individual and institutions trading in the secondary market.
(3) Trading security group, for customers or for its own account.
(4) Acting as investment adviser.

## (b) Property and Causality Companies:

They provide a wide range of risk pooling services. Their two primary businesses are property insurance covering hazards such as fire, property loss or damage due to accident and theft. The other casually insurance, which covers loss of earning power, product failure, or accident. P \& Cs have experienced a sharp decline in their underwriting income in the relation to premiums earned. This has been partially off set by growth in investment.

## (c) Finance Companies:

Finance companies are the least regulated of our major intermediaries. They specialize lending to individuals and secured lending to business. The former is called consumer finance and the latter commercial finance companies. Both types finance their operations with money and capital market debt sold in the credit markets.

## (d) Mortgage banking companies:

Mortgage banking companies are highly specialized firms that originate and service residential and, to a much lesser extent, commercial mortgages.

## (e) Diversified financial service companies:

Diversified financial companies are commercial, industrial, or nonblank financial firms that are involved in a broad spectrum of financial activities. In most of these activities, they complete with depository institution.

## (f) Investment intermediaries:

Investment intermediaries represent a group of firms that specialize in pooling assets of investors and providing investment experiments they hold are not taxed at the intermediary level intermediaries include open-end mutual funds, limited partnership, and real estate investment trusts.

## (g) Trust Companies:

Trust companies are not technically intermediaries, since they hold no financial assets. However, they are major providers of financial investment expertise and they act as services of person and other employee benefit accounts.

### 2.1.5 TERM STRUCTURE THEORIES OF INTEREST RATE

The relationship between long and short rates of interest is known as the term structure of interest rate. These are important to corporate treasures who most decide whether to
buy long or short term bonds. Thus it is important to understand how long and short term rates are related to each other and what causes shift in their relative position.

Various theories have been developed to define yield (interest) curve. Weston \& Brigham in their Essentials of Managerial finance have explained following main three theories as term structure of interest theories.

1. Expectation theory; - The expectation theory states that yield curve depends on expectation concerning future inflation rates. Especially Kt , the nominal interest rate on a U.S. Treasury bond that measures in $t$ years, is found as follows under the expectation theory.

$$
\mathrm{K}_{\mathrm{t}}=\mathrm{K}^{*}+\mathrm{IP}_{\mathrm{t}}
$$

Here, $\mathrm{K}^{*}$ is real risk free interest rate and $\mathrm{IP}_{\mathrm{t}}$ is an inflation premium that is equal to the average expected rate of inflation over the $t$ years until the bond matures. Under the expectation theory, the maturity risk premium (MRP) is assumed to be zero, and, for treasury securities, the default risk premium (DRP) and liquidity premiums (LP) are zero.

## 2. Liquidity Preference Theory:

The liquidity preference theory states that long term bonds normally yield more than short-term bonds for two reasons. (a) Investors generally prefer to hold short terms securities, because such securities are more liquid in the sense that can be converted into cash with the little danger of loss of principle. Investor therefore generally accepts lower yield on short-term securities and this leads to relatively low short-term rates. (b) Borrowers on the other hand, generally prefer long-term debt because short-term debt exposes them to the risk of having to repay the debt under adverse condition. Accordingly borrowers want to " lock in to " long term funds than short term funds this also leads to relatively low short term rates taken both operates to cause short term rates.

Thus lenders and borrowers preference both operates to cause short term rates to be lower that long rates taken together these two sets of preference and hence the liquidity preference theory imply that under normal conditions, a positive maturity risk premium (MRP) exists, and the MRP increases with years to maturity, causing the yield curve to be upward stopping.

## 3. Market Segmentation theory:

Briefly, the market segmentation theory states that each lender and each borrower has a preferred maturity. For example a person borrowing to buy a long term assets like a house, or an electricity utility borrowing to build a power plant would want a long term loan. However, a retailer borrowing in September to its inventory for Christmas would prefer a short term loan. Similarly difference exist among savers- for example, a person saving to take a vacation next summer would want to lend in the short term market, but someone saving for retirement 20 years hence would probable buy long term securities.

The trust of the market segmentation theory is that the stop of curve depends on supply /demand condition in the long term and short-term markets. Thus, according to this theory, the yield could at any given time be either flat, upward sloping, or downward sloping yield curve would occur when there was a large supply of short term funds relative to demand, but a shortage of long term funds, similarly a downward sloping curve would indicate relatively strong demand for funds in the short term market compared to that in the long term market. A flat curve would indicate balance between the two markets (Brigham, 1994; 50-53).

### 2.1.6 INTEREST RATE SPREAD IN NEPAL

Financial system acts as a facilitator to bridge deficit units and surplus units. Financial intermediation helps promote economic growth through the process of saving mobilization and promotion of productive investment in the country. In this process financial institution (FIS) generally pays certain prevailing rate of interest on lending. The differential interest margin is inventive to FIS to cover their operational cost and
contribution to the worth of the equity holder. The determination of interest rate of the deposit and the lending is more or less governed by the market force. However, the differential rate is mostly influenced by operational efficiencies and interest margin of FIS. Financial intermediation means transfer of surplus funds from investor via intermediaries to the ultimate borrowers. If investors directly finance the ultimately borrowers, the process involve higher cost of acquiring and evaluating information on the potential borrowers. Since the intermediaries are generally large, they gain economics of scale in analyzing the credit worthiness of potential borrowers, in processing and collecting loans and pooling risks. Therefore, it is postulated that the existence of efficient and competitive financial system leads to higher level of financial intermediation and lower intermediation cost or interest rate spread, i.e. lesser difference between the deposit rates and lending rate of FIS.

The history of development modern banking and financial system is not long in Nepal. The establishment of Nepal Bank Limited (NBL) in 1973 A.D. was the foundation stone laid down in the history of the banking and financial development of Nepal. Up to the mid 1980s, Nepal had own central bank, Nepal Rastra Bank (NRB) established in 1956, two commercial banks namely NBL and Rastriya Banijaya Bank (RBB), established in 1966. There were other two specialized financial institutions functioning as development banks. Agriculture development Bank (ADB/N) established in 1968 and Nepal industrial Development corporate (NIDC) established in 1956. In addition, some insurance company and one employee provident fund corporation were also established. There were thus very few financial intermediaries up to the mid 80s and almost all are more or less state owned and controlled financial activities were tightly regulated and controlled through measures like the administered interest rate regime, SLR (Statutory liquidity Ratio) requirement etc. Therefore, at that time, there were no competitive environment among financial institutions and the quality of financial service was poor and traditional. There was no other non-bank financial institution to provide service as per the diverse need and requirement of the consumers that is why innovation of new financial service and improved quality service could not take place. The level of intermediation as measured by total outstanding deposit of FIS inclusive
of CBS, ADB/N, and NIDC, as percentage of GDP was less then 25 \% in jolly 1989. The same was the case for loan and advance.

As against the aforementioned backdrop Nepal initiated the financial liberalization in mid 80s, the objective behind the liberalization was to create competitive atmosphere among the financial system operators so as to increase and improve financial service, reduce intermediation cost and thus help promote economic growth. The financial sector liberalization among others the deregulation of interest rate, free entry and exist arrangement of commercial banks and other financial institutions, removal of SLR adoption of indirect and market friendly monetary instruments, and establishment and implementations of potential norms etc, as a result of financial liberalization measures undertaken during 1990, by February 2001. The financial system of Nepal comprised the central bank 14 commercial bank, 9 development banks 5 regional rural development banks, 46 financial companies (FIS) 34 cooperative and 13 NGOs performing limited banking activities, 13 insurance companies, EPFC, NEPSE, Citizens investment Trust etc. These financial institutions are providing financial service all over the country with around a net work of 1300 institution entities. The level of financial institution as measured by total outstanding deposits of FIS inclusive of CBs, FCs, ADB/N, NIDC, RRDBs, and cooperative as a percentage of loans and advance to GDP increased from $21.2 \%$ in July 1989, it was expected that there would be competitive behavior among that CBs and FIS which would prompt the banks to provide higher interest rate on deposits while charging competitive lower interest rat eon lending. It was also envisaged that, while doing do, banks could inverse the quantum of financial intermediation and thus profit from it. Consequently it was expected that competition would further bring down the interest rate spread which would contribute to the economic growth by benefiting both depositors and borrowers alike. In addition, the reduced spread was considered as mechanism and parameter that would further bring down the interest rate spread which would contribute to the economic growth by benefiting both depositors and borrowers alike. In addition, the reduced spread was considered as mechanism and parameters that would reflect the financial efficiency and commercial expediency of the financial system in general and the banking system in particular.

## (1) INTEREST RATE SPREAD

Following the deregulation of interest rates the deposit rate particularly those of CBs. However, want on declining where as the lending rate either remained constant or declined marginally causing the spread to go up. The intermediate cost or spread rate of commercial banks has a direct bearing on saving and investment and thus economic growth of the country because the commercial banks hold dominate portion of financial intermediation, i.e. by July 1994 the share of commercial banks on total credit outstanding (loans \%advance) of commercial banks, ADB/N, NIDC, RRDBs. Financial companies and cooperative organization was more than $90^{\wedge} \%$ and deposit were more than $80 \%$. Further CBs along were serving with 483 Branches all over the country by the same time. The higher spread rate of CBs can be observed from comparative figure of un-weighted interest rate spread derived from the difference between the one year average fixed deposit rate and average industrial loan rate 1982, 1986, 1990, 1995, 1997 which were $2 \%, 2.5 \%, 7.32 \%$ and $6.25 \%$ respectively. IT says the deregulation along was not sufficient to reduce the spread over the years as the possibility of informal collusion for earning higher profit margins for the CBs could not be ruled out.

Though NRB, through moral suasion on the interest rate spread, direction the CB to keep the spread below 6\% in Sept 1993, this direction had almost no effect on their carting and syndicate type of behavior, in a way, the moral suasion contained no specific method of calculation and procedure of monitoring. Even after the moral suasion, the situation of higher interest spread continued. High interest rate spread indicated that depositors were getting low interest rate where borrowers were punished with high interest charge creating the flow loans to export and industrial sector, or other productive projects, this retarding pace of process of economic development. At the some time, CBs were higher cash reserve and enjoying greater profit margin. This called be substantiated from the figure portraying the share of industrial loan in the total outstanding loans and advance of commercial banks over time, For instance, the share of industrial loans \& advance of CBs decreased from 46\% in July 1996 to 43,3
\% 1997, While the cash reserve ratio increased from 13.7 \% to 15.7 \% the some period.

In view of the above situation, in July 1998 NRB gave directive to commercial banks to lower their weighted average interest rate spread within $5 \%$ and if necessary to change the existing interest rate structure. Since the directive contained no specific methodology as to how to calculate spread, CBs explode the situation for manipulating the calculation. Following this, NRB issued further directive in mid. November1998, prescribing the detailed method of calculation of weighed spread rate (The difference between the interest rate applicable for deposits and credits). Together with the required monitoring and reporting procedures, with the NRB, thus give concrete directive to CBs to maintain the spread rate with in the limit, it has been found that almost all CBs have complied with the $5 \%$ spread rate which, however, was mare than $5 \%$, for CBs in the beginning (Shrestha, 2058; 73).

## (2) MAJOR CAUSES OF HIGH INTEREST SPREAD

In the past, to reduce the high spread rate NRB has taken some measure such as cut in CRR, freedom to determine interest rate, moral suasion and mandatory directive etc. Still several factors contributed to make higher spread rate in the banking system of Nepal. They are mainly related to high cost of funds or high margin resulting from the requirement of maintains higher CRR, priority sector lending requirement, structural and operational characteristic of Banking System.

Surya Chandra Shrestha in his article has suggested major three causes to be high interest spread.
(a) Requirement of maintaining CRR.
(b) Priority sector lending program.
(c) Structural and operational characteristics of the banking system (Shrestha, 2058; 77).

### 2.1.7 INTEREST RATE LEVEL AND STOCK PRICE

Level of interest rate directs the stock price directly or indirectly. Weston \& Brigham in their Essential of managerial Finance has explained the two effect of interest rate on corporate profits, which leads the determination of stock price " Interest rate have two effect on corporate profits, first because interest is a cost, the higher the rate of interest, the lower the firms' profit, and other things held constant. Second, interest rate affects the level of economic activities and economic activity effect corporate profit Interest. Rate obviously effect stock price because of their effects on profit balance perhaps even more important they have on effect due to competition in the market place between stocks and bonds if interest rate rise sharply investors can get higher returns in bond market, which industry tends to sell stock and to transfer funds from stock market to the board market. A massive sale of stock in response to rising interest rates obviously would depress stock prices, of course the resource occurs in of interest rates decline" (Brigham, 1994; 55-56).

Hence, of interest rate decline the investors the investor may deviate to sock market rather investing in bonds, on the other hand if lending rate of CBs, declines the investor can borrow loan from CBs and invest it to stock. This increases the demand of stock \& the stock price may rise.

### 2.1.8 INTEREST RATE AND INVESTMENT PATTERN

The detail intermission regarding the effect of high interest policy on domestic investment and on the growth rate of the economy is not available indications however that is the effect on change in interest rate structure on domestic investment was not as favorable as indeed. The excess reserve of the commercial banks increased significantly after 1975 (April) leading to sharp deterioration of banks profit position. Thus is attributable partly to the decline in credit demand through the private sector and partly to the failure of the banks to channels their resources in non-traditional sector. The rural sector experience lack of funds due to heavy outflow of resources from unorganized sector. Acharya \& Upadhya says, "The anomalous situation derives particularly from the fact while a part of saving from the agriculture sector has been
diverted to the banks due to high interest rates, the overall investment in the rural sector did not appreciably improve. The traditional source of supply of rural sector did not appreciably improve. The traditional source of supply of rural credit is drying up fast but institutional sector is no where near filling the gaps" (Acharya and Upadhaya, 1980; 45)

The available information indicates that the interest rate has increased significantly specially in recent year in unorganized sector. It is the increment in investment because a significant part of resources comes from deposits and used largely to provide credit to private sector" (Panta, 1990; 61-69).

### 2.1.9 INTEREST RATE AND PROFITABILITY

Schulz explains that "An important aspect of interest rate policy is the setting of appropriate margin between the lending \& deposits rate. If the margin is too high banks will make excessive profits and this may lead to waste of saved resources. If it is low it will discourage intermediate and devitalized financial institution" (Schulz, 1978). The profits of commercial banks as an accounting identity is equal to the interest from earning assets less the interest cost on deposit. Accordingly, in the accounting sense at least the margin between deposit and lending rate of the commercial banks in the primary factors determining the profit position. "The basic difficulty with such theory is that it is based on their assumption that interest rate is determined by the market force, that is simple terms by the interacts of demand \& supply of loadable funds"(Panta, 1990; 71)

### 2.1.10 ECONOMICAL FORECAST AND THE INVESTMENT DECISIONS

As discussed earlier stock investment decision is influenced by the various factors. Interest rate is the most important factor that guides the stock investment decision. Together within firm's profitability and other micro and macro economic variables also effects the ones decision about stock investment or disinvestment. Donald E Fishcher and Ronlad J Jordon in their book security analysis and portfolio management have explained the economic forecast influence the stock investment
decision. "Approximately half the variability in stock price is explained by the movement of overall market. In investment Jargon, this common or market effect is known as systematic risk. Furthermore, it is intuitively appealing to reason that the total market or some index of market performance is related to overall economic performance, which is the success of economy will ultimately include the success of overall market. For without a positive and healthy economic environment corporations in general will face it difficult to flourish over time and investors holding period return will suffer. This in turn will adversely affect an index of overall stock market performance" (Fischer,Jordan, ,2000, 27). Robert C Klem Kosky and John D Martin have found the portfolio influence in stock securities investment. The tested the relationship of market beta with the stock price variance empirically. "The level of diversification achieved for high beta portfolios requiring a substantially large number of securities to achieve the same level of diversification as low level portfolio" (Klpmkosky, 1975; 153).

### 2.1.11 INTEREST RATE AND STOCK INVESTMENT

The management in interest rate has the direct or indirect impact on share investment decision. As discussed before the stock price is less or more governed by the interest rate and profitability of a company has direct or indirect impact on stock price again profitability is some how influence by interest rate there is relationship between interest rate and stock investment process. George E Pirchses and J Clay Singleton have correlated stock price and bon rating system. They have found that where bond rating increases (decreases), abnormally high (low) common stock returns should occur before an annulment of the bond rating change." They have further discovered that "where abnormal high returns were expected before the change in rating, normal returns were expected after the month of the bond rating change".

Zvi Bodle has identified "the effectiveness of common stock as an inflation hedge depend son two parameters. The first of these is the ration of variance of non-inflation stochastic components of the real return on the common stock, to the variance of unanticipated inflation. The large this variance eruption is the less effective is equity
as an inflation hedge. The second parameter is the difference between the nominal return on nominal bond and coefficient of the unanticipated inflation in the equation for the real return on equity. The greater the absolute value of this difference the more effective is equity as on inflation hedge" (Pinches, Singleton, 1998; 41-42).

### 2.2 REVIEW OF BOOKS

While reviewing the relevant literature, various books, various articles and publication were reviewed thoroughly. While discussing the financial operations of commercial banks, "Interest Rate Policy of Nepal" by Dr. Raghav Dev Pant was thoroughly reviewed. The main findings give by the written is involved in the part of interest rate and investment patterns. Similarly "Financial Market and Institutional Investment Approach" by Kenneth J Thygesson is also review for operation of commercial bank. The "Essential of Managerial Finance" Eugene F Brigham gets the important in put for the structural theories of interest rate. The same book is reviewed to know the relationship between the interest rate level and its impact on stock rice. In the same way"security analysis and portfolio management"by Donald E Fischer, Roland J Jorden, is revised for the impact of economic forecast on stock investment. To enlighten the topic area and conceptual foundation managerial finance by Weston and Copeland, Investment Management of IM Pandey, Macro Economic of Edward Shapiro and Macro Economic of Oliver Blenchard are thoroughly revised. To build the conceptual framework regarding assets and liabilities structure of commercial banks "Financial market and Institutions a managerial Approach "by Kenneth J Thygerson is thoroughly revised.

### 2.3 REVIEW OF JOURNALS ARTICLES AND PUBLICATIONS

To extract the concepts of study various journal articles and publication are reviewed. Neal Rastra Bank Annual report of 1998 is thoroughly gone to know the procedure of calculation interest spread. Nepal Rastra Banks Samachar of 2054, 2058 and 2059 is thoroughly revised to draw some extract and clear the concept about interest rate spread in Nepal. This cleared the history of interest rate, commercial banks, financial institutions and courses of high interest spread. The articles of Surya Chandra

Sherestha contributed much in the topic area. Similarly a paper present by Meena sand Updhaya in the seminar about " Resources Mobilization, Interest rate and Productivity of investment in Nepal" is also revised and capsulated the finfish so describe interest rate and investment pattern. Aspect of Realistic interest rate policy in Nepal by Schulz is revised to know same about interest rate and its relation in profitability. Market and Portfolio diversification by Robert C Klemkosy and John D. Martin in the journal of Incan enlighten about the relationship of stock investment and market economic parameter. In the same wary the adjustment in stock price to bond rating charge by George E Pinches and J Clay Singletion described about interest rate and investment. Common stock and inflation by Zvi Bodle also gave insight of the same sub topic area. The other major publications revised were Trading bulletin of Nepal Rastra Bank; Directions to commercial bank by Nepal Rastra Bank are also thoroughly revised.

### 2.4 REVISION OF DISSERTATION AND THESIS

The master degree thesis by Laxmi Shrestha on Impact on Interest Rate Structure on Investment Portfolio of Finance Companies of Nepal is properly revised. This thesis enlightens the relationship between the interest rate structure and investment patter of financial companies. A thesis Security Investment in Nepal by Kahtiwada Mohan, Lending Policy of Nepal by Chitrakar Tara, Investment Policy of Nepal Bank Ltd. by Pradhan Nirmal Man and The Interest Rate Structure of Commercial Banks in Nepal by Rajbhandari Narendra Bahadur are properly revised to throw the light on topic area.

## 2.5)Research Gap

There are various studies conducted by different researchers. Nepal as an underdeveloped nation, industrialization of the nation is the main thing for the development of the nation. To direct the nation towards industrialization. It is necessary that capital market should function well. That means its equity and debt markets are well existed and functioning well. That means its equity and debt markets are should existed and function well. To regulate and well managed equity market the authorized organization NEPSE is being performing its best. Beside this it can not perform its best as expected. Therefore, the main important factor (interest rate) and its impact on the share market is matter of curiosity. Other researchers focus on the effect of interest rate on investment as a whole but on specific unit i.e. share market. Therefore this research may fulfill the requirement to know the other impact of interest rate on capital market and secondary market too.

## CHAPTER-III

## RESEARCH METHODOLOGY

### 3.1 INTRODUCTION

In order to draw relevant information on market interest rate and its impact on share investment, different measures have been adopted here. While collecting and interpreting relevant data, facts and figures with a view, to systematize data collection and data interpretation, the simple statistical tools as well as some financial tools will be applied. To derive the conclusion some hypotheses will be formulated and tested. This chapter presents the hypothesis and testing tools. Besides these, the chapter also deals about the limitation and organization of the study.

### 3.1.1 HYPOTHESIS TO BE TESTED

Thus following question mention in first chapter is hypothesis to draw the conclusion.
(a) Do the change in interest rate, effect total deposit and loan \& advance of commercial banks?
(b) Does interest spread of commercial banks affects the profitability? In addition, ultimately on share trading volume?
(c) Is there any relationship in interest rate change and share trading volume in the secondary market?

To answer the above question, the following hypotheses have been drawn.
(a) Change in interest rate in the market will affects the total deposit and loans and advance of commercial banks.
(b) Interest spread and loan loss provision of commercial banks affects the profitability of the banks, thus impact on share closing price and ultimately trading volume.
(d) Fluctuation of interest rate affects the share trading volume in secondary market.

### 3.2 RESEARCH DESIGN

The present study is mainly based on two types of research design i.e. descriptive and analytical. Descriptive research design presents the general pattern of interest rate, profit share investment in secondary market. The analytical research design makes analysis of gathered information and makes a critical evaluation of it.

### 3.3 NATURE OF DATA

Most of the data will be secondary in nature. The secondary data will be collected from the journals; periodical, economic bulletins annual reports, banks publications etc.

### 3.4 RESEARCH TOOLS

The various financial and statistical tools will be employed to test the above mentioned hypothesis.

### 3.5 FINANCIAL TOOL

Financial tools are used to depict the profitability, interest spread, and position of loan loss provision and closing price of share trading in secondary market. The following financial tools will be used to get information and conclusion.
3.5. (a) Percentage: Percentage is used to measure the changing position of different amounts.

It is used to depict the change in loans and advances of review period, change in interest spread, change in loans loss provisions, change in closing share, change in
dividend pay out, change in share trading volume in secondary market. Similarly, change in deposit, net interest income, and so on will be analyzed using percentage. The percentage will be calculated by using the following formula.

## 3.5(b) Du Pont system

Du pont system will be applied to determine the changes in return on investment (ROI) (TOTAL ASSET), ROI return on investment (NET worth) due to the change in interest rate of sample commercial Banks \& finances companies. The following formula will be applied for the calculation of ROI (Return on Investment)
$\operatorname{ROI}($ Net Worth $)=\quad$ Net profit after tax
Net worth

ROI $($ Total Assets $)=\frac{\text { Net profit after tax }}{\text { Total Assets }}$
Total Assets

### 3.6 OTHER FINANCIAL TOOLS

In spite of the above tools to analyze the impact of interest rate on profitability, price of stock \& share investment Net interest income and adjusted Net interest income will be calculated. The formulate for the purpose will be,

Net interest income $=$ Interest from assets - Interest paid to liabilities.

Adjusted interest income $=$ Net interest income - Loan loss provision

The other financial tools will be effective interest cost $(\beta)$ which will be calculated as:

$$
\beta=\frac{\text { Interest Cost }}{\text { Interest paying liabilities }} \times 100
$$

Similarly, effective interest rate $(\lambda)$ that will be calculated as:
$\lambda=\frac{\text { Interest Earned }}{\text { Interest Earning Assets }} \times 100$

Interest spread that will be calculated as, $\lambda-\beta$ and

Return on capital, which will be calculated as,

## ROC $=\quad \frac{\text { Interest Paying Liabilities }- \text { Interest Earning assets }}{\text { Interest Earning Assets }}$

### 3.7 STATISTICAL TOOLS

To draw out the conclusion about hypothesis formulated in previous section of this chapter following statistical tool will be applied.

## 3.7 (a) CORRELATION COEFFICIENT (r):

These tools will be used to find out the research correlation coefficient between two factors. In this research correlation (i) interest rate (average of interest rate on lending and borrowing) and share investment in primary market as well (ii) interest rate and share trading volume in secondary market for this purpose. We code x and y for interest rate and share investment (times of over subscription) in primary market in the first case and interest rate and number of share trading in the secondary market in second case. The correlation will be determined for various other factors such as:
(a) Interest rate and total deposit
(b) Interest rate and loans \& advances
(c) Interest rate and share investment in secondary market
(d) Return on capital and share trading in secondary market

The following formula will be applied to find out the correlation coefficient between the two variables.

$$
\begin{aligned}
r= & \sum x y \\
& \sqrt{ } \sum x^{2} \sum y^{2}
\end{aligned}
$$

Where, $x=X-X$ and $y=Y-Y$ and $X$ is the mean of variables $Y$.

## 3.7 (b) REGRESSION ANALYSIS

"The statistical tools with the help of which we are in a position to estimate (or predict) the unknown values of one variable from known value of another variable is called regression" (Gupta, Statistical Method, $8^{\text {th }}$ edition, 11-1). After determining the two closely related variables it may estimate the value of one variable (dependent variable) if we know the value of other variable (independent variable). In the study we take interest rate as independent variable and Number of subscription on IPO in the primary market as dependent variable. In the same way, interest will be the independent variable and trading volume of share will be dependent variable. To determine the regression value we draw the regression line, which will be expressed as:

$$
Y=a+b x
$$

The above equation is regression equation of $Y$ on $X$. In this equation $a$ and $b$ are the fixed numerical value which determines the position of the line completely. The value of $a$ and $b$ is determined by using the methods of least square where we solve the following equations:
$\sum \mathrm{y}=\mathrm{na}=\mathrm{b} \sum \mathrm{x}$ and $\sum \mathrm{xy}=\mathrm{a} \sum \mathrm{x}+\mathrm{b} \sum \mathrm{x}^{2}$

These equations are normally called the normal equations.

### 3.8 SAMPLE SELECTION

To obtain the relevant data for analysis purpose following commercial banks will be considered as sample commercial banks:
(a) Nepal Arab Bank Ltd.
(b) Nepal Bangladesh Bank Ltd
(c) Bank of Kathmandu Ltd.
(d) Standard Chartered Bank Ltd.
(e) Himalayan Bank Ltd.

### 3.9 SOURCES OF INFORMATION AND DATA

Most of the data we use here is secondary in nature. For collecting information relating to the research some personal discussion and interviews with related persons like investors will be carried out. The conversation will try to understand the source of fund. It will also do to inquire whether the investors want to deposit it into bank or invest in shares. Is their decision influence by interest rate?

The secondary data will be obtained by various publications of NRB, publications of security Board Nepal (SEBO), Nepal stock. Exchange (NEPSE), various Annual reports of sample commercial banks. Economic surveys, Development plans, various national and international journals, newspapers, previous dissertations etc.

### 3.10 LIMITAITON OF THE STUDY

This study has been conducted for the fulfillment of partial requirement of Masters Degree in Business Studies (MBS) with Financial Management and Investment. Due to the time constraints, financial constraints and other constraints, the study is bound for limited area.

Being small research work, the work couldn't cover all the concerned areas and to capture all the burning issues regarding the topic area. Empirical study of the data is taken as the base of findings.

As stated earlier, there are various other factors to determine the bull and bear trend of share market. Due to the above constraints, only impact of interest rate on share investment is analyzed in the study. The share market of Nepal has not yet been mature. So degree of disclosure of information and rumor regarding share price of various industries also play an important role in rating of shares and subscription of IPO's. This point has not been taken in to consideration in the study.

There are various other analytical tools to make investment or disinvestment decisions such as Risk and Return, Net Present Value, Portfolio Theories, Arbitrage Theory, Hedge Theory etc. which are not used in the study.

## CHAPTER IV

## PRESENTATION AND ANALYSIS OF DATA

### 4.1 INTRODUCTION

The previous chapter has discussed about the Interest rate policy adopted by Nepal Rastra Bank, interest spread meaning and guide line of the interest spread provided by NRB, Interest structure, Interest in Nepal, various books of various writers and of various publications.

In this chapter, the analysis part has been dealt from the year 2003/04 to 2008, or situation of interest rate in the market, studied of investment flow in primary share market, situation of share trading in secondary market (trading floor); comparative study of interest ratios fluctuations and investment in to share at primary market as well as secondary market are of this time span. This chapter also deals about the interest income of commercial banks and its effect on share trading volume through profitability during this period.

### 4.2 IMPACT OF INTEREST RATE STRUCTURE

Changes in interest rate structure have some positive as well as negative effect in the financial market. The various economic indicators shows the impacts of changing interest rate are not as positive as expected. Regarding the effectiveness of monetary policies of NRB, it seems that money lending is highly influenced by the reserve money.

Financial institutions can lower their lending rate as they can lower their deposit rate, which will have a positive impact on profitability and other economic activities.

Lower deposit rate decrease the total deposit of commercial banks and other financial institutions and increase the loans and advance.
$>$ Lower market interest rate increases the frequency in share trading phenomenon.
> The differential interest rate can make the financial market active and open.
$>$ An appropriate and realistic interest rate on lending can help in the optimum utilization of available resources.
$>$ The wider spread of interest rate helps the financial institutions and banks to manage the higher liquidity position and good profitability.
> Lower the interest rate diverts the investment from bank deposit to share purchase on primary market.
$>$ Low lending rate may increases the loans and advance and increase the share investment ultimately.

### 4.3 ANALYSIS OF LENDING RATE AND DEPOSIT OF OMMERCIAL BANKS AND FINANCIAL INSTITUTIONS

The lending rate and deposit rate of commercial banks as well as financial institution affects the profitability of the institutions and banks. Lending and deposit rate is the major constituents of interest spread. Higher the interest spread better the profitability of organization. The financial institutions deserve to increase the spread however the state or central monetary authority checks the spread. As discussed earlier NRB had directed not to be more than $5 \%$ the following table analyzes the lending and deposit rate of financial institutions and commercial banks since 2004 AD

Table 4.1
Calculation of Interest Spread of CBs

| Particular | $\mathbf{2 0 0 4 / 0 5}$ | $\mathbf{2 0 0 5 / 0 6}$ | $\mathbf{2 0 0 6 / 0 7}$ | $\mathbf{2 0 0 7 / 0 8}$ | $\mathbf{2 0 0 8 / 0 9}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Average Deposit Rate (a) | 4.5 | 3.25 | 3.5 | 3.75 | 3.85 |
| Average Lending Rate (b) | 12.05 | 13.5 | 12.25 | 11.75 | 12.5 |
| Spread (b-a) | 7.55 | 10.25 | 8.75 | 8 | 8.65 |

Source: NRB Quarterly Economic Bulletin (Various Issues)

The interest spread as observed revealed that spread was more in the year 2005/06 later it falls and in the year 2008/09 it is $8.65 \%$ which is slightly more than other years.


### 4.4 ANALYSIS OF MARKET INTEREST RATE

As market interest rate has direct or indirect impact on share investment process. It is necessary to calculate the market interest rate, to know the investment analysis in share investment either in primary market or in secondary market. As hypothesized earlier, there is relationship between interest rate structure and share investment. The following table shows the market interest rate form 2004 AD to 2008 AD. Various rates (lending/deposit) of commercial banks, NRB securities, Government securities are taken in to considerations while developing market interest rate.

Table 4.2
Yearly Interest Rate Structure

| Particular |  |  |  |  |  |  | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Rate on Government <br> securities | 14.08 | 19.39 | 18.81 | 17.7 | 26.9 |  |  |  |  |  |  |
| Rate of Commercial <br> Banks | 3.94 | 4.17 | 3.99 | 4.18 | 4.64 |  |  |  |  |  |  |
| Range | 17.74 | 23.34 | 22.59 | 21.64 | 31.37 |  |  |  |  |  |  |
| Average | 9.01 | 11.78 | 11.4 | 10.94 | 15.77 |  |  |  |  |  |  |
| SD | 7.17 | 10.76 | 10.48 | 9.56 | 15.74 |  |  |  |  |  |  |
| CV | 44.67 | 50.11 | 50.37 | 48.31 | 53.87 |  |  |  |  |  |  |

The above table shows the interest rate in the market through out the different years. The interest rate in the above table is the average of different interest rate in different field. Interest rates on government securities and interest rate of commercial banks are averaged to draw the yearly market interest rate. For Every category the interest rate is seemed increasing and decreasing. In the year 2004 the interest rate was widely dispersed and the range was around $17.74 \%$. The spread was more in the year 2008 with CV $53.87 \%$. This indicate that there are large dispersions around the central value of interest rate of different categories. However the random variation in range of interest rate between risky field's interest rate and risk free interest rate shows the decrement in interest rate is due to the decrement in interest rate in risk free fields. Therefore this proves that due to the central monetary policy that rate of interest in the market is decreasing year after year.

### 4.5 YEARLY MOVEMENT OF TOTAL DEPOSIT BY COMMERCIAL

## BANKS

Total deposit in to commercial banks fluctuates together with the interest rate and other market investment environment. A person normally deposits his fund in time deposit of commercial bank due to either risk factor which he could not anticipate if he wants to invest in risky venture or there is no opportunity to get higher return than the time deposit rate given by the commercial banks as well as financial institution. The movement in total deposit thus helps in understanding the investment environment in the market and market return and risk.

Table 4.3
Yearly Total Deposit of Commercial Banks
In Millions Rs

| Year | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Current Deposits | 33755.2 | 34633.1 | 37386.4 | 45031.6 | 47985.1 |
| Saving Deposits | 114106.3 | 130013.6 | 151710.7 | 166173.8 | 198894.5 |
| Fixed Deposits | 10784.6 | 10695 | 13362.6 | 15842.4 | 20439.3 |
| Total | 158646.1 | 175341.7 | 202459.7 | 227047.8 | 267318.9 |
| Increase/Decreased |  | 16695.6 | 27118 | 24588.1 | 40271.1 |
| $\%$ |  | 10.523801 | 15.465802 | 12.144689 | 17.736838 |

Source: Nepal Rastra Bank Economic Bulletin

The above table shows that there is continue increase in total deposit by in commercial banks. While comparing the findings of this table on the table it is found that the increment percentage is being decreased. Hence increase in deposit in total volume may be due to other economic factors but the decreased percentage is due to interest rate. Here the table proves that there are numerous other factors that affect the total deposits of commercial banks.

### 4.6 ANALYSIS OF LOANS AND ADVANCES OF COMMERCIAL BANKS

Loans and advance of commercial banks is a good indicator of investment flow in various sectors. The increments in loan and advance effect to the investment in other sector positively. The loan and advance flow to the public sector may be defined as the increment in share trading and investment. The public may apply their funds obtained through loans and advance in to share investment and thus increment in share investment. On the other hand, volume of loans and advance is affected by interest rate.

Table 4.4
Sector and Yearly Loans and Advance Flow of CB

| Year | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Agriculture | 4901.9 | 4415.5 | 15784.3 | 14342.6 | 13880.2 |
| Industrial Sector | 23679.7 | 28601.2 | 46210.5 | 52513.4 | 71981.7 |
| Commercial Services | 4857 | 6391 | 10024 | 12766.4 | 24913.5 |
| Service Industries | 14216.9 | 14984.8 | 14163 | 18225.7 | 21163.3 |
| General Use and Social <br> Purpose | 42753.6 | 49977 | 70397.5 | 83505.5 | 118059 |
| Total | 92413.1 | 106374.5 | 198787.6 | 183360.6 | 252005.2 |
| Difference |  | 13961.4 | 92413.1 | -15427 | 68644.6 |
| Percentage Increase | 0 | 15.1076 | 86.87524 | -7.76054 | 37.43694 |

Source: Quarterly Economic Bulletin NRB


The sect oral loans and advances flow of CBs revealed that investment in all most of all sectors increased. These investors may borrow loan and invest on share market. The other common purpose of loan and advance taken may be for construction of industries, houses, commerce, agriculture, guarantees, term loans hire purchase of goods and gadgets etc. In the year 2007 the deceasing loan and advances shows some slack on investors but the rise of $37 \%$ in 2008 revealed the optimistic investors attitude. Investor always thinks about the price of the product and cost of it. The increment of loans and advance of commercial banks was due to its low cost.

### 4.7 ANALYSIS OF INTEREST SPREAD

Interest spread is the difference between the lending rate and deposit rate. However, commercial banks usually calculated interest spread as the difference between effective interest rate and effective interest cost. Interest cost is the total cost of raising funds and interest rate is total income and its share on total interest earning assets.

### 4.7.1 ANALYSIS OF INTEREST INCOME

Interest income is the difference between the interest earned and interest paid. If loan loss provision is adjusted into net interest income we get adjusted interest income. The table below gives the net interest income of commercial banks and finance companies, which is calculated as,

## Interest earned-Interest Paid

Table 4.5
Net Interest Income

| In Millions Rs. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Organization | 2004 | 2005 | 2006 | 2007 | 2008 | Averag e |
| SBC | 1042 | 1059 | 1190 | 1402 | 1591 | 6284 |
| HBL | 1446 | 1626 | 1775 | 1964 | 1176 | 7987 |
| NBBL | 1096 | 876 | 758 | 982 | 531 | 4243 |
| BOK | 550 | 607 | 718 | 819 | 1034 | 3728 |
| Nabil | 1002 | 1069 | 1310 | 1588 | 1979 | 6948 |
| Average | $\begin{aligned} & \hline 1027 . \\ & 2 \end{aligned}$ | 1047.4 | 1150.2 | 1351 | 1262.2 |  |
| Yearly Increased | 0 | 20.2 | 102.8 | 200.8 | -88.8 |  |
| \% of <br> Increased/decreased | 0 | $\begin{aligned} & 1.96651 \\ & 1 \end{aligned}$ | $\begin{aligned} & 9.81477 \\ & 9 \end{aligned}$ | $\begin{array}{\|l\|} \hline 17.4578 \\ 3 \end{array}$ | $6.57291$ |  |

On comparing the net interest income of the sample banks the interest income yearly increased up to 2007. The interest income is decreased in year 2008. This could be because of slow growth of economy. The percentage increase in the year is more than $17 \%$ while the lowest income from interest was recorded in 2005 among the sample years.

### 4.7.2 ANALYSIS OF ADJUSTED NET INTEREST INCOME

Adjusted net interest income is the difference of net interest income and loan loss provision. It is net of interest income after adjusting provision made for bad debts. The
following table shows the adjusted net interest income of sample CB and Financial Companies which is calculated as

Adjusted net interest income $=$ Interest Income - Loan loss provision

Table 4. 6
Adjusted Net Interest Income

| Name of <br> Organization | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | Average | $\mathbf{S D}$ | $\mathbf{C V}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| SBC | 762 | 824 | 968 | 1202 | 1406 | 1032.4 | 268.81 | 26.037 |
| HBL | 1186 | 1301 | 1555 | 1684 | 1499 | 1445 | 199.97 | 13.84 |
| NBBL | 985 | 780 | 713 | 907 | 466 | 770.2 | 200.47 | 26.03 |
| BOK | 530 | 585 | 645 | 734 | 959 | 690.6 | 168.04 | 24.33 |
| Nabil | 877 | 879 | 1125 | 1388 | 1734 | 1200.6 | 365.20 | 30.42 |
| Average | 868 | 873.8 | 1001.2 | 1183 | 1212.8 |  |  |  |
| SD | 512.99 | 518.37 | 524.29 | 476.86 | 554.97 |  |  |  |
| CV | 59.10 | 59.32 | 52.37 | 40.31 | 45.76 |  |  |  |

The annual comparison of adjusted net interest income showed highest adjusted net interest income on the year 2005 and interest income on the year 2007 is lowest among reviewed periods. The CV of Nabil bank is projecting the highest adjustment among the sample CBs while the highest CV of 2005, $59.32 \%$ indicates the highest adjustment on interest income on 2005. According to the table on inter bank comparison Himalayan Bank Limited has the lowest adjusted net interest income.

### 4.7.3 ANALYSIS OF EFFECTIVE INTEREST RATE ( $\boldsymbol{\lambda}$ )

Effective interest rate is the percentage of interest earned over interest earning assets. This indicates the earning capacity of companies earning assets. In the study, earning assets of CBs are taken as loans and advance and investment in shares and debentures. Effective interest rate is calculated by using following formula.

$$
\boldsymbol{\lambda}=-------------------------------\quad \text { X } 100 \%
$$

Table 4.7
Analysis of Effective Interest Rate ( $\boldsymbol{\lambda}$ )

| Name of <br> Organization | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | Average | $\mathbf{S D}$ | $\mathbf{C V}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| SBC | 9.31 | 9.75 | 8.87 | 7.57 | 6.81 | 8.46 | 1.23 | 14.54 |
| HBL | 12.93 | 13.69 | 4.5 | 15.08 | 10.94 | 11.43 | 4.15 | 36.3 |
| NBBL | 12.42 | 12.99 | 12.88 | 12.55 | 11.9 | 12.45 | 0.43 | 3.45 |
| BOK | 8.5 | 9.1 | 10.18 | 11.1 | 11.85 | 10.15 | 1.38 | 13.59 |
| Nabil | 9.21 | 9.78 | 8.25 | 8.1 | 7.2 | 8.51 | 1.01 | 11.86 |
| Average | 10.47 | 11.06 | 8.94 | 10.88 | 9.74 |  |  |  |
| SD | 2.04 | 2.11 | 3.05 | 3.12 | 2.53 |  |  |  |
| CV | 19.48 | 19.01 | 34.13 | 28.67 | 25.97 |  |  |  |

The effective interest rate shown in above table mentioned the effective implementation of available sources of the sources of CBs, interest earning assets ie, loan and advances and other remain idle. The effective interest rate will be lower and vice versa. The study of the above table showed that effective interest rate on the year 2006 is highest with CV 34.13\%. The highest interest rate is spread on the year 2006 among reviewed period. Among sample CBs the highest effective interest rate is found of HBL among sample banks. The lowest effective interest rate is in 2005 and while in the company lowest effective interest rate of company, NBBL is found.

### 4.7.4 ANALYSIS OF EFFECTIVE INTEREST COST ( $\beta$ )

Effective interest cost gives the information about how costly are the interest earning assets. If the cost of acquiring fund for investment is of high cost, it earns less income. The effective interest cost is calculated as

Effective Interest Cost ( $\beta$ )

## Interest Cost

$=\frac{\text { Interest Paying Liabilitie }}{}$ X $100 \%$

## Table 4.8

## Analysis of Effective Interest Cost

| Name of <br> Organization | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ | Average | SD | CV |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| SBC | 4.48 | 4.66 | 4.16 | 3.45 | 3.07 | 3.964 | 0.68 | 17.17 |
| HBL | 6.25 | 6.15 | 5.46 | 4.23 | 4.19 | 5.256 | 1 | 19.07 |
| NBBL | 7.26 | 7.39 | 6.7 | 6.42 | 6.86 | 6.926 | 0.4 | 5.768 |
| BOK | 4.52 | 2.36 | 6.64 | 6.09 | 3.25 | 4.572 | 1.82 | 39.77 |
| Nabil | 4.44 | 3.28 | 5.87 | 7.02 | 6.8 | 5.482 | 1.6 | 29.11 |
| Average | 5.39 | 4.768 | 5.766 | 5.442 | 4.834 |  |  |  |
| SD | 1.297 | 2.05 | 1.039 | 1.525 | 1.871 |  |  |  |
| CV | 24.05 | 42.99 | 18.02 | 28.02 | 38.71 |  |  |  |

The effective interest cost of sample CBs and its shows the ascending and descending in the reviewed years. The interest rates with the sample CBs are highly dispersed. The highest effective interest cost is found in the year 2008 having CV $38.7 \%$ and the lowest is recorded on the year 2006. On comparing the sample CBs, Bank of Kathmandu has the highest effective interest cost and NBBL has the lowest effective interest cost.

### 4.7.5 ANALYSIS OF INTEREST SPREAD

In general term interest spread is the difference between interest paid and interest earned. Interest spread is calculated by using various methods. In the previous section, we have calculated interest spread considering lending and deposit rate of commercial banks and finance companies. The following table shows the interest spread of commercial banks as well as finances companies.

Table 4.9
Interest Spread of Commercial Banks

| Year | SBC | HBL | NBBL | BOK | Nabil | Average | SD | CV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2004 | 4.65 | 3.25 | 4.42 | 3.41 | 4.46 | 4.038 | 0.65 | 16.21 |
| 2005 | 4.19 | 3.19 | 3.75 | 3.95 | 5.01 | 4.018 | 0.66 | 16.58 |
| 2006 | 4.11 | 3.8 | 3.7 | 3.37 | 4.9 | 3.976 | 0.58 | 14.59 |
| 2007 | 3.76 | 3.57 | 3.8 | 4.04 | 4.15 | 3.864 | 0.23 | 5.98 |
| 2008 | 3.7 | 3.66 | 4.2 | 4.35 | 3.94 | 3.97 | 0.30 | 7.63 |
| Average | 4.08 | 3.45 | 3.974 | 3.824 | 4.49 |  |  |  |
| SD | 0.38 | 0.26 | 0.32 | 0.42 | 0.46 |  |  |  |
| CV | 9.37 | 7.56 | 8.01 | 11.07 | 10.31 |  |  |  |

The table depicts the interest spread of sample Commercial banks. The highest interest spread is recorded on the year 2005 and the lowest is in the year 2007. Similarly BOK interest spread is more than any other CBs. The lowest interest spread is of HBL.

### 4.8 RATE OF RETURN ON CAPITAL

In general return on capital in calculated as
Net Income after tax
$=\quad \overline{\text { Total Capital }} \quad$ X $100 \%$
This shows how effectively capital is employed in the business. However, in this study the method of calculating return on capital is different, which is generally used by commercial banks. As the study area is limited to commercial banks and financial institution (because interest transactions are the operation transactions for these institutions), the method of calculating rate of return depends upon the interest rate \& interest cost. This is because, net income is the difference between interest income and interest cost. For commercial banks and financial institutions ROC is difference between interest spread and portion of interest rate (effective with difference between interest paying liabilities and interest earning assets divided by interest
earning assets mathematically return on capital of commercial banks and financial institutions is written as,


Table 4.10
Rate of Return on Capital
Percentage

| Name of Organization | 2004 | 2005 | 2006 | 2007 | 2008 | Average | SD | CV |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SBC | 5.62 | 6.13 | 5.38 | 4.59 | 4.83 | 5.31 | 0.62 | 11.62 |
| HBL | 4.026 | 1.329 | 1.28 | 4.23 | 1.52 | 2.477 | 1.51 | 61.02 |
| NBBL | 4.058 | 4.17 | 1.714 | 2.35 | 3.37 | 3.1324 | 1.07 | 34.29 |
| BOK | 2.42 | 2.53 | 2.58 | 6.38 | 6.633 | 4.1086 | 2.19 | 53.34 |
| Nabil | 4.03 | 1.78 | 2.75 | 5.8 | 5.78 | 4.028 | 1.8 | 44.58 |
| Average | 4.031 | 3.188 | 2.741 | 4.67 | 4.427 |  |  |  |
| SD | 1.131 | 1.968 | 1.595 | 1.564 | 2.027 |  |  |  |
| CV | 28.07 | 61.73 | 58.2 | 33.49 | 45.78 |  |  |  |

The rate of return on capital of HBL is more than any other sampling Banks. The rate of return on capital is lowest Standard and Chartered Bank. In the year 2005 the ROC is more and on the year 2004 it is lowest.

### 4.9 ANALYSIS OF INVESTMENT FLOW TOWARD SHARE

 INVESTMENT IN SECONDARY MARKETVarious companies issue their shares, debentures or their securities in the market. The market were original issues are made by the company is primary market. The issue of some companies is highly oversubscribed and some are under. This subscription of share in the primary market depends upon various factors such as performance of the industry, profitability of the company or firm, investment market environment etc. Interest rate is also a major factor that guides the subscription volume in primary
market. The following table shows the percentage volume of primary share subscription.

Table 4.11
Yearly Transaction Summary

| Year | No of share traded in "000"' | No of <br> transaction | Market <br> day s | Average <br> daily <br> turnover |
| :--- | :--- | :--- | :--- | :--- |
| 2004 | 6468 | 85533 | 243 | 45.23 |
| 2005 | 18433.55 | 106246 | 236 | 78.11 |
| 2006 | 12221.93 | 97374 | 228 | 53.60 |
| 2007 | 18147.25 | 120510 | 232 | 78.22 |
| 2008 | 28599.77 | 150800 | 235 | 121.70 |

Source: Trading Report NEPSE

The above table shows the transactions summary at share trading floor at NEPSE. The number of share trading was higher in 2008 and similarly the number of transaction is also higher in 2008. The share trading volume in secondary market is depicted in the line graph.


### 4.10 ANALYSIS OF NET PROFIT BEFORE AND AFTER TAX DUE TO CHANGE IN INTEREST SPREAD (EFFECTIVE RATE - EFFECTIVE COST)

The major operational activities of commercial bank is earning interest and paying interest. So as the other manufacturing or trading companies examine the changes in interest in Net Profit before/after tax due to the changes in sale (volume/unit and selling price per units) as the application of du pont theory the commercial banks and Financial institutions take change in interest spread to measure its effect on Net Profit Before and After Tax. The following table shows the changes in net profit before tax with respect to the change in interest spread of sample joint venture banks \& financial institutions with in review period.

| Year | SBC |  | HBL |  | NBBL |  | BOK |  | Nabil |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | NPBT | Interest Spread | NPBT | Interest <br> Spread | NPBT | Interest <br> Spread | NPBT | Interest Spread | NPBT | Interest Spread |
| 2004/05 | 537 | 3.25 | 420 | 3.15 | 225 | 2.98 | 178 | 3.25 | 425 | 3.35 |
| 2005/06 | 536 | 3.75 | 522 | 3.27 | 363 | 3.25 | 195 | 3.65 | 557 | 3.28 |
| 2005/06 | 658 | 4.25 | 672 | 3.78 | 398 | 3.78 | 258 | 4.17 | 468 | 3.45 |
| 2006/07 | 692 | 3.78 | 717 | 4.75 | 425 | 4.65 | 436 | 4.35 | 825 | 4.15 |
| 2007/08 | 819 | 5.96 | 948 | 5.35 | 569 | 5.15 | 475 | 4.15 | 989 | 5.15 |
| Average | 648.4 | 4.198 | 655.8 | 4.06 | 396 | 3.962 | 308.4 | 3.914 | 652.8 | 3.876 |
| SD | 118.47 | 1.046 | 201.79 | 0.95 | 123.59 | 0.92 | 138.24 | 0.45 | 243.87 | 0.79 |
| CV (\%) | 18.27 | 24.93 | 30.77 | 23.59 | 31.21 | 23.23 | 44.82 | 11.58 | 37.35 | 20.44 |

The NPBT of BOK is the highest with CV 44.82 while interest spread of Standard and Chartered Bank is seen highest with CV 24.93\%. The NPBT of Standard and Charted bank is observed to be highest with $18.27 \% \mathrm{CV}$ and interest spread of BOK is the lowest with $11.58 \% \mathrm{CV}$.

### 4.11 ANALYSIS OF SHARE TRADING VOLUME IN SECONDARY MARKET

Share trading volume of various companies depends upon the various factors like market situation (bull/bear market), whims, earning capacity, nature and industries, income of companies and so on. Here income of the companies (Net Profit before Tax) is taken as the important factor, which gives yield to stock holders for trading in share trading floor. The following table shows the trading volume (thousands) of sample CBs.

Table 4.13

| Year | S\& C |  | HBL |  | NBBL |  | BOK |  | Nabil |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Turnover <br> share | Turnover amount | Turnover share | Turnover amount | Turnover share | Turnover amount | Turnover share | Turnover amount | Turnover <br> share | Turnover amount |
| 2003/04 | 38.74 | 64.32 | 178.70 | 152.15 | 589.90 | 222.79 | 327.20 | 70.96 | 88.79 | 73.96 |
| 2004/05 | 1319.00 | 2317.90 | 106.40 | 101.61 | 316.80 | 84.80 | 666.70 | 242.18 | 169.50 | 211.21 |
| 2005/06 | 73.09 | 218.26 | 103.40 | 109.08 | 274.80 | 63.12 | 928.70 | 562.21 | 86.11 | 165.21 |
| 2006/07 | 61.60 | 265.01 | 158.00 | 190.71 | 976.10 | 339.74 | 803.00 | 798.80 | 125.60 | 390.75 |
| 2007/08 | 38.74 | 64.32 | 178.70 | 152.15 | 589.90 | 222.79 | 327.20 | 70.96 | 88.79 | 73.96 |
| Average | 306.23 | 585.96 | 145.04 | 141.14 | 549.50 | 186.65 | 610.56 | 349.02 | 111.76 | 183.02 |

Source: Trading Report, NEPSE ,Various Issues

While observing trading volume of sample companies the share turnover in share turnover of Bank of Kathmandu is more in these reviewed period. The average trade amount is Rs. 349.02 millions and the traded number of shares is 610.56 thousands. The lowest trading amount of share is observed of Nabil Bank with average of 111.76 thousands of shares and 183.02 million rupees.

### 4.12 CORRELATION ANALYSIS ( $\rho$ )

As discussed in previous chapter correlation shows the relationship between two variables. If the correlation is +1 , the two variables are perfectly positively correlated ie. Increment or decrement in one variable makes increment or decrement (in same direction and with same proportion) to other variables, ie. If $\rho=-1$, there is perfectly negative correlation between two variables with same ration and vice versa. On the other hand $\rho=0$, indicates there is no relationship between two variables. The increment or decrement in any one variable is independent to other variable. Here we have developed and studied the correlation between various variables.

### 4.12.1 CORRELATION BETWEEN TOTAL DEPOSIT AND MARKET INTEREST RATE OF COMMERCIAL BANKS

In general if the deposit rate of commercial banks increases than the volume of deposit should increase in the bank. However there may be other factors affecting the deposit volume in commercial banks. Correlation between market interest rate of commercial bank and total deposit is found to be 0.8454 . This indicates that there is positive relationship between market interest rate and total deposit in the commercial banks. The correlation of these two variables is calculated as follows, (Annex 2 A )
$r=\sum x y / \sqrt{ } \sum x^{2} \sqrt{ } \sum y^{2}$
$=0.8454$

### 4.12.2 CORRELATION BETWEEN YEARLY INTEREST RATE AND LOANS AND ADVANCES OF COMMERCIAL BANKS

As discussed earlier, the price paid by the customer to the product depends upon the utility of the products. Loans and advance of commercial banks flow to various, sectors such as agriculture industrial, commercial, service and general purpose. For every sector, the borrower considered the cost factor and its utility (how far the borrowed funds can earn return), so interest rate mainly lending rate of commercial bank effects the loans and advance forwarded by these institutions. The following calculation shows the correlation coefficient between these two factors (Annex 2 B)

$$
\begin{aligned}
& r=\sum x y / \sqrt{ } \sum x^{2} \sqrt{ } \sum y^{2} \\
& =0.79
\end{aligned}
$$

Hence, $\rho=0.79$ indicates that two variables are almost perfectly negatively correlated. Hence, the increase in one variable makes to decrease the other correlation between these two variable equals to 0.79 means, if one variable say market interest rate of commercial banks increased by $1 \%$ the loans and advances flow of commercial banks decrease by 0.79 .

### 4.12.3 CORRELATION BETWEEN INTEREST RATE OF COMMERCIAL BANKS AND SHARE INVESTMENT IN SECONDARY MARKET

Share investment in secondary market depends up on various factors. We have already discussed why the trading floor hikes and falls in volume of transaction market interest rate is also a significant factor that affects the no of share transacted or traded in the secondary market. The correlation between these two factors is calculated as follows: (Annex 2 C)

$$
\rho_{x y}=\sum x y / \sqrt{ } \sum x^{2} \sqrt{ } \sum y^{2}
$$

$$
=-0.49
$$

Hence, the correction coefficient between numbers of share traded in secondary market and market interest rate is -0.49 . The negative relationship between these two factor indicate the increment in one variables make to decrease the other and vice versa.

### 4.12.4 CORRELATION BETWEEN ROC AND NUMBER OF SHARE TRADING IN SECONDARY MARKET

As already discussed, no of share trading in secondary market depends up on many variables. In a sub chapter we try to show the relationship, exist between return on capital and a volume of share trading in secondary market. It is generally accepted that higher ROC betters the efficiency of the company. This efficiency makes to trade the share of such companies. The calculation of correlation coefficient between ROC and number of share trading in secondary market is shown below. (Annex 2 D )

$$
\begin{aligned}
\rho_{\mathrm{xy}} \quad & =\sum \mathrm{xy} / \sqrt{ } \sum \mathrm{x} 2 \sqrt{ } \sum \mathrm{y} 2 \\
& =-0.024
\end{aligned}
$$

This shows that there is negative correlation between ROC and number of share trading of these companies in secondary market.

### 4.13 REGRESSION ANALYSIS

Regression analysis helps to find the value of any dependent variable if we know the value of independent variables. In the study, two regression equations are constructed considering market interest rate as independent variable. The dependent variables are first equation is percentage subscription in primary share market and in secondary market.

## Regression Analysis between shares traded in secondary market and market interest rate.

From the correlation analysis in sub chapter 4.10 .2 we know that there is negative correlation between share trading market and interest rate, where the correlation coefficient was fund -0.024 . The following regression line (equation) shows the relationship between these two variables mathematically regression line of y (share traded in secondary market) on $x$ (market interest rate) is given by

$$
\begin{aligned}
\mathrm{y}-\mathrm{Y} & =\mathrm{b}_{\mathrm{xy}}(\mathrm{x}-\mathrm{X}) \\
& \mathrm{N} \sum \mathrm{UV}-\sum \mathrm{u} \sum \mathrm{v} \\
\mathrm{~b}_{\mathrm{xy}} & =--\cdots-\cdots-\cdots-\cdots \mathrm{U}^{2}-\left(\sum \mathrm{U}\right)^{2} \\
& =0.308(\text { Annex } 5)
\end{aligned}
$$

Substituting the value of $b_{x y}$ on equation

$$
\begin{aligned}
& y-22.62=0.308(x-1.42) \\
& Y=0.308 x-0.4388+22.62 \\
& Y=0.308 x+22.1811
\end{aligned}
$$

The above equation is equation of regression line, which shares the degree of relationship between above two variables. Using this equation we can take a given value of $x$ and compute the value of $y$ on which $y$ is dependent variables (i.e. share trading volume in secondary market) and x (market interest rate) is independent variables, the equation shows that as the value of x increase the value of y decreases and vice versa.

### 4.14 MAJOR FINDINGS

Findings are the conclusion that comes after the analysis. In the study, various aspects of topic and its area are observed carefully. Various methods and tools are used to collect, interpret and analyze the data and information. In our study also we studied various aspects of market interest rate, yearly fluctuation style, deposits, loans and advances by commercial banks. Interest rate is the most important part of commercial bank and financial institutions and so on. Therefore, focus of the study is concentrated on the interest rate. Hence, various aspects of interest rate, such as lending rate, deposit rate, net interest income, adjusted net interest income, effective interest rate, effective interest cost, and return on capital on the basis of interest income of commercial banks are observed and studied. Together with this study also examined the NRB's policy of interest rate, interest rate structure and so on. The focus of the study is provided towards share investment in secondary share market. The issues of shares in secondary, trading activities in secondary market, and mainly in trading floors of NEPSE are studied in detail. Various relationships among and between the various variables are developed and studied. The findings of this analysis are given in detail in this sub chapter.
1.0 Before the period of 1989 , the CBs were bound to charge interest rate on the deposit and credit flow according to the rules and regulations of NRB. After some period NRB realized the importance of financial liberalization to develop a healthy and competitive financial market thus flexible policy regarding determination of interest rate was introduced. The banks had been awarded little freedom in the determination of interest rate. The procedure of fixing the
spread has also directed by NRB. Due to the freedom in fixing the interest rate of CBs, banking economies is effected together with the market interest rate. On the other hand there exist fluctuation of interest rate according to the demand and supply of money and other factors. This fluctuation in the market interest rate influences the investment in shares or other security market.
2.0 The market interest rate is calculated and compared to the deposit of commercial banks. The comparisons are made on lending rate and deposit rate of commercial banks with deposit and loans and advance. The comparative table of interest rate and deposit volume showed the deposit rate deceases with the increment in lending rate and vice versa. When lending and deposit both rate are considered it developed negative correlation between market interest rate (lending and deposit rate average) and total deposit of CBs. This proved that there is relationship between interest rate and deposit volume in commercial banks. Deposit volume has positive relation with deposit rate, negative relation with lending rate and negative relation with total market rate.
3.0 Again the comparative table also gave the relationship between market interest rate and loans and advance of commercial bank and financial institutions. On comparing loans and advances with lending rate of commercial bank the correlation between these two is found almost perfectly negative. Hence there is a tight relation ship between the market interest rate and loans and advance. From the entire discussion, it could concluded that market interest rate has negative relationship with deposit and loans and advances, this negativity is more in loans and advances and less deposit increment percentage.
4.0 Interest spreads of commercial banks are calculated using two methods. The first is calculated by subtracting deposit rate from lending rate. The second is calculated by determining effective interest cost and effective interest rate and subtracting effective interest cost form effective interest rate. The second part of calculation is compared with profitability of commercial banks. Net interest income and adjusted net interest income is calculated to depict the profitability
of commercial banks and financial companies. The comparison is made with these income and spread of interest. From these all discussion, interpretation and analysis, it is proved that there is positive relationship between interest spread and profitability of commercial banks.
5.0 Again profitability is compared to the share trading volume in secondary market. This comparison is made between return on capital and share trading volume in secondary market. In conclusion it is found that interest spread has positive correlation with profitability of commercial banks and financial companies and this profitability has positive relationship with their share demand in secondary market. These demands increase the buying and selling activities in the trading floor and ultimately the share trading column in secondary market increases.
6.0 The analysis is conducted on share trading volume in secondary market. Yearly trading amount and no of shares with transaction is observed. The comparative table of these showed that amount of share traded has been increased year after year. The increment percentage however is not proper. This proves that there are various factors that effect share trading in secondary market. The change in trading volume of share is compared with market interest rate. This comparison shows that there is increment of trading volume of share in secondary market when market interest rate is decreased. However this inverse proportion is not prefect. To depict the actual relation between these two factors correlation coefficient between market interest rate and no of share trade in secondary market is calculated.

The relationship between market interest rate and share trading volume in secondary market is negative and predicts the influencing relationship in the trade and transaction of shares in the secondary market.

## CHAPTER V

## SUMMARY, CONCULSION AND ECOMMENDATIONS

### 5.1 SUMMARY

Capital in the free economy is distributed through the price system. The interest rate is the price paid to borrow capital. Thus study of interest rate is important in the view of either saver or borrower. The firms with most portfolio investment opportunities are willing and able to attract most of the capital hence, tend to attract fund from the inefficient firms. In the expanding economy firms need capital and this demand for capital will be accelerated by the interest rate prevailed in the market and funding institutions.

It is necessary to flow capital towards productive sector for accelerating future economic prosperity and enhancement of the capital market could divert unproductive sector investment to productive sector. The development of capital market in Nepal has short history and it has to be matured hence, formulating the programs to enhance capital market is ongoing. The efficient capital market will allow large choice among the investors. Their investment decisions will be guided through the trend and maturity of capital market. In this context, the study focuses the impact of interest structure on share investment in Nepal and attempt to answers different inquires regarding market interest, interest rate structure past trends, volume of share transaction in secondary market and relationship on interest rate structure and bull and bear trends with the fluctuation of interest in the market.

The study has aimed to analyze the impact of share investment in Nepal with market interest rate and provide some suggestions to the potential investors. The study was to examine background of the interest rate policies decisions and strategies on share investment, deposit loan and advance situation, effectiveness of the interest rate on the secondary market.

Various literatures have been reviewed to gather information for the assessment of impact study. The current interest rate policies along with the past policies are considered for the completion of the study. The various statistical tools are viewed and appropriate one are only considered for the study. The expectation theory, liquidity preference theory, market segmentation theory has been observed for the study. To enlighten the study various issues of financial journals, micro and macro economics, financial management, investment analysis related books has been reviewed for better theoretical output.

The research has studied change in interest rate in the market or of commercial banks total loans and advance on share investment in secondary market through collecting data form various sources. Most of the data collected were from published source. The collected data are processed by using various financial tools like return on investment, effective interest cost, effective interest rate, and return on capital, correlation and regression analysis.

The above stated problems are tested by using various statistical tools. The lending and deposit rate when considered for analysis negative correlation between market interest rate (lending and deposit rates average) and total deposit of commercial bank has been observed. This proved that there is a relation between interest rate and deposit volume in commercial banks. The deposit volume has positive relation with deposit rate and negative relation with total market rate. The correlation between market interest rate and total deposit was found -0.8454 .

The increment in lending rate results on decreasing loans and advances. This loans and advances are compared with total market interest rate. The net interest income and adjusted net interest income are also calculated to depict the profitability of commercial banks. Again profitability is compared to the share trading volume in secondary market. The regular transaction in market share is compared to market interest rate calculated earlier. The comparison showed negative relationship of -0.49 between market interest rate and secondary share market. The increment percentage in share transaction is far more than that of decrement in market interest rate and share
transaction in secondary share market. The change in trading volume of share is compared with market interest rate. This comparison shows that there is increment of trading volume of share in secondary market when market interest rate is decreased. This made to increase the trading volume and trading amount in secondary market on market interest rate is drawn. The relationship between return on capital and share trading in secondary market is calculated and found to be -0.024 . This shows the negative relationship between ROC and number of share trading of the commercial banks.

### 5.2 CONCLUSION

After the study of various aspects on market interest rates, bank's performance profitability, movement of resources from one sector to another it is concluded that, interest is the main determinant factor for firms (Commercial banks) profit, collection of deposit and flow of credit capital on investment etc. The high loan rate and low deposit rate increase the firm's earnings. Interest has direct effect on earning and expenses of the banks, so the change in the interest rates should assist in maintaining a balance between earning and expenses of the bank.

Interest spread has the direct impact on profitability of firm. The deposit depletes with increased interest spread while the lending ascended with the interest spread. The interest spreads also broaden the profitability of the banks by increasing bank borrowing for investment. Better profitability of the company gives more return to share holders fund as dividend or increasing closing price of share in secondary market. This factor leads to increase the demand of such company's share. This demand increases the buying and selling activities in secondary market. Thus interest spread has direct or direct impact on increasing and decreasing the share trading volume in secondary market.

The share trading volume in secondary market is also affected by the interest rate. When interest rate is lowered by the commercial banks public borrowing hikes. These borrowed funds are utilized in various investment opportunities in market. Share
investment is also the investment process in the market. So if lending rate and deposit rate decrease the share investment in secondary market increases rampantly.

In precise, interest is the important factor that effects the share investment in secondary market. Due to the fluctuation in interest rate structure the potential investor's sometimes move for share investment and sometime hoard money in the bank as deposit.

### 5.4 RECOMMENDATIONS

Based on the study following suggestion can be recommended to the concerned authorities and potential investors to improve the present situation of investment.
a. There needs to be appropriate interest rate structure. The rate should be charged according to capacity of Nepalese people.
b. The central bank has directed to maintain interest spread within $6.5 \%$ but there are many CBs found to charge slightly more interest rate than directed by central bank.
c. NRB monitoring and controlling mechanisms should be well advanced with effective rules, regulation and its policies.
d. Central bank should provide required policy to commercial banks for meeting national standards to mobilize the funds.
e. Due to lack of perfect information of secondary market, the performance evaluation of CBs should be published through NEPSE; otherwise the bear could anytime show its character affecting huge investment.
f. The interest in the market is fluctuating hence disturbing the deposit and lending volume hence the higher and lower limit of interest rate should be managed by NRB.
g. NRB has made policy to monitor the CBs for their operating activities and interest spread. Thus the monitoring mechanism should be strict.
h. Most of the investors do not make buying, selling and holding decision of their share rationally and this should be handled carefully. The investors need to require market nature and various factor prior investing into share.
i. Because of reluctance nature of sample CBs the data taken are from the secondary source like published annual reports and bulletins. Thus the new study could be done with primary data.
j. The data considered are of five years but the one who wish to research further, could use six, seven, eight, nine, ten or so on years for more accurate prediction.
k. There are many other tools to depict the relation between interest rate and share investment thus one could use those tools for more clear and concise information.

1. A strong high level monitoring mechanism should be established to monitor small scale financial institutions to make capital market strong and durable.
m . This study has used data of five commercial banks but in Nepal there are many commercial banks, development banks, financial institutions and cooperatives dealing with finances thus the new research could incorporate these institutions for observing share investment mechanism.
n. In this study primary subscription of share has not been viewed thus a large chunk of fund are invested in primary share thus the observer can focus him on these issues.
o. More precise information regarding impact of interest on share trading can be generated and one who will be interested to review this study is always welcome.

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## ANNEX 1

## Interest rate structure

| Year | Percentage per Annum |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Mid-Month | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ |
|  |  |  |  |  |  |
| Government Securities |  |  |  |  |  |
| T-bills* (28 days) | 1.82 |  | 2.4 | 2.13 | 5.16 |
| T-bills* (91 days) | 1.47 | 3.94 | 3.25 | 2.77 | 5.13 |
| T-bills* (182 days) |  | 4.42 | 3.86 | 3.51 | 5.16 |
| T-bills* (364 days) | 3.81 | 4.79 | 4.04 | 4 | 6.47 |
| Development Bonds | $3.0-8.0$ | $3.0-8.0$ | $3.0-6.75$ | $3.0-6.75$ | $5.0-8.0$ |
| National/Citizens SCs | $6.5-13.0$ | $6.5-13.0$ | $6.0-8.5$ | $6.0-8.5$ | $6.0-7.75$ |
|  |  |  |  |  |  |
| Inter bank Rate | 3.03 | 3.35 | 4.93 | 2.69 | 3.61 |
|  |  |  |  |  |  |
| Commercial Banks |  |  |  |  |  |
| 1. Deposit Deposits |  |  |  |  |  |
| Saving Deposits | $2.0-5.0$ | $1.75-5.0$ | $2.0-5.0$ | $2.0-6.5$ | $2.0-6.50$ |
| Time Deposits |  |  |  |  |  |
| 1 month | $2.0-3.5$ | $1.75-3.5$ | $1.5-3.5$ | $1.5-3.75$ | $1.5-3.75$ |
| 3 Month | $2.0-4.0$ | $1.5-4.0$ | $1.5-4.0$ | $1.5-4.1$ | $1.50-6.75$ |
| 6 Months | $2.0-4.5$ | $2.5-4.5$ | $1.75-4.5$ | $1.75-4.6$ | $1.75-6.75$ |
| 1 Year | $2.75-5.75$ | $2.25-5.0$ | $2.25-5.0$ | $2.25-5.0$ | $2.5-6.0$ |
| 2 Years and Above | $3.0-6.0$ | $2.5-6.05$ | $2.5-6.4$ | $2.5-5.5$ | $2.75-6.75$ |
|  |  |  |  |  |  |
| 2 Lending Rates |  |  |  |  |  |
| Industry | $8.5-13.5$ | $8.25-13.5$ | $8.0-13.5$ | $8.0-13.5$ | $7.0-13.0$ |
| Agriculture | $10.5-13$ | $10.0-13.0$ | $9.5-13$ | $9.5-13$ | $9.5-12$ |
| Export Bills | $4.0-11.5$ | $4.0-12.0$ | $5.0-11.5$ | $4.0-11.5$ | $5.0-11.5$ |
| Commercial Loans | $9-14.5$ | $8.0-14$ | $8.0-14$ | $8.0-14$ | $8.0-13.5$ |
| Overdrafts | $10.0-16.0$ | $5-14.5$ | $6.5-14.5$ | $6.0-14.5$ | $6.5-13.5$ |
| Soun Quan |  |  |  |  |  |

Source: Quarterly Economic Bulletin of NRB ,July 2008

## ANNEX 2

2.A Calculation of correlation between market interest rate and total deposit of commercial banks

| Year | Market <br> Interest <br> Rate (X) <br> \% | Total <br> Deposit (Y) <br> "In Million <br> Rs." | x | y | xy | $\mathbf{X}^{\mathbf{2}}$ | $\mathbf{Y}^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2004 | 9.01 | 158.646 | -2.77 | -47.516 | 131.62 | 7.6729 | 2257.79 |
| 2005 | 11.78 | 175.341 | 0 | -30.821 | 0 | 0 | 949.946 |
| 2006 | 11.4 | 202.459 | -0.38 | -3.7032 | 1.40722 | 0.1444 | 13.7137 |
| 2007 | 10.94 | 227.047 | -0.84 | 20.8848 | -17.543 | 0.7056 | 436.175 |
| 2008 | 15.77 | 267.318 | 3.99 | 61.1558 | 244.012 | 15.9201 | 3740.03 |
| Total | 58.9 | 1030.811 |  |  |  |  |  |
| Mean | 11.78 | 206.1622 |  |  |  |  |  |

$$
\begin{aligned}
& x^{-}=------------\quad=58.9 / 5=11.78 \\
& \text { n } \\
& \text { n } \\
& \text { r =------------------ }=0.845 \\
& \sqrt{ } \sum \mathrm{X}^{2} \sum \mathrm{Y}^{2}
\end{aligned}
$$

## 2.B Calculation for correlation between yearly interest rate of commercial banks and loans and advances

| Year | Market <br> Interest <br> Rate (X) <br> \% | Loans and Advance <br> Flow (In Millions Rs.) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | X | Y | X | y | xy | X ${ }^{2}$ | $\mathrm{Y}^{2}$ |
| 2004 | 9.01 | 92.413 | -2.77 | -74.175 | 205.464 | 7.6729 | 5501.9 |
| 2005 | 11.78 | 106.374 | 0 | -60.214 | 0 | 0 | 3625.7 |
| 2006 | 11.4 | 198.787 | -0.38 | 32.1992 | -12.236 | 0.1444 | 1036.79 |
| 2007 | 10.94 | 183.36 | -0.84 | 16.7722 | -14.089 | 0.7056 | 281.307 |
| 2008 | 15.77 | 252.005 | 3.99 | 85.4172 | 340.815 | 15.9201 | 7296.1 |
| Total | 58.9 | 832.939 |  |  |  |  |  |
| Mean | 11.78 | 166.5878 |  |  |  |  |  |

$$
x^{-}=------------\quad=58.9 / 5=11.78
$$

$$
y^{-}=---------------\quad=832.939 / 5=166.587
$$

$$
\frac{\sum x y}{\sqrt{2}=------------\mathrm{X}^{2} \sum \mathrm{Y}^{2}}=0.789
$$

2. C Calculation of correlation between interest rate of commercial banks and number of share traded in secondary market

| Year | Market Interest Rate (X) \% | Number of shares "000" |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | X | y | X | y | xy | X ${ }^{2}$ | Y ${ }^{2}$ |
| 2004 | 9.01 | 306.23 | -2.77 | -38.388 | 106.3348 | 7.6729 | 1473.639 |
| 2005 | 11.78 | 145.04 | 0 | -199.578 | 0 | 0 | 39831.38 |
| 2006 | 11.4 | 549.5 | -0.38 | 204.882 | -77.8552 | 0.1444 | 41976.63 |
| 2007 | 10.94 | 610.56 | -0.84 | 265.942 | -223.391 | 0.7056 | 70725.15 |
| 2008 | 15.77 | 111.76 | 3.99 | -232.858 | -929.103 | 15.9201 | 54222.85 |
| Total | 58.9 | 1723.09 |  |  |  |  |  |
| Mean | 11.78 | 344.618 |  |  |  |  |  |

$$
x^{-}=-----------\quad=58.9 / 5=11.78
$$

n

$$
y^{-}=---------\cdots---\quad=1723 / 5=344.618
$$

$r=-------------\quad \sqrt{\sqrt{2} y}=-0.4982$

## 2. D Calculation of correlation between ROC and no of share trading in secondary market

|  |  | No of Share Trading in Secondary Market |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | ROC |  | $\mathbf{x}$ | y | xy | X ${ }^{\mathbf{1}}$ | $\mathbf{Y}^{\mathbf{2}}$ |
| 2004 | 4.031 | 306.23 | 0.2196 | -38.388 | -8.43 | 0.048224 | 1473.639 |
| 2005 | 3.188 | 145.04 | -0.6234 | -199.578 | 124.4169 | 0.388628 | 39831.38 |
| 2006 | 2.741 | 549.5 | -1.0704 | 204.882 | -219.306 | 1.145756 | 41976.63 |
| 2007 | 4.67 | 610.56 | 0.8586 | 265.942 | 228.3378 | 0.737194 | 70725.15 |
| 2008 | 4.427 | 111.76 | 0.6156 | -232.858 | -143.347 | 0.378963 | 54222.85 |
| Total | 19.057 | 1723.09 |  |  |  |  |  |
| Mean | 3.8114 | 344.618 |  |  |  |  |  |

$$
x^{-}=\frac{\sum x}{n}----------\quad=19.057 / 5=3.8114
$$

$$
y^{-}=---------------\quad=1723 / 5=344.618
$$

## ANNEX 3

Construction of regression equation of percentage of share traded on market interest rate

| Year | Market <br> Interest Rate <br> (X) \% | No of share trading in secondary market | u | v | $\mathrm{u}^{2}$ | $\mathrm{v}^{2}$ | uv |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | X | y |  |  |  |  |  |
| 2004 | 9.01 | 30.623 | -2.39 | -24.327 | 5.7121 | 591.8029 | 58.14153 |
| 2005 | 11.78 | 14.504 | 0.84 | -46.552 | 0.7056 | 2167.089 | -39.1037 |
| 2006 | 11.4 | 54.95 | -4.37 | 43.774 | 19.0969 | 1916.163 | -191.292 |
| 2007 | 10.94 | 61.056 | -47.96 | -111.253 | 2300.162 | 12377.23 | 5335.694 |
| 2008 | 15.77 | 11.176 | 3.99 | -23.2858 | 15.9201 | 542.2285 | -92.9103 |
| Total | 58.9 | 172.309 |  |  | 2489.012 | 26128.72 | 8064.409 |

$\mathrm{X}=1.422$
$\mathrm{Y}=22.6212$
$b_{x y}=-2.35738$
$u=x-x^{-}, v=y-y^{-}$

$$
\begin{aligned}
& \text { Ex } \\
& \mathrm{x}^{-}= \\
& \text {n } \\
& y^{-}=\quad------- \\
& \text { n }
\end{aligned}
$$

## ANNEX 4

Cash Flow Stmenent
For the Period from 15 July 2018 to 15 July 2905
(4.)

|  | Paritulars | This Pear | Preninus 7 fox |
| :---: | :---: | :---: | :---: |
| 1. | Cuat Arw frna Ophrieing Actisitios | 175.956.605 | 167,484847 |
| t. | Cont Peosipy | 1512182568 | 1.465.812. 157 |
|  | 1.1 vulusal heten |  | 1,501,818,501 |
|  |  | 128.838 .490 | 134.574,408 |
|  | 1.2 Euderge tian: | 184.87808s | 15),224,288 |
|  | 1.4 Wropautro lianes | 72.24123 | 82.782. 383 |
|  | 1.5 Obsy incame | 53, 212.6 比 | 30.513.312 |
| 2. | Cash Pammerts | 1.388 .208 .561 | 1.282.315.316 |
|  | 2.1) intest frapata | 248,514813 | 232,941,503 |
|  | 2.2 Soll Eapteses | 188510217 | 185.458 .420 |
|  |  | 150.739,470 | 151,374,929 |
|  | 24.4 Edargetan | + | . |
|  |  | 5 | - |
|  |  | 722846.35 | 875152.258 |
| B. | Cash Fiva from linestigg Activies | (183,377,843 | (13)752.435 |
|  | 1. Dsorsseilrceasin Diane wit Os\%es | 270.572282 | 274,30214? |
|  | 2 Ocowseiltecawi in Money at Cal and Sint Matice | 50.366051 | (2) 4 ¢ 578.1001 |
|  |  | 1,568,715.89 | 191.321829 |
|  |  | 12.998.177,151) | (4).040880 |
|  |  | 23, 108, 1501 | [66,211,101] |
|  |  | 51.884.219 | 216.411435 |
| c. | Cart Flom fron Finstrimg Activitiet | 284848.173 | 15.388 .798 |
|  | 1: Decreveihgoust in berruivgs | [212587,387 | (231,82, 159 |
|  | 2. Daoreseiharese n Depoets | 457570.602 | 601.271851 |
|  | 3. Dratueilvouse in 2ls Poyde: | 531.74.2431 | 64, 355.795 |
|  | 4. Dacruselbowase in athe liatities | 83056.150 | 11,241.165 |
|  | Net Ceth Flawat the Year | (140,533,657) | 98,162.307 |
| E | Braring Cinh Balaxe | 248385.272 | 187,717,015 |
|  | Toting Cuth Babare | 148,312,555 | 285,8t8, 212 |

Mati Eank Haked
CashFlow Statement



## matamon lisitat

## Cash Flow Statement



| Tiavouspian | Davacumes | mis Yua |
| :---: | :---: | :---: |
| (1,930.740.775 | (d) Cash Flow frem Opetrating fictiollies | \$44231.717 |
| 1,572.877.673 | 1. Cash Recelved | 2,009565.057 |
| 1/192,544.431 | 1.1 nueser hoome | 1517460858 |
| 76.JVJ95S |  | $100 \cos 50$ |
| 14.eati6\% |  | jovgab, Mal |
| 54.552,806 | LA Paboury at Loan Wirinen of | 23.594924 |
| 62x4\%,64 | 15.0 ent likumes | b) 574517 |
| (1,014,972,709) | 2. Gash Dagment | (1,21,651,926) |
| 1357,0504551 | 2.1 luesest Expumes | 1535, 211 (5x0 |
| 171070.810 | 7.7314.7x-stios | (240162.2.a) |
| (1) $10.50 \mathrm{c} \times 540)$ |  | d MaFleri |
| 1228.135.359\% | 2.4 liconte Tas Pals | (855) 95, 118) |
| (49.979.262) | 2s Ceser Erpermer | (2)T34396 |
| 557,903,064 | Caih Flow betore chinges in Werking Capitat | G2ap13,131 |
| \$6.184,774,567) | (ticreaselioscrease of Current Assets | (4, 374, 19, 425) |
| (8364736i6) | I inscresseldecuste is Monyy in Cal and Shert Hetict | 1.17135937 |
|  |  | 12,NESAICSLIT |
| 12.379 .520 .9 pm | 3. Inamosefpeocasio Lems, fovarcesas suls furchas | (2357498.74) |
| 122.464 .595 | 4. nizesse/ Doctesse b Gther Pssets | 3. 555542 |
| 4,506,129,525 | Increavandecresuel of Current Latilies | 4.220,417,011 |
| A $7005 \times 0.736$ |  |  |
|  |  |  |
| 156119010 |  | coramisio |
| 1020.499185 |  | (41) 25 (ema) |
| 1,101,598,752 | ibi Cash Fbue treminvastmant Activitias | 225,353,544 |
| 1,13,601,127 | 1. Denessul Destexio an Loag Teim liasatmern | 173755.973 |
| 01506.118 |  | D)24t132 |
| T07822970 | 3.introst incoine thotis losy Jem mastment | 71.465109 |
| 160,205 | 1. Exthend inceme | 76.373 |
| nkefirs. | 2. Colie | \$064.976 |
| $\cdots$ | (C) Cash flow from fnancing Actuvites | $\stackrel{+}{+}$ |
|  |  |  |
| - |  <br>  |  |
|  |  |  |
| $\square$ | (c) inceme itoss) frons change in exchiagge rate in Cosh s turk bialance | $\bigcirc$ |
| toas 2,974 | (e) Curr int Year's Cash How trum Alt Adivitles | 744857,261 |
| 559,250.514 | (f) Oporing Cash ard Burk Balance | 630.239 .598 |
| $670,218,5 \mathrm{se}$ | igi Casimg Cashand gark talince | 1.390.325.851 |

## Mabisink Li=Fitd

## CashFlow Statement

For the poriod leom 12 Jafy 2607 to is laby 2so3i


## Schedule 26 : Cash Flow Statement

| Provious Year Pe | Pesticutas | This Yoar Rs |
| :---: | :---: | :---: |
| 725,602,002 | A Cashiflien framOjermions | 706, 9 5, 50. |
| 1,519,619,8\% | 1. Caslifeespis | 1/700, enc, 211 |
| 1.245,805.030 | 1.1 leterestinconus | $1.466+08803$ |
| 123,093,005 | 12 Ceawestios nail Disearm |  |
| 117, 410,400 | 1.3Currasa Esifuerye aniome | 397300 94\% |
| 3,290,067 | 1A tion Gpeteting incores | 2.704 .442 |
| $34,070,151$ | 150tar luvere | 41,200.817 |
| T07, \%evenx | 2. Conh Payments | m2,765.sil |
| 401,643,363 | 2.5 Interen Crientes | 301.968 .770 |
| INR, 5e9,6m | 2280 E®rremet | $17 \times 3000387$ |
|  | 230 genabicg fofentes | 23) 2 a2, 416 |
| - | 24Curoncy Cothange Lons | - |
| , | 28 Non Operatup Eyperses | * |
| , | 2.1) CClent Equenses | , |
| 1,921,865,419 | 8. Cashrienfromitrvestiry Aufifities | 3 400,678430 |
| 144.0ak210 |  | 062.130 |
| 218,800,000 | 2. Incrasa)(Dearease) in Mereyy at eall | 72.160 .000 |
| (\%1\%,3X, 007 ) | 3 Ifumase) Decesesa) is imventitesis | 2.400280 .040 |
| 2.134206.095 |  | 650.700.462 |
| 192,205,169 | 5 Increxse/MCe( rewep) in Fiaed Ansels | 81,645.586 |
| 202,706,600 | 6 Invemanideronsel in Colur Assats | 35 ART,489 |
| 1,072,953,416 |  |  |
| 50, 072.423 | 1. HormaeeqDecreane) in Distostioye | (152,057 505) |
| 005,246,24.4 | 2. Iformaseg (-ernase) in Coprait | 2 2934070.600 |
| 17.614 .478 | 3 IncanaselDecresna) in E4is Payadion | 40178920 |
| 20.225 .204 |  | 11.306 .649 |
| (122.95x, 059) | 0. This Year's Net Gandirlow | 12.204.608 |
| 307, 510.317 | S. Oporere) Canh patiose | 244235320 |
| 274.235.720 | F Ciosicg OanhBalanse | 206.520.934 |

CASH FLOW STATEMENT
For the perice 16 July 2005 to 16 July 2006 (I Srrewan 2062 to 32 dshach 2063)

| Previous vel (R0) | Parmiculars | THIS YEMREM |
| :---: | :---: | :---: |
| 56atsav |  | stacotida |
| 1,76034858 | 1 cantucapt | 1937.0425a |
| 1,20, exaces) | 21istensiscemt | 1,19990586 |
| 132615662 |  | 165.407 .892 |
| 13733059] |  | 198.392 136 |
|  |  | 2903m |
| 4),540.505 | 150tericcomp | 17,130.0s9 |
| 1,74.800431 | 2 cahramm | 1,307,197,970 |
| 361.361.70 | 21 artien fromest | 6, matale |
| 120.59235 | 22Satloperses | misks 285 |
| 27123047 | 23 crce bixteno pxposes | $73580 \%$ 991 |
| 211.04885 | 2 2ircters lat Pax | 250716830 |
|  | 250ter feerser |  |
| 500,97400 |  | mainatal |
| 2851,563061 |  | 2200. $2 \times .138$ |
| T2.ro2.05 |  | 544.702180 |
| 240923906\% |  | 1991 cearsm |
| 617.\%262 | 1 ncounevecrone in touns ses furtimes | 2318035556 |
| 272.526es | 4 nemarw Decousce in Coters Aums | 189005352 |
| 2834093s40 |  | vetaructid |
| 2993,973005 | - ncomesebrawse ir Seports | (6incalas56 |
|  | 2 menoxeDegrine in Cetticated ceposts |  |
| 9 Sasacos |  | 11, $2 \times$ 2\% |
| 113saces |  | (20.53260] |
| 31311281 |  | Ca74.2i1) |
|  |  |  |
| $31.64 \times 634$ |  | 2AECR5916 |
|  |  |  |
| 139638 | 4 chisest lacose | (61),709 |
|  | 5 Stersi |  |
|  | Cceen Awimm Ruscoy nownes |  |
|  |  |  |
|  | 2 nceanempeseswein Stwy Cx \% |  |
| - |  |  |
| - |  reckred bom sks |  |
| . |  |  |
| 13230.33t |  | (30), 183837 |
| 2806.514521 |  | 2014axack |
| 2,94*70,237 |  | 1,717352336 |

CASH FLOW STATEMENT
July 17,20016 :o Jay 16.2007

| Pravous MEAR RS. | PARTICULARS | THIS Year ms. |
| :---: | :---: | :---: |
| spoerans | A. Cuhnse trom Oeentira Netheter | 760.770 .70 |
| 1,98170623 | 1. Catm Meiturd | 2,102406, 215 |
| 1,414.950,506 | 1.113teraliche | 1.817 .037584 |
| 165447, | 12 Conniswos asd Comajet mean | 197,224.228 |
| 198.130 .134 |  | 131.637.327 |
| 12.500 .317 | 1A Ancovey orlasi wition of | 915830.003 |
| 117.190055 | 1500 arimate | 455,476.301 |
| \$1921.17870 | \% Cinh Fiymer | 1/6017098275 |
| 648381835 | 2.1 Nutrest Euteis | 763.21297 |
| 191,838.231 | 22 Suaf Equents | 268,26e963 |
| 235812091 |  | 168,275,521 |
| 298,750803 |  | 197350508 |
| - | 2500 ir bokrsis |  |
| censmixms |  | 687232309 |
| 2,242195.159 |  | 6207\%3405 |
| \$86.19,100 |  | 204, 24385 |
| 5001,8es,7s5 |  | s14,6es,109 |
| 2,3namasse |  | $2.159,010081$ |
| tespasaza | 4. ncwnowncrese nomersmura | 273527,17 |
| legateast | Oncrimaj pectime) sf Curmet lubitus | 2,630,062,76: |
| 1.576.039684 |  | 3537.506.115 |
|  | 2. nceabedernse a Centicase stimeses |  |
| (1,4233050 | 3. nceasedecresse essont wes Borrowing | 91.3425:4 |
| 20,525,9000 | 4. incesperberrese nomen tiabites | 21,953753 |
| 263 44,271 | B. Cwe Fiw frum Imastment Aetivies | (435s8 A43) |
| - | 1. newaerteo everi i lomy lemmimsinats |  |
| casczasits |  | 167.298378 |
| - | 1. miesthegris fion Lexp fenn mestreal | - |
| 611,35 | 4.0viord rimen | 210532 |
|  | Saturs | - |
|  |  |  |
| - | 1. (newiuncheomesial in tery Termallownops Eondbetoreres ex |  |
| - | 2 incersecbesway in Sicre Casid | * |
| - | 3. nowaer Des envel in Cluer tidilies | . |
| - | 4. neveserpesegea n neivercelboing robvec Tren N : |  |
|  |  <br>  |  |
| 697tixem | E Curent Yars Caih fow fion al fetates | 32, ¢8498 |
| 209443951 |  | 1.737/22,298 |
| 1.717252,58 |  | 1737-91231 |

CASH FLON STATELAENT



Financial Highlights of Nepal Bangladesh Bank Ltd.

|  |  |  |  |  |  |  | Rs. in '000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Audited | Audited | Audited | Audited | Unaudited 9 months |  |
|  |  | 2060/61 | 2061/62 | 2062/63 | 2063/64 | 2064/65 |  |
|  |  | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 |  |
| Brief Finan Indicators |  |  |  |  |  |  |  |
|  | Networth Per Share | 182.42 | -32.59 | -217.07 | -364.54 |  | -317.03 |
|  | Earning Per Share | 0.74 | -104.12 | -249.65 | -147.47 |  | 72.83 |
|  | Dividend Per share | - | - | - | - | - |  |
|  | Dividend Payout Ratio | - | - | - | - | - |  |
|  | Earning Yield | - | - | - | - | - |  |
|  | Price Earning Ratio (In case of old co) | 478.38 | - | - | - | - |  |
|  | Market Price | 354 | 265 | 199 | 550 |  | 565 |
|  |  | 680 |  |  |  |  |  |
| Strpityre | Rs. In Million | Millim ${ }^{\text {k }}$ | Millin ${ }^{\text {M }}$ | Million | Ms.llipn |  |  |
|  | Authorised Capital | 1500 | 1500 | 1500 | 1500 |  | 1500 |
|  | Issued Capital | 1000 | 1000 | 1000 | 1000 |  | 1000 |
| Liabilities | crsurect and Paid up | 359.92 | 719.86 | 719.86 | 719.86 |  | 744.13 |
|  | Debenture | - | - | - | - | - |  |
|  | Reserve \& Surplus | 296.65 | -485.28 | -2,282.44 | -3,344.02 |  | -3,103.26 |
|  | Deposits | 12807.38 | 12,125.58 | 13,015.14 | 9,385.95 |  | 9,801.44 |
|  | Others | 794.02 | 916.99 | 256.73 | 492.76 |  | 2,947.76 |
|  | Total | 14257.97 | 13277.15 | 11709.29 | 7254.55 |  | 10390.07 |
| Assets |  |  |  |  |  |  |  |
|  | Cash \& Bank Balance | 1436.47 | 1,401.77 | 7,694.68 | 1,164.05 |  | 735.53 |



# Bank of Kathmandu Ltd 

CASH FLOW STATEMENT

E-20514/1 T. 20533/31

| primpus nite | FakTlcusazs | 1HธYAR |
| :---: | :---: | :---: |
| 262,111.008 |  | 295.145,975 |
| 726.235.509 | 18.-a R-aw | 756.078.893 |
| 567.055 226 | 1.1 Leven lavere | 602.0061562 |
| 77.200.811 | 1.2 Conomen an Dasmex Law- | 72.351 .875 |
| 84,645 514 | 1.3 Esorarge Gen | $72.114 .863$ |
| $15,458.800$ | 1.4 NumOpmens h | 45, 43) |
| 1.956.448 | 1.50wn hen | 4.461.25s |
| 474.745.560 | 2. ComProvers | 452.593, 151 |
| 206.239,050 | 2.2 l-areon Eqwirn | $241.630 .764$ |
| 47,721,772 | $2.25 .0 \mathrm{~S}_{\text {cher }}$ | 511802,909 |
| 86,959.906 |  | 98.180 .173 |
| - | 2.4 tw+ers-t-0. |  |
| $*$ |  | 51 m 297 |
| 57,172.200 | 2506- Leren | 64.763,237 |
| $12.170970227$ |  | $\$ 472.452 .9406$ |
| [756.350.254 | 1. Crenge on Berw- -m. Beran | $64.611 .270$ |
| (241900200) |  | \$86.552.887 |
| 1562.260 .763 | 3. Conger in livenuress | (120.843.162] |
| $(1.265 .261 .326)$ |  | (300.737.526 |
| 10075.774 |  | ( $11,805.958$ ) |
| \$5858.046 | 8. Congex mosos Amos | 51.738 .352 |
| 1.900678 .769 |  | 120 SSc.a55 |
| 412.914.140 | 1.C.nnom | OCOC, 290.5001 |
| 1.570 .971854 | 2.C.....00 | 1,201,109,174 |
| 2.565706 |  | (18.935.496] |
| (172.73, 531) | 4.C.r.-. On- Lnern | (17,500.807) |
| [12.178,427 |  | 22.248751 |
| $157,400.526$ | E) OPENNC CRSH BALANCE | 132220.903 |
| 1392kbsus | F) CLOSNG CASH EALANEE | 352.465\%554 |



$\xrightarrow[\text { R }]{\text { D }}$ M




$\xrightarrow[C \rightarrow O]{A-S}$

Soperw K Keranan
5.5. Keraneo \&

Cureor



## CASH FLOW STATEMEIT

## 



| Puwtus Year | farfoular | Canum Tesi |
| :---: | :---: | :---: |
|  |  | 1321速 |
| क¢7alsiz8 | 1.Cast Plospits | 1213828,62] |
| Tu¢6Es | 11.1 bseet huos | 976888\%02 |
| 97, 31728 | 12Corriestim an decount hoore | 18415582 |
| 7274178 | 13 Extugs 6 an | 89788\%89 |
| 411150 | 1 1. heowsy al minauttian | 6tto |
| (32tasem | 1.5 ke (peorby licoms | Wheso |
| 18000887 | 16 Otes haces: | \%10724 |
| 004, 251388 | 2 Cast Panests | 328.120230 |
| \$30181011 | 21 Invest forres | 47743185 |
| Wirbose | 22 Enologn Extsos | S0,01500 |
| 18122994 | 23 Ofcs Datests | 120uaste |
| - | 24 Enametus | - |
| 11760000 | 25 lucome tax Pial | 15050000 |
| . | 26 Kcolpenty Sypuse | . |
| . | 270 ter lepens | - |
| TRensere |  | 31.800 er |
| (6012)2906 | CHMBES W Cuneir assers | Q7615384 |
| 59768750 |  | 1665 |
| \%69219880 |  | (20)01315 |
| (2) 102355851 |  | [2\%.30938t |
| 48388734 |  | 24.488143 |
| 1,224.320.29 |  | 2511,70028 |
| 15005886 |  | Su4810.c5 |
| . |  | . |
| 120.1998 |  | invosesou |
| 205 248 sks |  | 203170212 |


| Provisus Yayr | Particulors | Carrent Yaar |
| :---: | :---: | :---: |
| \%11aligulit |  | 148006494 |
| [236942759 |  | [17297n |
| [19010197] | 2 Increpsa llecrexcel is faxd Mocets | 陮497357 |
| 4756485 |  | 5731958 |
| 450168 | 4. Bivions lewse | 14206 |
| - | 5 Whers | - |
| 65128 |  | - |
| - |  | - |
| 130580.100 | 2 harcie Decrexti in Sure foplal | - |
| ก399\%230 | 3 harsa flecacosi in Ofer lablbes | - |
| - |  | - |
| batide |  | 14.awde |
| 3017asasi |  | 1203530\% |
|  |  | 1.31s cectur |
| 120503111 |  | 1.6nbemeic |



As per ox mpat of wen dore

Gogal P Painatak FC2
Gir. Popanas 5 ce
Gratenidecractants

## Standard Chartered Bank Ltd.



Seheswles 11022,27828 feen lefograf pat of ihls Gash Fow Statweect.
As jer ear cespe of even thlo

| S.04 Mindar Cht it Dovedor | Brbert Given bravily (Alenty is [. Mirs) | Roblel sianh Thet Rivereler CNEtr | Mrayan K. Tenewhe Cunoset | 18, Upengery for and on bohat of 12C. Havige \& CDe Cloceres Rcoountiers |
| :---: | :---: | :---: | :---: | :---: |
| Dule: 54008004 Matmasca |  |  |  |  |

Schedule 28 : Cash Flow Statement
Fiscal Year 16 July 2004 to 15 July 2005 (1 Shrewan 2061 to 31 Ash3d 2062)

|  | PARTICULARS | This Year Rs. | Previous Year Rs. |
| :---: | :---: | :---: | :---: |
|  | Cash Flow trom Operations | 205,004,012 | 264,006,107 |
|  | 1. Cash Recejpts | 1,552,214,700 | 1,501,965,526 |
|  | 1.1 Intrest inoome | 1.069,05/A18 | 1,002.798,808 |
|  | 12. Commiction ant Discount inome | $183.430,697$ | 199.286.716 |
|  | 1.3 Sumency Explange Gan | 266.054,.669 | 273050.040 |
|  | 1.4 Non-perating iscome | 2,957.005 | - |
|  | 1.5 Celics income | 29,292.795 | 25.590 .877 |
|  | 2. Cash Fayments | 1.245.510.438 | 1.237,050,418 |
|  | 2.1 Inlerest Experses | 255.584.777 | $283,154.261$ |
|  | 22 Staff Expenses | 149.097.439 | $135776601$ |
|  | 2.3 Otice Oveintad Expenses | 167, 4x0,658 | 197.000.871 |
|  | 2.4 Currescy Exctarge Loss | - | - |
|  | 25 Non-Operasig Experses | 2,547,444 | 11,969,168 |
|  | 2.5 Oher Experses | 572.967 .970 | 608.159 .877 |
| B) | Cash Flow From lmossmat Activity | 1,470,351,235 | 12,783,527,285) |
|  | 1. Changes in Balance with Banks | 919880,587 | $[521,908,248)$ |
|  | 2. Clanges in Money at Call and sthert Node | ( $41,021,500$ ) | $(560,659,750)$ |
|  | 3. Coanges in investrments | 1,857, 775,162 | (1,144,129, 295 ) |
|  | 4. Changes in Loars. Adrances and Biss. Purchased | (1.728,296.745) | $(694,631,356)$ |
|  | 5. Cranges is Foxed Assets | 1,518,058 | (9,512,569) |
|  | 5 Crunges in Other Asoets | 851,749,6R | $167.344,545$ |
| c) | Cash Flow From Financing Actulics | (1,980,206,419) | 2,487,471,600 |
|  | 1. Changes in tourvaingo | (22,356,464) | $(980,753)$ |
|  | 2 Cranges in Deposits | (1.026,342,002) | 2.405,806.896 |
|  | 3 Cranges in Buis Payable | (2,727,0e9) | 4,183,179 |
|  | 4. Cranges in Oher Lastoes | (116.775.914) | 双.761,702 |
| D) | Net Cash Flow for the Year | 7,153,832 | (11,050,235) |
| E) | Opaning Cash Balance | 187.704.879 | 198,755,114 |
| F) | Closing Cash Balance | 195,458.711 | 187,784,874 |

Schedules 1 to 22, 27 \& 28 form Integral part of this Cash Flow Statement.


## Standard Chartered Bank Nepal Limited <br> Cash Flow Statement <br> for the period 16 July 2005 to 16 tuly 2005 (1 Shrawan 2062 to 32 Achad 2063)

| Previous Yeat Rs. | PARTICULARS | This Year Rs. |
| :---: | :---: | :---: |
| (600,098,268) | A) Cenh Flow frofe Opersaing Activites | (550.562.436) |
| 634,367,341 | 1. Cuph Recrigtis | 714,577,197 |
| 156.369.912 | 1.1 Intenest heomp | 190300655 |
| $183,432,6 \div 2$ | 12 Gerrribsion and Tiscopart incame | $220,550,254$ |
| \% 5 , 864,969 | 13 Incoeve foun Fornign Exchange Trankaction | 263,471.65\% |
| $300,350$ | 14 Recovery of Loan Witian of | 1576.518 |
| $31,390,978$ | 15 Ceber hromp | $25776,160$ |
| 1,234,504,519 | 2. Cach Paymaty | 1,771,139,695 |
| $255,523,777$ | 2.1 Irserent Enperases | $300272205$ |
| $181,037,439$ | 22 Sull Expmines | $168457<66$ |
| $167,430,656$ | 23 (fiot Optrating Exp+nst | 160.07990 |
| 270.503 .579 | 24 \|nojese 7x. Py | $265.500 .934$ |
| 405,400,656 | 25 Cbive Experses | 450837038 |
| (60).095.268) | Cosh Flow before Changes in Working Caplal | (593.562.296) |
| (904,737.567) | Oecrosse I Oncressel of Currert Assets | (610, 530.424$)$ |
| ( 41.291 .560$)$ |  | $22.520 .000$ |
|  | 2 Decrease / Ancrease) in Stor Farre Invesmant |  |
| 11.729, 796.7451 | 3. Decresse ) (lacrosse) in Loan and Bibs Aurchase | (790.837222) |
| 㜞1,749/278 | 4. Dscrease / \|lisrosse) in Other Asscss | (102.176, 166) |
| [1.975,912999] | [Decrasea) / Inctuase of Cuerent liabilijes | 3,574,730,393 |
| [1.825.947,008] | 1 (Dearese) / Itcrase in Deposkls | $3.697562 .231$ |
|  | 2 (Decruse) / Inctrase in Cetibcate at Dwperibs |  |
| (22, 2.86 .464 | 3 (Decrupse) 'herikase in Stort Jerta Bheoseity | $[28,058,121)$ |
| (127.209.539) | 4 ( Prcrease) / hecivase in Other Latolse | 5.266 .198 |
| 2,572,640,979 | B) Cash Fligu froce Inwesment Notivities | 42,240, 3258.836 |
| $1,657.775,152$ | 1. Decrease ? (llawase) in Long Terts impestroert. | $(3.145 .982407$ |
| $1.518,068$ | 2 Decrease ! (lycrease) in Fand Aksets | $147539.177\rangle$ |
| 953,297,506 | 3. mberest income from Long Ferm Irestnerk | $\$ 51.913,054$ |
| 49.353 | 4 Ovidond Ingoste | seros |
|  | C) Cash Fiow from Financing Activities | = |
| - | 1. incrsce I (Oecresse) in Long lerm Bonowings (Bond. bebsthre otc. | - |
| - | $\frac{2}{3}$ Increse ( (Decrease) in Stars Captal | - |
| - | 4 increse I (Decrease) in Reinance I Faoloes Rocened From Nopal Raspa Elonk. | - |
| - | D) Incorne I Loss from thange in Exchange Rate ho Cash and Bark Balonce. | - |
| (912045.759] | E) Cutrete Yeat' Cash Flow from al Actiritivg | 165,124.529 |
| 2,023,163,509 | F) Openitg Casb and Back Balunce | 1,911,516.894 |
| 1,111.116384 | G) Closing Cash and Bank Balance | 1,276.211.423 |

Rakhi Sisgh Chint F nascial Otiker

Nranjan K. Tibrewala Drector

Selit Mundut CEO \& Drector

Stnjoer A prawal Direstor

As per our report of even date
P. R. Somasundiram

Diselice
(Allernale to IS S. Biedra)

Ram B. Aryal Divector

TR. Upmiltray
For and on bethaf of TR Upadtrya 8 Co
Chartared Accourtants

## Kathmarsou

Date: 140920606

## Standard Chartered Bank Nepal Limited

## Cash Flow Statement

for the pencd 17 July 2005 to 16 July 2007 （1 Shrawan 2063 to 32 Ashad 2064）

| Previcurs Year R＊． | PARTICULARS | This Year定密。 |
| :---: | :---: | :---: |
| 2，822．214．511 | A）Cash Flow tron Cpetating Activilies | 1，002．743，050 |
| 1，251，151，301 | 5．Cash Recolpts | 1，572，010，974 |
| 776．S24．776 | 1.1 Itfereet incocte | 1071，701，4\％ |
| 220250,214 | 12 Comnission and Descent hcone | 224．164．421 |
| $223.429 .683$ | 13 Incorne bom Foreign Eechangn Trastastion | $237.103 .978$ |
| 1.576 .515 | 14 Rokovey of Lior Wrnen ofl | 1，000，334 |
| 26776162 | 15 Other Inobete | 38000976 |
| 1，273，139，635 | 2．Cash Paympty | 1，501，旡），667 |
| 300222.265 | 21 litende Exptnses | 397832.097 |
| $168.491 . A 95$ | 22 Suse Expents | $200,045,208$ |
| 158079560 | 23 Office Operaligy Expenses | 201588.139 |
| $265.502 .94$ | 2.4 Fextul Tax Protimelt | $300065,78$ |
| 450837,030 | 25 Ohme Expensts | 496768，365 |
| （121．592．354） | Cash Flow tefore Changes in Working Capatal | $(59,683,503)$ |
| （610．532．481 | Decrease／／hicrease）of Cument Assess |  |
| $212,520,005$ | 1．Decrases ；Ginoresee）in Money $\geq$ Cal and Ston Noose | $216,119,500$ |
| $=$ | 2．Decrease ！（incosocel in shat fem lavemsent |  |
| $(790,537,272)$ | 3．Decrese＇（ncresee）in Lom and Bls Puchaes | （ $1509,202,453$ ） |
| （102，116，166） | 4．Decresce（ Ginowse）in Oter hoses |  |
| $3.578,730303$ |  |  |
| $3,097.562,231$ | 1．（Decriapa）／Incruape in Deposts | $1,595,364,574$ |
|  | 2 （Decrusia）／incrusie in Certfcire of Duppents |  |
| [28 098 121) | 3．（Decreana）／Incrave in Shat Tern Bcrownys | $390417,456$ |
| $5.206 .193$ | 4．（Decracie）／Incrate in Oter listaites | $537,834,194$ |
| （2，837，132，171） | 日）Cash Flow flom limegrmet Letivities | $(421,102,274$ |
| $(3,144,582,42)$ | 1．Decrabie ？（incraise）in Lerg Tem trveethrent | （714．675，029） |
| $(47535,177)$ | 2．Drcruse）（（fincresso）in Fiand dsppe | $(33,230,3 \times 4)$ |
| $355250743$ | 3．Indertst incotat Iven Liong Teen leveiloient | PGS Stas, 58 |
| 76705 | 4．Diëderd heamp <br> 5 Dters | $256,215$ |
|  |  |  |
| － | 1．Incrouse／（Decreme］in Lorg fom Borowings（Biord，Dobernse ox．） |  |
| － | 2．Incroase／（Dectosel in Share Coplol | 1．152． 100 |
| － | 3．Incrase ）（Derresea）in Other Liatily <br>  |  |
| 60.042 .189 | D）Inoorne／Exporse from Changy In Exchange Rate in Cash and Hank Dalance | 71．732．526 |
| 165.124 .589 | E）Cament＇Yar＇s Cash Flow from all Artivities | 744．779，615 |
| 5，511，516，694 | F）Optcing Cash atas Beok Buatco | $1.276 .241,423$ |
| 1276241，23 | 6）Closing Caent and Bank Ralsnte | 2，001，021，／69 |

## Nirmpan K．Ticrewala <br> Derector

Sujt Mundut CEO \＆Drector

Neseral Swaroop Derector

As pit eur report of ovin date
Rakhi Singh
Chiet Financial Oficer

Ram B．Aryal Drector

## Madan Krishna Sharma

Pactier
for and an bevaly of CSC 8 © Co
Charlered Acoovotants

Cash Fiow stavment


| Previous Year | Particulars | This Yoar |
| :---: | :---: | :---: |
| EL |  | Rs. |
| 1.642.742033 | (A) Cash Fhow from Operating Actiolties | (45,233,838) |
| 1,572.010.934 | 1. Cashrecropts | 1,a62, 221,002 |
| 1,081.101,495 | 1.1 Intesti income | 1,295,622,504 |
| 224.64 .451 | 1.2 Conrrisice and Dscout Ifromet | 272.006274 |
| 237:103.978 | 1.3 Incoone tom Froign Excharge Tarracsori | \$65.435. 138 |
| 1.980384 | 1.4 Boventy or thari Wimen eff | S.997.246 |
| 34020746 | 1.50 iner ncame | 33.175 .730 |
| 1,631. 1 , 29807 | 2. Canh Piymuety | 1, $271,292,559$ |
| 397872097 | 21 Insoct Eperses | 474.628, 590 |
| 200045248 | 22 sull biperio. | 274,057,512 |
| 207528.130 | 23 Ofice Operstiny Expenss | 205.769 .247 |
| 330 crs 238 | 24 tixathetax Paptem | 715, 062. 598 |
| 496253395 | ZS Other Epossts | 331.1B6534 |
| (89eftissy) | Casta Now before Chinges in Working Capitat | 250,922, 443 |
| (1,351.302.697) | Docrease/ 'increase) of Current Assets | (4.354.232.028) |
| 276.170500 | 1. Dociema / (ngruast in Mongy ar Cit and Sut Nown <br> 2 Docieral inveascin Stort sems imetmert | (104305,208) |
| (1, 5 (tezes, 496 |  | (2)457207n |
| 21,881 265 |  | 012603.8511 |
| 2.504 .240 .3 EJ | Decresset Ancriorve of Curent Liataties | 4,072,062, 747 |
| 1585988574 |  | $5 \mathrm{cos.972} 1138$ |
|  |  |  |
| 384.417 .456 | 3. (Lecressh/ Iscrase in stot form eoocwings | (348,711.311) |
| 537)184.814 | 4. (Decreasel/bdease inthee Liderms | 910.130.309 (16.652637 |
| $(914,678.002)$ |  | (9)3400.5An |
| (332:30,394) | 2 Docicond (ncrusel in fiedi oxees | 174.116.4351 |
| 326549)(6) |  |  |
| 256215 | 4. DVidond hoome | 1.099.875 |
|  | 5 Others |  |
| 1.150.360 | (C) Cash Fiow from Financing Acthiles | 601,799 |
|  |  |  |
| 1.150360 | 2. iscrease/ Docross of in Storo Capeal | 501.799 |
|  |  |  |
|  |  |  |
| 21,042,526 |  | 00,235,102 |
| 144.739,645 | (E) Carrest year's cashl llow from all activities | 21,222,146 |
| 1,276,241.423 | (F) Opering Cash and Bank Balanco | 2.ce1.021.058 |
| 2.021,021.064 | (a) Cloring Cash and tark Batance | 2.050 .248 .214 |


|  |  |  |  | As pes out mport ct oven dite |
| :---: | :---: | :---: | :---: | :---: |
| Rakje Sirgh Cherpinmavctiowe | Sule Murdial CCOA Divela | Nobsal Seuscop flucast |  |  |
| Rfan Easfow Rogsti Datrecta: | Surhoo.jtiygn Drichat | Anceag Malisha lyencter | Ram Bahaar Aryar Darcias | Matan WhehraShzma <br> Partier <br> for and con benat of CSC \& Co <br> Chuthend focieteris |

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