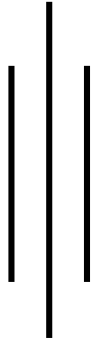


AN ANALYSIS OF DEBT SECURITIES IN NEPAL WITH REFERENCE TO  
NEPALESE SECURITIES MARKET



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**A Thesis Submitted To**  
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**Kathmandu**

**In partial fulfillment of the requirements for the Degree of**  
**Masters of Business Studies (M.B.S.)**

**Kathmandu, Nepal.**

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**RECOMMENDATION**

**This is to certify that the thesis**

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NEPALESE SECURITIES MARKET**

*has been prepared as approved by this department in the prescribed format of the Faculty  
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## VIVA-VOCE SHEET

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

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

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## DECLARATION

I hereby declare that the data and work reported in this thesis entitled AN ANALYSIS OF DEBT SECURITIES IN NEPAL WITH REFERENCE TO NEPALESE SECURITIES MARKET submitted to office of the dean, faculty of management, Tribhuvan University, **Shanker Dev Campus** is my original work done for the partial fulfillment of the requirement of the degree of Master in Business Studies (M.B.S.) under the guidance and supervision of **Prakash Singh Pradhan, Campus Chief**, Shanker Dev Campus ,Kathmandu, Nepal.

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## LIST OF ACRONYMS

&	=	and
Amt	=	Amount
B.S.	=	Bikram Sambath
F/Y	=	Fiscal Year
HBL	=	Himalayan Bank Limited
i.e.	=	That is
LTD	=	Limited
NEPSE	=	Nepal Stock Exchange
SEBON	=	Securities Board of Nepal
NGOs	=	Non- Governemnt Organisations
NIBL	=	Nepal Investment Bank Limited
NIC	=	Nepal Industrial & Commercial Bank Limited
NRB	=	Nepal Rastra Bank
Pg	=	Page Number
Rs.	=	Rupees
S.N.	=	Serial Number
SRSM	=	Shree Ram Sugar Mills Limited
T-Bills	=	Treasury Bills
Yrs	=	Years
NEA	=	Nepal Electricity authority
IPO	=	Initial Public Offering

## Chapter –1 Introduction

### 1.1 Background of the study

Capital Market is one of the significant aspects of every financial market. Hence it is necessary to study its correct meaning. Broadly speaking the capital market is a market for financial assets which have a long or indefinite maturity.

The Capital Market is the financial market where long-term securities are traded. Here companies and government raise their funds to meet their long term financing needs. Securities having life span of more than one year are traded in the capital market which means money is lent for more than one year period. Long term financial instrument such as *stocks (shares) and bonds* issued by various corporations and institutions are basically traded in a capital market.

The capital market is place or mechanism in which various types of financial instruments are issued for a specific financial function. These are normally financial claims that have a maturity period of one year or more (Thygeson, K.J, “Financial Markets & Institutions” Harper Collins College Publisher (1993) Pg. 142.). These are then transferred from one person/ parties to another by means of different trading mechanism. This allows the parties who have excess fund to channelize the surplus funds to those who are in deficit of the funds for the investment with ease. Thus a capital market plays a major role in the maintaining healthy economy of a country.

When referring to a *capital market*, it is important to note that the term can refer to a rather broad range of products and services that are associated with finances and investments. To that end, a capital market will include such components as the [stock market](#), commodities exchanges, the [bond market](#), and just about any physical or virtual facility or medium where debt and [equity securities](#) can be bought or sold. The major components of a capital market are stock market, debt securities, mutual funds, government treasury bills etc. Thus capital market plays an important role in mobilizing a continuous flow of savings and channeling these financial resources for expanding productive capacity in the economy. Among these securities, debt securities play an important role as it provides a strong base for implementing

monetary and debt management procedures. The advent of security and capital market is not a recent phenomenon. A long array of securities, sophisticated market places, different classes of market participants, up to date, self and government regulations and mechanism have evolved over time. Modern innovations are more rampant in security market than in product market. There is rise in types of securities day to day. In fact, the development in securities market has been an indicator of the economic development of a country. Therefore securities and securities market have been the reality of business world and a subject of business education.

The main objective of security market is to create opportunity for maximum number of people to get benefits from the return obtained by directing the economy towards the productive sector by mobilizing the long-term capital. The objectives can be fulfilled only by the rational and accountable behavior relating to the three factors of the capital market such as intuition, mediator, and investor.

As a market for securities with a very broad reach, the capital market is an ideal environment for the creation of strategies that can result in raising long-term funds for bond issues or even mortgages. At the same time, the capital market provides the medium for short-term fund strategies as well. Essentially, any type of financial transaction that is meant to result in the buying and selling of securities and commodities for profit can rightly be considered part of the capital market. Institutions are also part of the framework of the capital market.

A debt instrument is a long term contract under which a borrower agrees to make payments of interest and principal on a specific date to the holder of the bond. In other words, debt securities represent a piece of paper as a financial claim (Bringham & Gapenski "Intermediate Financial Management" Chicago: Dryden Press (1985), Pg.6.). Debt securities get the utmost preference at the time of payback as the interest on bonds and debentures are paid from the total earning of a company before paying the dividends to the share holders. On the other hand, the issuing companies are not liable to pay dividends to its common stock holders if it is suffering loss. However the interest on debentures and bonds must be paid in time regardless of the company going in loss or profit.

The mentioned topic is entirely related to debt securities market with reference to the Nepalese securities market. A debt securities market is that type of market in which financial instruments (mainly bonds & debentures) dealing in outstanding debts are bought or sold.

## **1.2 A brief History of Debt Securities in Nepal:**

The stock market of Nepal is quite young. Accordingly its debt securities market has not reached its maturity stage yet. Therefore there is not a proper exercise of debt securities market in Nepal. Debt securities have a very short history in Nepalese securities market. Nepal government of that time issued debt securities for the first time in 1962 A.D. After this, the government has been issuing these bonds regularly to meet its financial needs. The public debt act 2059 was brought into regulation from 2059 B.S and this act has been regulating the debt market presently. NIDC capital markets and Bottlers Nepal were two of the organizations to issue debt securities for the first time. For the transaction of debt securities, the "Security Exchange Center" was involved. Later it was converted into Nepal Stock Exchange Limited.

The Nepal Stock Exchange Limited popularly called NEPSE is the only stock exchange of Nepal. The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through member, market intermediaries, such as broker, market makers etc. The NEPSE Index is primary all equity market index of NEPSE. Nepal Stock Exchange, in short NEPSE, is established under the company act, operating under Securities Exchange Act, 1983. NEPSE opened its trading floor on 13th January 1994. It is regulated by the Securities Board of Nepal. Government bonds alike Rastriya bachatpatra is being listed on NEPSE and transaction is being carried out on the secondary market"

The present debt securities market in Nepal can be classified into two types namely:

- a) Government debt securities market**
- b) Corporate debt securities market**

### **a) Government debt securities market:**

This is the debt market which deals in the debt securities issued by the government. The government from time to time issues certain bonds, treasury bills etc. to meet its financial needs promising to pay a certain rate of interest regularly or sold at discount equivalence to the risk-free market rate. This works as an effective tool to meet the deficit

budget in a certain financial year more likely termed as fiscal year. The different types of government debt securities include Treasury bills, national saving bonds, special bonds, public saving bonds, etc. In Nepal, Rastra Bank has been actively issuing different types of debt securities in order to compensate the deficit in the national budget by collecting funds from the general public from these securities. Some of these various debt securities issued by Nepal Rastra Bank are discussed below.

Apart from T-Bills, government debt securities issued by Nepal Government listed on NEPSE (outstanding) are mentioned below:

- ) Bikash Rinpatra 2067
- ) Bikash Rinpatra 2067 Ka
- ) Bikash Rinpatra 2067 Kha
- ) Bikash Rinpatra 2067 Ga
- ) Bikash Rinpatra 2072
- ) Bikash Rinpatra 2075
- ) Bikash Rinpatra 2075 Ka
- ) Bikash Rinpatra 2076
- ) Bikash Rinpatra 2076 Ka
- ) Bikash Rinpatra 2076 Kha
- ) Bikash Rinpatra 2076 Ga
- ) Bikash Rinpatra 2072 Ka
- ) Bikash Rinpatra 2071 Ka
- ) Bikash Rinpatra 2071 Kha
- ) Bikash Rinpatra 2073 Ka
- ) Bikash Rinpatra 2069

*Source: www,nepalstock.com*

#### **i) Treasury Bills:**

Treasury bills (or T-Bills) mature in one year or less. Like zero-coupon bond, they do not pay interest prior to maturity; instead they are sold at a discount of the par value to create a positive yield to maturity. Treasury bills are the short term fund collecting instrument of the government. T-Bills are commonly issued with maturity dates of 28 days (or 4 weeks, about a

month), 91 days (or 13 weeks, about 3 months), 182 days (or 26 weeks, about 6 months), and 364 days (or 52 weeks, about 1 year). Therefore treasury bills are the short term fund raising instrument of the government. Treasury bills are sold by single-price-auction held weekly.

The Government of Nepal initiated the process of selling treasury bills to different commercial banks, financial institutions and individuals since 2018 B.S. After that it initiated the auction process in 2045 B.S. Till the third quarter of 2011/12, the total amount of Treasury bills outstanding is 126840.70 million Rupees  
(Ownership\_Structure\_of\_Government\_Securities--2068-02(Jestha) – *See Appendix 1*)

## **ii) Development bonds:**

This type of bonds is normally issued to meet the budget deficit to perform development works. It is a long term government bond and has a maturity period of 5 years. It has fixed and minimal interest rate and is paid normally in semiannual basis. The interest earned on this type of bond is taxable. Government of Nepal initiated the process of selling development bonds since 2020 B.S. Till the third quarter of 2011/12, the total value of the development bonds outstanding is 53,519.40 million Rupees  
(Ownership\_Structure\_of\_Government\_Securities--2068-02(Jestha)).

## **iii) National saving bond:**

It is also a long term bond having a maturity period of normally 5 years. It has a fixed interest rate and the interest on this bond is paid on a semiannual basis. The interest on these bonds is higher than the market interest rate and is tax free income. The main holders of this type of bond are the general public as this bond is focused on the general public. Also other financial institutions can also purchase this bond. The government initiated the process of issuing National Saving Bonds since 2040 B.S. Till the third quarter of 2011/12, the total amount of National saving Bonds outstanding is 12180 million Rupees  
(Ownership\_Structure\_of\_Government\_Securities--2068-02(Jestha)).

## **iv) Special bond:**

As the name of this bond suggests, this type of bonds are issued only on special occasions. Normally this is a mode of payment of the government to certain parties which

have liabilities against it. Instead of paying cash, the government issues these special bonds which the parties in turn can use as collaterals to fulfill their fund needs. The government issued special bonds for the first time in 2023 B.S. Till the third quarter of 2011/12, the total amount of special bond outstanding is 157.6 million Rupees (Ownership\_Structure\_of\_Government\_Securities--2068-02(Jestha)).

#### **v) Citizens Savings Bond**

Citizen Saving Bond is also a long term debt instrument of the government normally having a maturity period of 5 years. It has the same characteristics as other government bonds except that it cannot be used as collateral. It also has a fixed interest rate and the interest is normally payable semiannually. It can be purchased only by the Nepalese citizens. The interest earned on this type of bond is taxable. Nepal government initiated the process of offering citizens saving bond since 2059 B.S. Till the third quarter of 2011/12, the total amount of citizens saving bond outstanding is 4,630.30 million Rupees (Ownership\_Structure\_of\_Government\_Securities--2068-02(Jestha)).

#### **b) Corporate Debt Securities Market**

The market that deals with the debt securities issued by any corporation other than the government is called corporate debt securities market. As discussed above, the corporate debt securities market is in a very initial stage in Nepal. Hence the history of corporate debt securities in Nepal is not so old. In the year 1986/87 Bottlers Nepal issued debentures worth Rs. 5 million and was redeemed at maturity. Similarly, Shri Ram Sugar Mills issued debentures worth Rs. 93 million in the fiscal year 1997/98. It was convertible in nature and paid an annual coupon interest of 14%. However due to inadequate response it failed to reach its target and had to be terminated by refunding before maturity.

On the other hand the banking sector has had a good response on their issue of debt securities. For example, The Himalayan Bank Ltd. has issued “Himalayan Bond 2066” at a coupon rate of 8.5% semi-annually. Similarly Nepal Investment Bank has also issued debentures “Nepal Investment bank Ltd. Bond 2067” with a coupon rate of 7.5% paid semi-annually. Both the bonds have a maturity period of 7 years and have a par value of Rs.1000.

In the secondary market, at present, there are 13 debentures belonging to 10 companies. Of the 10 companies, nine are commercial banks and the other is Nepal Electricity Authority. Corporate debentures amount to Rs 4.97 billion. In addition to corporate debentures, there are government bonds worth Rs 22.4 billion in the secondary market. Bonds issued by corporate and the government is primarily absorbed by banks and financial institutions to maintain their Statutory Liquidity Ratio, and they prefer not to sell the bonds as the profit obtained from trading these bonds is also much.

It is not only ignorance among general investors but also the higher return of shares in the earlier phase and higher deposit rates in the later phase which has overshadowed bonds trading. Likewise, it has also been neglected due to the absence of specialised market intermediaries who deal with fixed income brokerage.

The corporate debt securities issued by Nepalese Organization listed on NEPSE (outstanding) are mentioned below:

- J Nepal Investment Bank Limited Bond 2067
- J Everest Bank Limited Rinpatra 2061
- J Bank of Kathmandu Rinpatra 2069
- J Nepal Investment Bank Limited Bond 2070
- J Nepal Industrial and Commercial Bank Limited Bond 2070
- J Nepal SBI Bank Rinpatra 2070
- J Nepal Investment Bank Bond 2071
- J Nepal Bidhut Pradhikaran Rinpatra 2069
- J Himalayan Bank Limited Rinpatra 2072
- J Nabil Bank Limited Bond 2075
- J Laxmi Bank Limited Debenture 2072
- J Nepal Investment Bank Limited Bond 2072
- J Kumari Bank Limited BOND 2070

*Source: [www.nepalstock.com](http://www.nepalstock.com)*

In the due course of evolving with the debt securities market, the government has made some important legislative provisions which are directly or indirectly involved in regulating the debt securities market in Nepal. Some of these legislations are listed below:

- Securities exchange act, 1983
- Securities exchange regulations, 1993
- Security allotment guidelines, 1994
- Issue management guidelines, 1994
- Membership of stock exchange and bye laws, 1998
- Securities regulation and issue approval guidelines, 2000 etc.

### **1.3 Statement of problems:**

Debt securities are assumed least risky securities. Interest income is fixed and regular in these securities and a very few chances of losing the principal even in case of the liquidation of the firm. On the other hand it is a very effective tool in increasing the value of the firm. Government and other local securities also receive the required fund to carry out and meet the deficit budget for development purposes. Even having so many opportunities not much interest has been given to this sector. Therefore, this study is mainly concerned in analyzing the present status of the debt securities market in Nepal and the problems faced by this market. Nepalese economy is in an underdeveloped stage. There is a lack of appropriate investment opportunities, due to which an investor cannot find a proper place to invest his funds. On the other hand debt securities market is a potential investment market, but it has not received the kind of interest that it deserves. Likewise, the most of the government debt securities are held by institutional investors rather than individual investors.

Investors who invest in debt securities and hold deposits in commercial banks are the same group of individuals as both of them get a fixed interest. While studying the trend of average interest rate of commercial banks we can see that it has been decreasing gradually. Although debt securities pay much higher interest rate than the bank deposits, these investors are still not seemed to be concerned with the debt securities.

Thus the major problem with the debt securities market is that there is not much of exchange of information between the prospective investors and the issuing party. On the other hand there are a very few instances of issuance of debt securities in the Nepalese securities market except for the Government debt securities.

The debenture or bond units can be traded at the secondary market. However, NEPSE has not seen any transaction of any single bond unit since it began listing bonds.

Therefore we can conclude that the development of the debt securities market in Nepal is not influenced by a single factor but by a number of different factors directly or indirectly.

#### **1.4 Objectives of the study:**

As discussed above the Nepalese debt securities market is in a very initial stage. The present study is focused on the problems and trend of the prevailing debt securities market in Nepal with reference to the government bonds and corporate bonds. The main objective of this study can be summarized in the following points.

- To study the current status of the debt securities market in Nepal
- To examine the major investors in the government and corporate bonds (Ownership Pattern)
- To identify the major problems faced by the prevailing debt securities market in Nepal
- To analyze the possibilities of systematic growth of the debt market in Nepal

#### **1.5 Significance of the study:**

This study is concerned with the prevailing situation of the Nepalese debt securities market. Debt securities market is a major factor in any security market. However, in context of Nepalese security market, debt security market has not been able to make its mark. Thus this study is an attempt to analyze the problems faced by the debt securities market in Nepal and to work out a suggestion for its better growth.

All industries require fund to enhance the value of their firm. Debt securities are very efficient tool for raising long term funds for any industry/ government institution. Hence this study has its own significance as it deals with the possible ways to improve the debt securities market in Nepal. Therefore this study will be conducted with a view to provide a helpful outlook on the debt securities market with regards to different sectors of the economy such as the investors, government, students, brokers, prospective market makers, etc.

#### **1.6 Research questions:**

As this research is being conducted to analyze the certain problems faced by the Nepalese debt securities market, the following questions were prepared to fulfill the objective of this research.

- What is the contribution of Debt securities market in the structure of Nepalese securities market more likely termed as capital market?
- What is the contribution of government and the corporate sector in the debt securities market in Nepal?
- Who are the key investors in the Nepalese debt securities market and the features of Nepalese corporate/government debt securities?
- What is the major problem of the existing debt securities market in Nepal?
- What can be done for the systematic growth of the Nepalese debt securities market?

### **1.7 Limitation of the study:**

While performing any research, there are various constraints that have to be crossed. Similarly, this research is not an exception. There are various limitations to this study as well. Some of these limitations are listed below.

- ) The present study is purely an attempt to analyse the debt securities market only. Hence it does not cover other type of debts such as bank loans, receivables, overdraft, etc.
- ) In Nepal, data collection is a major problem. The concerned institutions are not so cooperative and at times adequate data are not available. There is no systematic database to provide all the required data for the above study. Hence collection of data is another limitation associated with this study.
- ) The data for this study is of both secondary and primary nature. The secondary data might be with reporting error on the other hand primary data might not be as accurate due to the various types of respondents involved. And as many respondents are reluctant to divulge any information however basic they might be.
- ) The period of the study is limited to year 1993/94 to 2011/2012.
- ) Other limitations associated with this research are time constraint, financial constraint and researcher's experience.

### **1.8 Organization of the study:**

The present study is organized in such a way that the stated objectives can easily be fulfilled. The structure of the study will try to analyze the study in a systematic way. The

study report has presented the systematic presentation and finding of the study. The study report is designed in five chapters which are as follows

Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Research Methodology

Chapter 4: Data Presentation and Analysis

Chapter 5: Summary, conclusion and Recommendation

### **Chapter 1- Introduction**

The first chapter deals with the introduction of the study as a whole. It provides a preview about how the study has been conducted and provides a background on the components of this study. It provides a brief introduction of the present debt securities market in Nepal, general economic review, statement of problems, objective and significance of the study. This chapter mainly focuses on the growth, essence, present scenario and the future potential of Nepalese debt securities thereby, giving a picture of the problems faced by the debt securities market in Nepal.

### **Chapter 2- Review of literature**

This is the second chapter which deals with the analysis of related literature. This chapter has been further divided into two sub chapters namely conceptual frame work of the study and the review of related studies to this analysis.

### **Chapter 3- Research Methodology**

The third chapter deals with the different methods that have been used in this study to analyze the available data concerning the debt securities in Nepal. Basically this chapter has been designed to identify the proper data analysis methods to analyze the available concerned data to meet the end conclusion of the study.

### **Chapter 4- Data Presentation and Analysis**

This Chapter deals with the processing, analyzing and interpretation of the data, presentation and analysis of relevant through defined course of research methodology. Hence, this chapter is the most important one as it provides with the actual conclusion of the whole study with the analysis of questionnaire and presentation of the data in graphs and table.

### **Chapter 5- Summary, Conclusion, and Recommendation**

This chapter deals with the presentation of the final conclusion of the study. This chapter also provides with the conclusion and recommendations for proper management of debt securities market.

## CHAPTER -2

### REVIEW OF LITERATURE

A **literature review** is a body of text that determines the aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Literature reviews are secondary sources, and as such, do not report any new or original experimental work. Most often associated with academic-oriented literature, such as a thesis, a literature review usually precedes a research proposal and results section. Its main goals are to situate the current study within the body of literature and to provide context for the particular reader.

In this chapter a brief analysis of the past studies and progress on the similar field has been considered. All those studies related to this study, “*An analysis of Debt Securities in Nepal with Reference to Nepalese Securities Market*”, are categorized into two parts namely – "conceptual framework" and "review of related studies". Conceptual framework covers the area of the research work and theoretical concepts which are developed by various scholars and writers and the second one includes review of relevant Journals and review of some previous research work related to the topic that has been reviewed. Some of the most relevant literatures have been reviewed in this thesis as presented below:

#### **2.1 Conceptual Framework:**

##### **2.1.1 Debt Securities Market:**

A market is a medium where buyers and sellers are brought together to aid in trading of goods and services. Among the different types of market, financial market is one of the important market, where trading of financial assets are held.

It helps to divide financial market into two general types – the money market and the capital market. The money markets are the markets for debt securities, which pay off in the short-term, where as capital markets are the markets for long-term debt and equity shares. Furthermore, financial markets can be divided into primary and secondary markets. Primary market is for initially issued securities more likely called as Initial Public Offering.

Companies which want to raise required fund from the capital market issue the securities in primary market. This market facilitates the flow of the fund from surplus units to deficit units. Similarly, secondary markets are for trading debt securities after they are originally sold (Stephen A Ross: et al. "Corporate Finance". Sydney, Australia: IRWIN. (1993)Pg 21-23.). The further buying and selling of the securities takes place in the secondary market which does not increase the capital of the issuer companies. Investors, who want to have capital gain thorough buying at low and selling at high price, are involved in this market. In other words, secondary market does not provide with fresh capital to the issuing company however it does provide liquidity to the investors. The market can be viewed as a "used" security market. Again, the financial market also can be divided as securities market and non securities market. Securities market implies mobilization of funds through the issuance of the securities: shares, bonds and debenture by corporate sectors; and bills, bonds and debentures by government. A security market can be defined as a mechanism for bringing together buyers and sellers of financial assets traded in them were issued to same previous point in time. One of their main function is "Price discovery" that is to cause prices to reflect currently available information (Sharpe, William F: Alexander, Gordon J.: et al "Investments", Fifth edition, New Delhi, India: Prentice Hall of India Pvt. Ltd. 2001, Pg 128). Non securities market refers to the mobilization of financial resources by the financial institutions in the form of deposit and loans.

Debts securities market is an important securities market where trading of debt securities are held. It may be short-term, intermediate term or long term. Debt security market provides a variety of securities for investment propose, which in turn is issued by any organization and government. So, debt securities market in the country can be divided into two types; government debt securities market and corporate debt securities market.

### **Government Debt Securities Market:**

Variety of Purpose government of any country has to collect the financial sources by issuing/ selling the debts securities to impact in the national economy by mobilization of capital (Bhole, L.M. “Financial Markets and Instruments” New Delhi: Tata Inc. (1982) Pg.23.) . Government securities are issued with various maturities: Short-term, intermediate term and long term and also issues saving bonds to individual investors. It should come as no surprise that the government relies heavily on debt financing. Revenues seldom cover expenses and new securities must be issued to obtain deficit funds. Moreover, new debt must be issued in order to get necessary funds to pay off old debts that come due (Sharpe, WF : “Fundamentals of Investments”. New Delhi: Prentice Hall of India Pvt. Ltd. (1987) Pg.157.).

### **Corporate Debt Securities Market:**

In meeting its need for long term finance, the firm has a choice between debt and equity source. One of the most important debt financial securities is bond. According to T.T Hampton, a corporate bond is a security resending long – term promise to pay a certain sum of money at a certain time over the course of the loan with the fixed rate of interest payable to the holder of the bond (Hampton,T.T, “Financial Decision Making”, New Delhi: Prentice Hall of India Pvt. Ltd.(1973).

Corporate bonds come in several different forms. The basic classification includes collateralized (secured) and uncollateralized (unsecured), senior and junior, callable and convertible bonds (Thygerson,K.J. “Financial Markets & Institutions” Harper Collins College Publisher, (1993), Pg.63.). Business firms issue many types of bonds. However, smaller firms deals directly with lenders such as Banks, Insurance Companies. Firms can obtain long-term debt financing privately or through public offering. Private debt includes several types of debt that consists of direct loans from banks and institutions as well while public offering debt includes issuance of bonds and debentures.

A **bond** is an instrument of indebtedness of the bond issuer to the holders. It is a debt security, under which the issuer owes the holders a debt and, depending on the terms of the bond, is obliged to pay them interest (the coupon) and/or to repay the principal at a

later date, termed the maturity. Interest is usually payable at fixed intervals (semiannual, annual, and sometimes monthly). Thus a bond is a form of loan or IOU, the *holder* of the bond is the lender (creditor), the *issuer* of the bond is the borrower (debtor), and the *coupon* is the interest. Bonds provide the borrower with external funds to finance long-term investments. The bond holder cannot exercise control over the company and do not have a voting rights in company. In liquidation, claim of debt holders is before that of preferred and common stock holders. Corporate debt securities market has to be developed according to the same way with the other components of capital market within country.

### **2.1.2 Interest Rate:**

Interest is compensation to the lender, for a) risk of principal loss, called credit risk; and b) forgoing other investment that could have been made with the loaned asset. These forgone investments are known as the opportunity cost. Instead of the lender using the assets directly, they are advanced to the borrower. The borrower then enjoys the benefit of using the assets ahead of the effort required to pay for them, while the lender enjoys the benefit of the fee paid by the borrower for the privilege. In economics, interest is considered the price of credit. Interest rate features are stated in terms of the par values of related obligation. The contact value is directly related to interest rates. The bond market is driven by interest rates. In fact, the behavior of interest rate is the single most important force in the bond market. These rates determine not only the amount of current income that the investor will make, but also the amount of capital gain (or loss) the bond holders will incur. It is not surprising, therefore, that interest rates also so closely followed by market participants, and the bond market performance is general portrayed in terms of interest rates. Different theories of interest are explained differently. Expectation theory deals with long-term interest rate are a geometric average of short term interest rates while liquid preference theory explained that, on average, long term interest rates are higher than short-term interest rates because investors demand a liquid premium for lending long-term funds. Similarly, Market Segmentation theory says, the interest that is determined by supply and demand conditions in each market. In a free market economy, interest rates will adjust until the total amount of capital demanded by producers equal the amount that the owners of wealth are willing to supply.

### **2.1.3 Investment Bankers / Underwriters of securities:**

The agent responsible for finding buyer for brand new securities is called the Investment Banker or Underwriter. An investment banker is a firm that serves as a middle person between financial markets and capital seekers. The investment banker specializes on underwriting and selling new securities and advising corporate clients. First, the member of the issuing firm and the investment banker hold pre-underwriting contract at which they discuss the amount of capital to be raised, the type of security to be issued and the term of agreement. When the investigations are completed underwriting agreements are drawn up by the investment bankers. Investment bankers' charges fees commonly referred to as flotation costs for designing underwriting and selling securities.

A security issue may be completely underwritten by an investment banker and the other members of the syndicate. If it is, the issuing corporations receive the public offering prices less a stated percentage spread. The underwriters in turn sell the securities at the public offering price (or less) and may buy some of the securities themselves. Underwriters who provide this sort of firm commitment bear all risk because public may not be willing or buy the entire issue.

### **2.1.4 Duration of the Bond:**

According to Macaulay, duration is directly related to the time and is inversely related to coupon and yield to maturity. Duration is defined as the weighted average number of years that cash flow occurs. Cash flow includes both coupon and principal payments. The weights are the present value of each cash flow as a percentage of the total present value of all cash flows.

According to Sharpe, duration is a measure of average time prior to the receipt of the payments obtained by calculating bond duration. This is simply weighted average of the lengths of time prior to the payments using the relative present values of the payments as weights. According to Cheney and Moses, duration is a function of term, coupon, maturity value and yield to maturity. Bonds with low coupons and 'long' terms will have durations greater than bonds with higher coupons and 'short' terms. Also, as yield to maturity increases; duration will decrease.

### 2.1.5 Valuation of Bond:

According to Surendra Pradhan, in his book “Basic of Financial Management”, the value of bond is sum of present value of the periodical interest payments and the par value that is due at the end of bond life. The bond value ( $V_b$ ) is a function of several factors presented below:

$$V_b = f(F, P_m, N, I, K_b)$$

Where,

F= Face value or par value

N= Maturity period

I= Coupon interest rate

$P_m$ = Market price of bond

$K_b$ = Market interest rate

According to Pradhan, there are three types of bonds:

**(a) Ordinary bond (b) Callable bond (c) Perpetual bond** . *an ordinary bond* is one whose life is generally between 5 to 20 years. The valuation formula for such bond can be expressed as follows :

$$V_b = I_t \left[ \frac{1}{1+k} \right] + F \left[ \frac{1}{1+k} \right]$$

Where,

$V_b$  = Present value of bond

$I_t$  = Interest payment during ‘t’ period

$K$  = Market interest rate

F = Maturity value of face value

t = Time periods

n = No. of time periods

A callable bond is not much different from ordinary bond except the issuer keeps the right to redeem it at a specified date or any time before the maturity, its valuation model presented as:

$$V_b = \sum_{t=1}^m \frac{I_t}{(1+K)^t} + \frac{P_c}{(1+K)^m}$$

Where,

$m$  = No. of periods to call period

$P_c$  = Call price

A perpetual bond is the one that is never redeemed by the issuer, but the issuer pays for an indefinite period. The issuer is never required to pay the par value of the bond holders. For an infinite series, the value of bond may be expressed as follows:

$$V_b = \frac{I}{K}$$

Where,

$I$  = Interest payment each year

$K$  = The appropriate interest rate bond

## Yield to maturity(YTM):

According to Surendra Pradhan, the yield to maturity of a bond represents the annual rate of return that will occur if certain conditions are satisfied. In computing the yield to maturity, several important assumptions are made:

- i. The bond will be held to maturity
- ii. All cash flows will occur as indicated in the indenture(i.e the issuer will not default on the contractual obligation)
- iii. The bond will not be called or redeemed by the issuer before the specified date.
- iv. Coupon receipts will be reinvested at a rate of return equal to the yield to maturity.

The YTM can be calculated by using the following equation:

) *By approximation formula method:*

$$\text{YTM} = \frac{\text{Interest} + \frac{\text{Facevalue} - \text{Purchase Price}}{\text{Years to maturity}}}{\frac{\text{Face Value} + 2 \text{ X Purchase Price}}{3}}$$

) *By trial and error method:*

$$\text{The market price of debt (P}_0\text{)} = \sum_{t=1}^n \frac{\text{Interest}}{(1 + \text{YTM})^t} + \frac{\text{Maturity value}}{(1 + \text{YTM})^n}$$

### 2.1.6 Key characteristics of Debt Securities:

Debt securities do not have the same contractual features. Although all bonds have some common features which are:

- ) **Par value:** The par value is stated face value of the bond generally it is assumed that the par value is Rs. 1000. The par value generally represents the amount of the firms borrowed sum and promises to repay on the maturity date.
- ) **Coupon interest rate:** Coupon is specified number of dollars interest paid each period, generally each six months. This payment which is fixed at the time the bond is

issued, remains in force during the life of the bond. Typically at the time a bond is issued, its coupon payment is set at a level that will enable the bond to be issued at or near its par value. In case of zero coupon bond, a bond that pays no annual interest but it is sold at discount below par, thus providing compensation to investors in the form of capital appreciation.

- ) **Maturity date:** Bonds generally have a specified maturity date on which the par value must be repaid. Most of the bonds have original maturities (the maturity at the time the bond is issued) ranging from 10 to 40 years, but any maturity is legally permissible.
- ) **Call provision:** Most corporate bond contains a call provision, which gives the issuing corporation the right to call the bonds for redemption. The call provision generally states that the company must pay the bond holders an amount greater than the par value if they are called. The additional sum is termed as a call premium.
- ) **Sinking Funds:** It is a bond contract that requires the issuer to retire a portion of the bond issue each year. A sinking fund is money taken from a corporation earning that is used to redeem bonds periodically, before maturity a specified indenture (<http://www.investingbonds.com>) company , it can use the require number of bonds on the open market.
- ) **Trustee:** The trustee's responsibilities are to authenticate the bond issues legality at the time of issuance, to watch over the financial condition and behavior of the borrower to make sure all contractual obligations are carried out, and to take appropriate actions if the borrowers do not meet any of these obligations.
- ) **Indenture:** the legal agreement between the corporation issuing the bonds and the trustee, who represents the bond holders, defined in the indenture. The indenture contains the terms of the bond issue as well as the restriction place on the company.
- ) **Other features:** Several other features are convertible bond (a bond that is exchangeable, at the option of the holder, for common stock of the issuing firm), warrant (a long-term option to buy a stated number of common stock at a specified price) income bond (a bond that pay interest only if earned) and indexed bond (a bond that has interest payments based on an inflation index so as to protect the holder from inflation).

### 2.1.7 Types of debt instruments financing:

Long- term debt instruments consider various kinds such as:

- ) **Debentures:** The term debenture usually applies to the unsecured bonds of a corporation. Although the debenture holders are protected by the restrictions imposed in the indenture.
- ) **Sub-ordinate debentures:** Subordinate debenture represents debenture that ranks behind debt senior to these debentures with respect to claim on assets. Because of the nature of the claim, a straight subordinated debenture issues has to provide a yield higher than a regular issue in order to attract the investors.
- ) **Mortgage bond:** A mortgage bond issue is by lien on specific assets of the corporation usually fixed assets. If corporation defaults in any of the provisions of the bond indenture, the trustee, on behalf of the bondholders, has the power to foreclose and the trustees take over the property and sell it, using the proceeds to pay bonds.
- ) **Income bond:** A company is obligated to pay interest on an income bond only when it is earned. If the company does not generate earning, interest may be cumulative. However, the cumulative obligation usually is limited to no more than three years.
- ) **Equity-linked debt:** This debt instrument is given an option on common stock with debt + warrant; the debt holder has an option to purchase the common stock of the company and continues to hold the debt instruments.
- ) **Treasury bills:** It is a money market instrument especially of government. Treasury bill is the short-term, common stock used by government debt securities. Treasury bills are issued on a discount basis, with maturities of up to 52 weeks. All bills are issued in book entry form, where the buyer receives a receipt all time of purchase and the bill's face value at maturity.

According to Sharpe although treasury bills are sold at discount, their rupees yield (i.e. difference between the purchase price and the face value if bill is held to maturity) is treated as interest income for tax purpose.

## **2.2 Review of related studies:**

### **2.2.1 Review from Journals:**

Further to the above topic, in this section a review of some of the related journals, thesis and articles has been done. This review is based on the past studies done by various individuals in the related fields.

Shree Prasad Poudel in his article, “Government Securities Markets: Rational and Development in Nepal” has stated that, security markets are centre of the financial system. Private corporations and government can issue debt securities. If securities can not be traded in secondary market, those are called non marketable securities. Special bonds issued by NRB are such types of securities. Holders of debt securities receive interest payment at predetermined dates and principal payment at the maturity of the debt instruments. Periodic interest payments and capital gains are the incentives in bond investments. Debt securities market in Nepal is highly dominated by government debt securities. Corporate debt securities in Nepal are extremely limited. Government in less developed country usually borrows at lower rate than the market rate of interest on the one hand while on the other hand securities are exchanged in the face value even if their value appreciated in the market. Moreover, international loan use to substitute bonds in emerging markets. In Nepal, international loan use to substitute the domestic debt securities market of the government. Bonds price should be determined competitively in market, which is lacking for government debt so that so there may be problem of corporative and sovereign bond market development. The market paved the way for debt security market development. When market interest rate goes down price of previously issued bonds at higher coupon rate goes up and investors receive capital gains. While government interest rates sometimes provide real return on government debt, security is negative at a time when coupon rate is lower than inflation rate. Risk associated with bond investment reduces the value of bond. Issuing and exchange of corporate bonds is virtually absent in Nepal. Market makers facilitate the secondary market transaction of marketable securities. Settlement of payments is made through NRB. Securitized government debt, as percentage of GDP is low. Marketable government securities are lower than the non-marketable securities. All these factors are the impediments of developing cheep and vibrant debt securities market in Nepal. Further he has given that NRB and commercial banks are main holder of government bonds. Higher Proportion of ownership of government security needs to be transferred to the household sectors for secondary market development.

Shiva Raj Shrestha in his article “Effective Domestic Debt Management in Nepal” has explained consequences of excessive government borrowing. According to him, an excessive government borrowing could have a number of bad effects as illustrated below.

- ) If the cost of servicing the debt accounts for large part of the government revenue, the scope for public spending on desirable items such as health, education and infrastructure is correspondingly diminished.
- ) If the government preempts a large part of saving of its residents, it may reduce the amount the private sector can borrow or raise in the capital market, thus crowding-up private investment.
- ) Excessive borrowing can also increase interest rates deterring investment by making it more expensive.
- ) If government finances its deficit by borrowing too much from central bank, through money creation, it strokes up inflation.
- ) The building up of excessive debt today entails higher servicing costs on future generation who suffer higher taxation.
- ) Excessive domestic debt can affect a country’s credit rating and therefore increase the cost of its future borrowing.

Elton, Grober, Agrawal and Maan in their article “Explaining the rate spread on corporate bonds”, explains the spread between rates on corporate and government bonds. The purpose of this article is to examine and explain the differences in the rates offered on the corporate bonds and those offered on government bonds (spreads) and in particular to examine whether there is risk premium in corporate bonds spreads and if so, why it exists. They have shown that the spreads almost entirely be explained by three influences; the loss from the expected loss, state and local taxes which must be paid on corporate bond but not on government bonds and a premium required for bearing unsystematic risk.

Rabindra Bhattarai in his article “Debentures are Welcome” in 2004 has stated “Bond in Nepal is very lean. Very few companies have issued bond in the market. However, since last few years, some positive signals can be seen in the nepali capital market. Though the government bonds are not available in the stock exchange floor, corporate bonds are being made available.” According to him, due to oversubscription in the recently issued corporate bonds, it can be predicted that more of the corporate bonds will be expected to issue in the

future, particularly from the banks to meet their higher capital requirement under NRB directive.

### **2.2.2 Review of Thesis:**

Acharya, Purushottam (1968) studied on “A case study on public debt in Nepal” and reached on the conclusion that “Public debt is most popular these days because of the fact that the repayment of debt on maturity can be adjusted through the issue of fresh public debt. But the fact is that the habit of purchasing bonds issued by government should be developed among the people so that any difficulty may not be faced in getting the bonds purchased by people”. He also concluded that the investors have full trust on the government bond and subscription of government bond is higher than the bonds issued by other non government institution.

Joshi, Mahesh Ram (1982) studied on “Structure of Public Debt in Nepal”. His objective was to study the role of public debt in Nepalese fiscal system and under plans. He pictured the poor economic performance of the nation, which is due to the nation’s national topography and human behavioral limitations. He concluded that the internal borrowing is most essential to develop they money and capital marketing the nation. He recommended floating or introducing the different public borrowing scheme which may suit the pocket of rich as well as poor people. Finally he concluded that “a public debt is one of the best ways of financing development expenditure of the government which helps to control inflation in the country.”

Sharma, Brij Prasad (1988) in his thesis “Burden of Public Debt in Nepal” stated “there is similar return on the bonds and securities as well as the rates of return on the fixed deposits of commercial banks. To attract the investors towards the debt securities, initially, the tax should be exempted, which will help to increase the return and also will help to attract some more investors”. According to him, the basic function of debt securities market is to provide and allocate funds to firms with profitable investment opportunities and to offer an avenue of liquidity for individuals to invest current income or borrow against future income thereby achieve their preferred time pattern of consumption. Because investing involves uncertainty, capital markets also provide a means of transferring risk among the parties to these transactions.

Koirala, Hari Krishna (1997) studied on “Public Debt in Nepal”, he concluded that “the internal borrowing mobilization for development purpose has been fluctuating and the

banking sector has dominated the total internal borrowing. Government should initiate policies to attract maximum borrowing from non banking sector. It is the most non-inflationary source of internal borrowing since it is simply transfer of idle saving from people to government for development purpose.”

Khanal, Shree Bhadra (2000) in his “ Public Debt in Nepal: A study of its structure and burden from 1974/75 to 1997/98” summarized that internal public debt has played a significant role in financial resources for development expenditures as well as growth of money and capital markets, and it facilitates the effective implementation of monetary policy. He further concluded that the system of public debt as one of the best ways of financing development expenditures of government which helps control inflation and to mobilize inter-financial resources in the productive sector of the country’s economy. He recommended that the government should try to maximize the mobilization of internal resources for development purpose and excessive dependency upon foreign assistance for the development programme should be continued to the desired extent.

Sharma, Daya Ram (2001) studied on “Public Debt System and Practice in Nepal”. His objective was to overview the system and practice of public debt in Nepal, to understand the attitude of investors towards the government securities. The study found that the interest of investors towards government securities and their educational background is completely independent to each other. Both educated and uneducated people are equally interested on government securities. The study also concluded that both poor and rich people are interested towards government securities. This means that the government is efficacious to draw the attention of poor and rich, educated and uneducated people whom the government sells its securities, which are the means of borrowing the loan internally. The study verified the general statement that the people in urban areas are more aware to the government securities. The study also draws the conclusion that the people who have insufficient time to run the private enterprise and who are not dexterous to grab the opportunity in the market are interested on government securities. He also concluded that the person with academic background of economics, finance and management are more aware to the government securities.

Poudel, Ram Prasad (2002) in his thesis “A study on government securities practice in Nepal” summarized that the government securities is issued to meet short-term and long-term

financial requirement. The government expenditure through public debt is quite beneficial to nation if used productively. But a large public debt may create problems in the economy in future. Further, Nepal has been suffering capital shortage since the first budget speech. Most people use their idle funds on government securities rather than behaving as investors. Among them majority are service holders and very few of them are retired people. The people of rural area are less aware to government securities. Poor as well as rich, and educated as well as uneducated people are interested towards government securities. He concluded that the Nepalese investors are attracted towards government securities. Most of the investors of Nepal are risk averters and they need less risky investments. Lastly he recommended that, people pride themselves on their financial contribution to the nation, if there are suitable debt securities to them. There fore, government should develop various methods to influence the business and private individuals to buy more and more government securities.

Kafle, D.R. (2003) in his thesis “Problem and prospect of debt market growth in Nepal” has summarized, “capital market of Nepal is in infant stage and debt securities market of corporate bodies is limited in existence. The government debt securities market is growing below expectation. The heavy reliance of government in foreign debt has created huge problem in debt securities market growth in Nepal”. According to him, in Nepal, investment made in impulse rather than thorough market study or credit ratings, he found that national saving bond and development bond were more preferred by investors than other government bonds. He has also concluded that due to over supply of deposits by customers in commercial banks; they do not issue debt securities. On the other hand top-tier corporate bodies could get loan easily from banks at lower cost so they are not required to issue debt instruments for raising the funds. Low-tier firm have been facing the problem in raising the fund from bank and market as well. Tedious and lengthy process of issuing the debt securities is another problem with debt securities market growth.

Mainali, Nirmal Kumar (2003) studied “Problem and Prospect of debenture Market growth in Nepal”. The researcher has found many problems in Nepalese debenture and bond market growth. According to him, there are many problems such as insufficient legislative provision regarding Nepalese debenture market, political instability, poor price sensitivity, insufficient information disclosure, investor’s low preference on debenture etc in Nepalese debenture market growth. Not only problems, but researchers also found many prospects of debenture

market growth. Additional capital supply, tax saving, interest income, means of meetings deficit budget, growth on public debt are some plus points which signifies the prospect of debt market growth.

Pokharel, Bhim (2007) on his thesis “Issues and Prospects of corporate Bond Market Growth in Nepal” has concluded that the Nepalese debenture market is characterized by an infant and sluggish growth, future of this market is not gloomy at all. His study reveals various indicators of his market which can promise a prosperous future to this market if all of its stakeholders, especially government are willing to make serious effort regarding the promotion of the market. He has conceded that the future growth of corporate bond seems satisfactory. The allotment of debenture is made through negotiations. There is no any free competition between institutional investors in case of application and allotment of debentures. Over subscription of debenture issued by banking sectors indicates the positive attitude of investors towards corporate debenture.

Shrestha, Dinesh Kumar (2008) in his thesis “Problem and Prospects of Debt Market in Nepal gives that government should create the right policy and environment for the facilitation of critical mass of financial instruments. These are urgent for development of the money and bond market (both government and corporate bond market) and increase domestic institutional investor’s participation in the market. Also there is a need to develop full service securities firms with capacity to provide loan array of financial services to ensure investors as well as develop new market and instruments such as commercial papers, corporate bond and debentures, government bonds etc. Further due to the following reasons the capital market in Nepal has not reached its full potential. Unfavorable macroeconomics condition, political instability, low investors, confidence, weak tax system, slow process of privatization, inadequate institutional investors, base investment of saving bank deposits and government securities, lack of improved prospectus to investors, weak legal affairs for markets regulation, lack of money and bond market. These are the problems of debt market growth in Nepal.

Adhikari, Bikram (2010) on his thesis Status of Debt Securities Market in Nepal refers that Nepalese debt securities market is still at infant state. Government debt securities market is slightly at maturity state in comparison to corporate debt securities market. So that emphasis should be given in development of corporate debt securities market will grow up very soon because there is positive signals felt by researcher such as declining interest rate on

deposit of commercial banks, growing participation of banking sector in issuing debentures. As per the review, major problems are investor's increasing attraction towards common stock, lack of public awareness, limited supply of quality bonds, difficult process of issuing debenture, high preference in purchasing banking sector's debentures and low preference of other sectors debentures, political instability, unsystematic government debt securities, lack of large business organization, insufficient legal provision and few issuances of corporate debt securities in spite of encouraging public response.

Hence this research is an attempt to put forward a clear picture regarding the current status of the debt securities market in Nepal. As it includes the debt security market as a whole, it is hoped that the end result of this research will be helpful for many individuals to better understand the prevailing situation of the Nepalese debt securities market.

### **2.2.3 Research Gap:**

This research mainly deals with present scenario and future prospect of Nepalese debt securities market. The research study based on this subject has been made by other researcher up to the year 2010 where as this research has been carried out till the year 2013. Comparatively very few research efforts have been taken in context of Nepalese Debt securities market, here researcher have tried some effort to make a research work on this subject to analysis the problems, growth & future prospects of debt securities market. The research work is based on primary as well as secondary data which results are more accurate and reliable. This research has done by survey through the questionnaire based upon the present situation of debt securities market with reference to Nepalese debt securities market.

Nepal as an under-developed 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 the capital market should function well. That means its equity and debt market are well existed and functioning well. But in case of Nepal, the debt market of corporate bodies is limited in its existence. Therefore the present study is focused on the present status of Nepalese debt securities market for future development of Debt securities market.

## CHAPTER -3

### RESEARCH METHODOLOGY

**Research** means to search or study about a phenomenon. We study the social problem again and again to find out the something more about the phenomenon. The first look may not be adequate. It prone to error, we enter into the subject matter and study the problems differently and thoroughly each time. This process is called research. Research is a systematic and organized effort to investigate a specific problem that needs a solution.

**'Methodology'** refers to the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind it. Thus, research methodology is a way to systematically solve the research problem, what we are doing at present. Research methodology is the process of arriving to the solutions of the problem through planned and systematic dealing with the collection, analysis and interpretations of facts and figures. The research methodology includes the nature and sources of data, its presentation, and the analysis techniques. The study depends upon both secondary and primary source of data. This chapter aims to familiarize the relevant techniques of data collection, analysis of data using statistical tools and techniques required for the preparation of research report and include research design, population and samples of the study, sources and data and research methods. The research design is thus an integrated frame that guides the researcher in planning and executing the research works

*According to Kerlinger (1986), "Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variance".* This chapter indicates different methods, tools and techniques utilized to present the study in simplified and understandable manner.

#### **3.1 Research Design:**

Research design refers to the entire process of planning and carrying out a research study. It is the outline of carrying out a research study. It is outline of a good research employed for the investigation of the required result. The research design asks, what

approach to the problem should be taken, what method will be used, what strategies will be effective? Etc.

According to Paul, E. Green Donald S. Tull: *Research for Marketing Decisions*, “ A research is the specification of methods and procedures for acquiring the information needed. It is the overall operational pattern of framework, of the project that stipulates what information is to be collected from which sources by what procedure. If it is a good design, it questions and that it was collected by objective and economical procedures.”

In this chapter, *Research Methodology*, we deal mainly with the method, which are used during the period of research. In this regard, this chapter explains not only of the research methods but also considers the logic behind the methods, which are used in the context of my research study. So, research design, sources of data, uses of statistical tools, etc are basically explained in this chapter.

This research study attempts to analyze the present status of Nepalese Debt Securities Market. To fulfill the objectives, different measures have been used, while collecting and interpreting data, facts and figures with a view to systematic data collection and data interpretation. Simple statistical tools (not so sophisticated) have been used to finish this research work, which represent the explanatory and descriptive analysis of the relevant data.

The research methodology used in this research includes personal observation, interview with questionnaire, secondary data and annual reports. The research design is thus an integrated frame of exploratory study and descriptive study. To conduct this study, descriptive cum analytical research approach has been adopted. Descriptive approach has been utilized mainly for conceptualization of the associated problems of debt securities market in Nepal. Analytical approach has been followed mainly to examine ownership pattern and trend of the government debt securities. Various statistical tools such as time series analysis, curvilinear model and chi- square test for testing hypothesis are applied to interpret and come to conclusion.

### **3.2 Population and Samples of the Study:**

This study is conducted to trace out the present scenario of Nepalese debt securities market. So, it is obviously clear that the research covers wide area. Since this study comprises of all the listed companies which are the potential issuer company of debenture, (207 listed

company in NEPSE as on fiscal year 2011/12.), all the holders of debt securities are also considered as population for sampling in my research study. Government bodies, concerned staffs and experts of debt securities, the brokerage firms and the market makers are also included in the population of this study. Similarly, various practices of corporate debt securities and government securities issuance held from 1962 A.D. are also included as a population of this study. A questionnaire survey is conducted among the population in order to attain research objective.

### **3.3 Source of Data:**

Data is the fact, information, views etc collected systematically and presented formally for the purpose of reaching in the suitable decision. So, data is necessary for conducting the research work because without data we can not prove the reliability as well as can not support the research strongly. This study is based on both primary (*questionnaire and interview*) and secondary source of data.

Please see (*Appendix No.1 for the sample of questionnaire*).

A set of questionnaire is developed in order to collect the primary data. These are allocated to the respective samples and collected after sometime. The main sources of primary data are as follows:

- ) Listed companies.
- ) Individual investors.
- ) Brokers and market makers.
- ) Other experts mainly staff of SEBON, NEPSE and NRB.

To examine the trend and the ownership pattern of Government securities, position and debt securities market in the structure of Nepalese securities market, key characteristics and key investors of the corporate debt securities, secondary data are also used. The main sources of secondary data are as follows:

1. *Nepal Rastra Bank:*
  - ) Various Quarterly Bulletins.
  - ) Rastra Rin Khabar Patra.
  - ) Various Economic Reports.
  - ) Various Budget Speeches etc.

2. *SEBON:*
  - ) Various Annual Reports.
  - ) Prospectus of SRSM.
  - ) Prospectus of NIBL.
  - ) Various Publication of NEPSE.
3. *Past researches and other aforementioned publications of the concerned bodies.*
4. *Academic and non academic books.*
5. *Prevailing laws and by laws.*

### 3.4 Research Methods:

Since data analysis is based on the explanation and statistical analysis and interpretation. Separate techniques are utilized in order to analyze the data statistically and present them systematically. Hypothesis testing, time series analysis, curvilinear model analysis, etc has been conducted in order to represent the reliability of data.

#### 3.4.1 Testing of Hypothesis:

The Chi- Square test of the hypothesis is used to examine the problems of Nepalese debt securities market. The Chi- Square test is an important test among the several tests of significance developed by statisticians. For this test, 25 listed companies, 20 brokers and market makers, 35 individual investors and 20 other experts are taken as sample.

In this study, Chi-Square value is compared in order to test whether there is significant difference between expected and observed opinion regarding various matters. The expected frequencies are calculated by applying the formula:

$$\text{Expected frequencies} = \frac{\text{Row total} \times \text{column total}}{\text{Grand total}}$$

And the calculated values of  $\chi^2$  were calculated by the following formula:

$$\chi^2 = \frac{(O-E)^2}{E}$$

Where,

O = Observed Frequency

E = Expected Frequency

### 3.4.2 Time Series Analysis:

Time series analysis is utilized in order to find out the forecasted value of T- Bills, Development Bond, Special Bond and National Saving Bond for the year 2004 to 2008, with the help of equation:

$$Y = a + bx$$

Where,

y = total forecasted value

a = minimum value

b = change rate per period

x = difference between actual time and mid value (assumed) time

### 3.4.3 Curvilinear Model:

To examine the trend of government securities, curvilinear model has been used. With the help of this model, the forecasted amount of government securities is calculated for the next five years.

The equation of curvilinear model is as below:

$$y = a + bx + cx^2 \dots\dots\dots (i)$$

$$y = Na + b x + c x^2 \dots\dots\dots (ii)$$

$$xy = a x + b x^2 + c x^3 \dots\dots\dots (iii)$$

$$x^2y = a x^2 + b x^3 + c x^4 \dots\dots\dots (iv)$$

By solving the above equations the value of a, b, c are calculated. The forecasted value can be calculated by using the following equation.

$$\hat{y} = a + bx + cx^2$$

### 3.4.4 Application of Computer Programming

For the sake of the simplicity in calculating and other statistical problems the MS Office package (MS. Excel) is used for the analysis. The results drawn from this programming are presented in data presentation chapter and appendices. MS. Excel program is used for the some calculations and graphical presentations such as bar diagrams, pie-charts and for trend analysis.

## **CHAPTER -4**

### **PRESENTATION AND ANALYSIS OF DATA**

This chapter deals with the presentation and analysis of related data according to the research methodology of this study. The main purpose of data presentation is to change it from an unprocessed form to an understandable presentation and to organize the collected data so that it can be used for interpretation. The presentation of the data and its analysis helps to draw valid conclusion. Hence, this part of the thesis mainly focuses on the presentation of data and its analysis.

This chapter deals with both secondary and primary data in order to point out the situation of the debt securities market in Nepal and the problems faced by it. To study the present availability of debt securities in the Nepalese stock market, an analysis of the debt securities of various institutions has been presented. Similarly to analyse the problems faced by the debt securities market in Nepal, a primary data collection has been performed using questionnaire method of research study.

Secondary data has been collected from various related organizations such as SEBON, Nepal Rastra Bank, and other related institutions issuing debt securities. Similarly, for the secondary data, a market survey was done using questionnaires. A standard questionnaire was distributed among various related groups such as stock brokers, individual investors, issuing agencies, and organizations. Then a hypothesis testing was performed to analyze the collected data in order to pin point the exact problems faced by the current prevailing debt securities market in Nepal.

As a whole this chapter is a combination of analysis of secondary and primary data to analyse the present debt securities market in Nepal. This chapter provides an insight in order to draw conclusion and to offer recommendations to improve the current debt securities market. Therefore this chapter is a very important, as it contains the core analysis of the whole study.

Different types of analytical tools such as hypothesis testing, statistical diagrams and analysis, etc have been performed in this chapter to make the presentation of this study more relevant.

#### **4.1 Analysis of secondary data:**

##### **4.1.1 Position of debt securities in the Nepalese securities market:**

Securities markets form the backbone of the capital market economy in both the developed and developing countries. Securities markets are built on some basic elements which can be summarized as- a number of issuers with financing needs, investors with a need to place savings or other liquid funds in securities, intermediaries that bring together the investors and issuers, and last but not the least an infrastructure that provides a conducive environment for securities and settlement of transactions. Types of securities available in Nepal are limited as compared to other developed countries and its capital market is in infant stage.

A comparative study of the trend of issue approval given by SEBON has been presented in the below table. We can see that the use of securities has been increasing by the year with issue approval being provided to new and old companies alike. Different types of securities and their trend of issuance has been shown and discussed in below headings.

##### **4.1.2 Ownership pattern of government securities and T-bills;**

Total bonds and T-bills of Nepalese government consist of Treasury bills, Development bonds, National saving bonds, special bonds and Citizens saving bonds. In this portion an analysis of the ownership pattern of these government bonds by different individuals, institutions, and corporate sectors has been done.

Table no.2 shows that in the year 2007/08, NRB's total share in the purchase of government securities is Rs.23685.7 lakh which was 28% of the total ownership. However in the year 2012 Rs. 238866.65 lakh following a up and down trend in the years in between. However the ownership pattern of government has been in decreasing trend. The next substantial contributors in the purchase of government securities are the commercial banks. Their ownership of the government securities has grown from Rs. 39469.3 lakh in 2002 to Rs. 1321202.5 lacs in 2012. Thus it is clear from the table that the participation of the commercial banks in the purchase of Government bonds is in the increasing trend due to various factors.

However the contribution of other business sectors like financial companies and other private enterprises has not been very satisfactory along with the participation of other individuals not been enthusiastic and is in decreasing trend. We can see from this trend that the NRB controls

most of the debt securities issued by the government and besides the regulatory requirement for commercial banks regarding CRR and SLR, there is not much attraction towards government securities in individuals to be briefed. There is a need for promotion of the involvement of other private sectors and individuals. The following table is more helpful in understanding the ownership pattern of debt securities in the Nepalese stock market.

**Table:1**  
**Ownership pattern of Government Securities and T- Bills**

Year										
Owner's name	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Nepal Rastra bank	23685.7 (28%)	20875.05 (23.84%)	17457.4 (19.94%)	11049.2 (12.28%)	22081.5	255495.02 (24.75%)	244,101.78 (21.38%)	291,163.60 (24.56%)	373,748.93 (22.66%)	238866.65 (11.86%)
commercial banks	39469.3 (46.63%)	43796.3 (50.85%)	48550.7 (55.45%)	58461.4 (64.99)	59609.4	598169.75 (57.95%)	683,571.25 (59.88%)	647,292.75 (54.60%)	915,273.75 (55.50%)	1,321,202.5 0 (65.58%)
Financial ins, ins co.,	7184 (8.5%)	7500.1 (8.7%)	8601.3 (9.82%)	7207.6 (8.01%)	3679.3	66446.22 (6.44%)	15792.37 (5.5%)	100012.87 (8.43)	142738.83 (8.66%)	167766.21 (8.32%)
Govt.bss.ent, priv.bss.ent	864.8 (1.02%)	824.9 (0.96%)	658.7 (.75%)	648.5 (0.7%)	6147.4	74714.75 (7.24%)	88172.75 (7.73%)	115863.75 (9.77%)	121002.50 (7.34%)	132837.75 (6.57%)
Individuals	6994.5 (8.3%)	6635.3 (7.7%)	6941.1 (7.93%)	5198.7 (5.78%)	3681.1	29255.08 (2.83%)	28144.33 (2.47%)	2 6,514.98 (2.24%)	19,510.06 (1.18%)	22,235.02 (1.10%)
others	6447 (7.62%)	6500.7 (7.55%)	5354.2 (6.11%)	7389.5 (8.21%)	3980.4	8052.43 (0.78%)	34,912.17 (3.06%)	4 ,734.66 (0.40%)	76,810.03 (4.66%)	132,036.10 (6.55%)
Total	84645.3 (100%)	86133.7 (100%)	87564.3 (100%)	89954.9 (100%)	99178.9	1032133.25 (100%)	1,141,566.90 (100%)	1,185,582.61 (100%)	1,649,084.10 (100%)	2014545.23 (100%)

*Source: Quarterly Economic Bulletin--2012\_(Mid-July)*

#### **4.1.3 Trend and amount of Government securities issued in Nepal:**

Since 1961, government of Nepal has been borrowing funds from the internal sources to fulfill the budgetary deficits by issuing various securities. During its initial years of practice it only issued T-bills to fulfill such budgetary deficits, but in the later years it has started to issue different types of debt securities such as development bonds, special bonds, national saving bonds, etc. The below table shows that there has been a substantial increment in the mobilization of government bonds and its subscription between the years 1993 to 2012. The trend in the below table shows that the mobilization of government bonds is increasing every year with a positive growth rate. Based on the available data it is observed that the total amount of government bond mobilized in the year 2012 is 209120.2 million rupees as compared to 25456 million rupees of 1993.

The total amount of Government bonds issued every year from the year 1993 till 2012 has been tabulated below for trend analysis of the mobilization of government bonds.

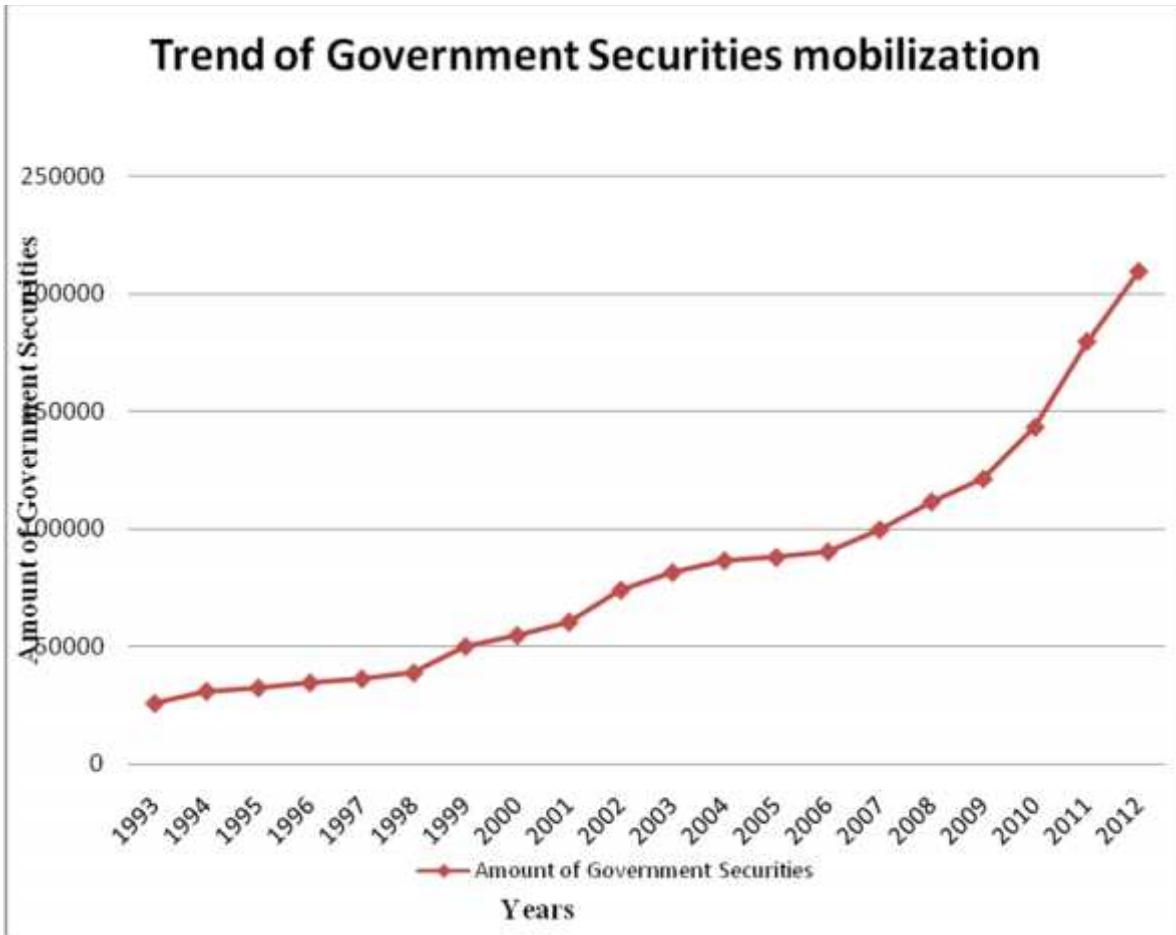
**Table:2**  
**Trend of total Government Securities from 1993-2012** (Rs. in Billion)

<b>Year</b>	<b>Total Amount of government securities</b>	<b>Growth rate (in %)</b>
1993	25456	-
1994	30631.2	17
1995	32057.9	4
1996	34241.8	6
1997	35890.8	5
1998	38406.6	7
1999	49669.7	23
2000	54357.0	9
2001	60043.8	9
2002	73621	18
2003	81148.3	9
2004	86133.7	6
2005	87564.3	2
2006	89954.9	3
2007	99303.8	9
2008	111239.1	11
2009	120873.7	8
2010	142859.7	15
2011	179328.4	20
2012	209120.2	14
<b>Total</b>		

(Growth rate is calculated by taking the current year as base year)

*Source: Quarterly\_Economic\_Bulletin--2012\_(Mid-July)*

**Figure 1: Trend line of Government securities in the past 20 years**



We can see from the above trend line that the mobilization of the government bonds is in positive growth rate. As the trend curve is upward sloping, a curvilinear model of forecasting is used to forecast the amount of future government bonds. The growth trend of government securities is tabulated below for further analysis and forecasting purposes. The available data from 1993 till 2012 has been arranged in the below table to create a curvilinear equation.

**Table:3**

**Growth trend of Government securities in curvilinear model**

Year	x=no. of years	y=Amt. of govt.securities (Rs.)	xy	x <sup>2</sup>	x <sup>3</sup>	x <sup>4</sup>	x <sup>2</sup> y
1993	1	25456	25456	1	1	1	25456
1994	2	30631.2	61262.4	4	8	16	122524.8
1995	3	32057.9	96173.7	9	27	81	288521.1
1996	4	34241.8	136967.2	16	64	256	547868.8
1997	5	35890.8	179454	25	125	625	897270
1998	6	38406.6	230439.6	36	216	1296	1382637.6
1999	7	49669.7	347687.9	49	343	2401	2433815.3
2000	8	54357	434856	64	512	4096	3478848
2001	9	60043.8	540394.2	81	729	6561	4863547.8
2002	10	73621	736210	100	1000	10000	7362100
2003	11	81148.3	892631.3	121	1331	14641	9818944.3
2004	12	86133.7	1033604.4	144	1728	20736	12403252.8
2005	13	87564.3	1138335.9	169	2197	28561	14798366.7
2006	14	89954.9	1259368.6	196	2744	38416	17631160.4
2007	15	99303.8	1489557	225	3375	50625	22343355
2008	16	111239.1	1779825.6	256	4096	65536	28477209.6
2009	17	120873.7	2054852.9	289	4913	83521	34932499.3
2010	18	142859.7	2571474.6	324	5832	104976	46286542.8
2011	19	179328.4	3407239.6	361	6859	130321	64737552.4
2012	20	209120.2	4182404	400	8000	160000	83648080
<b>Total</b>	<b>210</b>	<b>1641901.9</b>	<b>22598194.9</b>	<b>2870</b>	<b>44100</b>	<b>722666</b>	<b>356479552.7</b>

The equations of curvilinear model are as under;

$$y = a + bx + cx^2 \dots\dots\dots (i)$$

$$y = Na + b x + c x^2 \dots\dots\dots (ii)$$

$$xy = a x + b x^2 + c x^3 \dots\dots\dots (iii)$$

$$x^2y = a x^2 + b x^3 + c x^4 \dots\dots\dots (iv)$$

From the above table we have the following values:

$$x = 210$$

$$y = 1641901.9$$

$$x^2 = 2870$$

$$x^3 = 44100$$

$$x^4 = 722666$$

$$xy = 22598194.9$$

$$x^2y = 356479552.7$$

$$N = 20$$

Substituting the values in eq<sup>n</sup> (ii), (iii) and (iv), we get

$$1641901.9 = 20a + 210b + 2870c \dots\dots\dots (v)$$

$$22598194.9 = 210a + 2870b + 44100c \dots\dots\dots (vi)$$

$$356479552.7 = 2870a + 44100b + 722666c \dots\dots\dots (vii)$$

Solving the above equations we get; (see appendix 1)

Value of :

$$a = 34087.62$$

$$b = -1923.27$$

$$c = 475.27$$

Now, substituting the above values in equation 1 we get:

$$y = 34087.62 - 1923.27x + 475.27x^2$$

Now to forecast the value of government securities in the near future the above equation can be used.

Therefore, the forecasted values for the year 2013, 2014, 2015, 2016 and 2017 will be as under:

$$y_{2013} = \text{Rs.}203293$$

$$y_{2014} = \text{Rs.}221806.4$$

$$y_{2015} = \text{Rs.} 241270.2$$

$$y_{2016} = \text{Rs.} 261684.7$$

$$y_{2017} = \text{Rs.} 283049.6$$

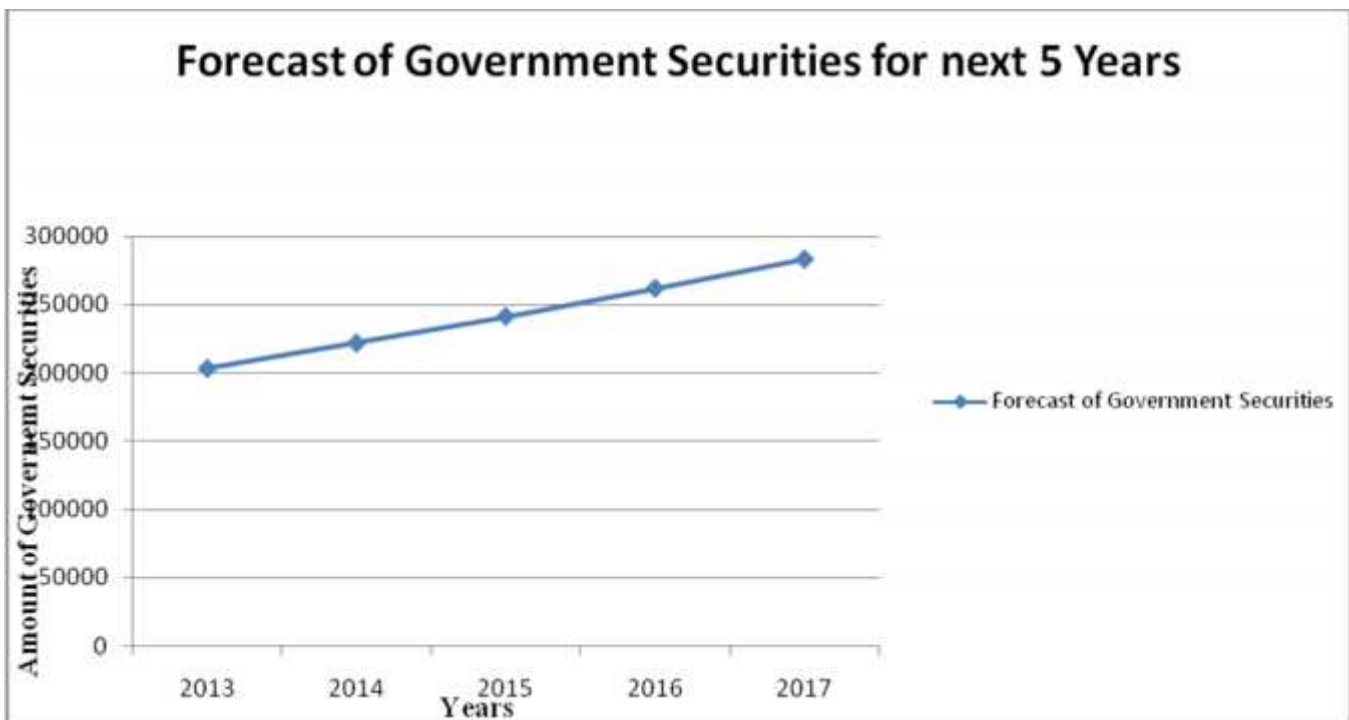
**Table-4**

### Forecasted amount of Government Securities from 2013-2017

Year	Total amount of government securities
2013	203293
2014	221806.4
2015	241270.2
2016	261684.7
2017	283049.6

The above data has been shown below in the form of a trend line.

**Figure 2: Forecast of Government securities for the next 5 years**



From the above figure we can see that the mobilization of government securities is in increasing trend and this trend is forecasted to increase positively even for the next 5 years. In the above figure this forecast is visible till the year 2017 and the trend line is upward sloping indicating the positive growth of government securities in the years to come.

#### 4.1.3.1 Trend of treasury bills

The below table shows trend of treasury bills mobilization in the past 20 years. The adjacent growth rate column in the table denotes the growth rate of T-bills mobilization as compared to previous year.

**Table:5**  
**Growth Trend of Treasury Bills**

*(Rs. In millions)*

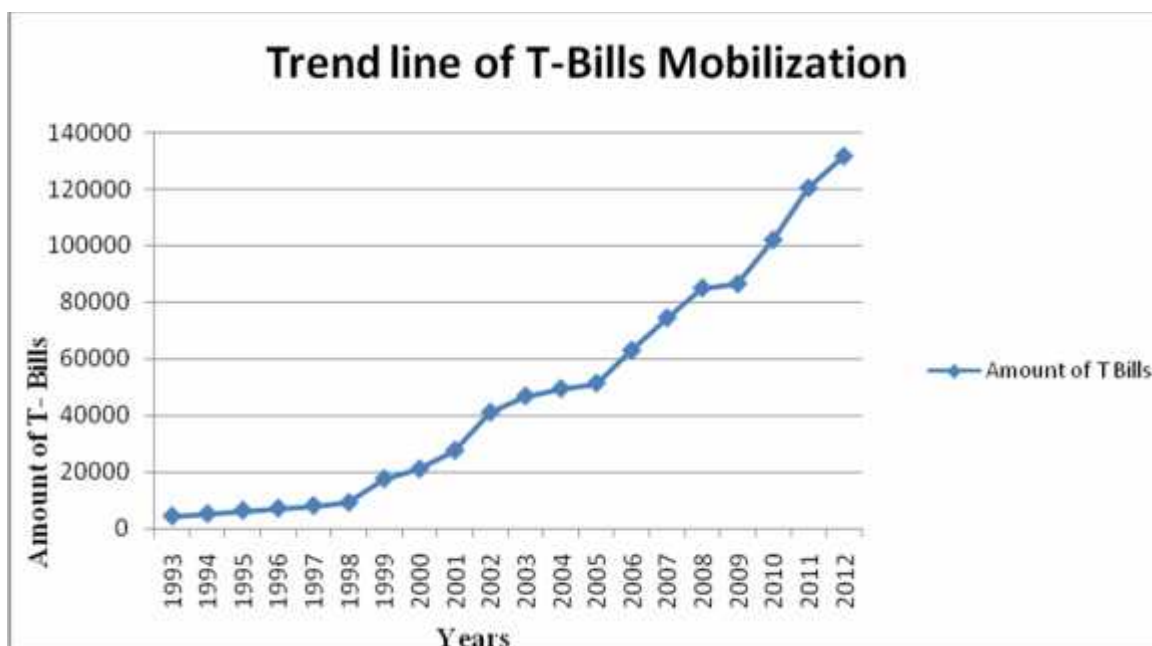
<b>Year</b>	<b>Total amount of treasury bills</b>	<b>Growth rate</b>
<b>1993</b>	4403.2	-
<b>1994</b>	5216.3	18
<b>1995</b>	6392.5	23
<b>1996</b>	7142.5	12
<b>1997</b>	8092.5	13
<b>1998</b>	9182.5	13
<b>1999</b>	17586.9	92
<b>2000</b>	21026.9	20
<b>2001</b>	27610.8	31
<b>2002</b>	41106.5	49
<b>2003</b>	46844.9	14
<b>2004</b>	49429.6	6
<b>2005</b>	51383.1	4
<b>2006</b>	62970.3	23
<b>2007</b>	74445.3	18
<b>2008</b>	85033	14
<b>2009</b>	86515	2
<b>2010</b>	102044	18
<b>2011</b>	120341	18
<b>2012</b>	131624	9

(Growth rate is calculated by taking the current year as base year)

*Source: Quarterly\_Economic\_Bulletin--2012\_(Mid-July)*

The above table is presented below in the form of a trend diagram.

**Figure 3: Trend line of T-bills mobilization**



The above table shows the amount of T-bills mobilized in the past 20 years. The rate of public borrowings through T-bills is seen to be increasing in a slower rate till 1998. A hint of sharp increase is recorded after the subsequent years till 2003. The trend line has negative slope till year 2005. However, in the following years the rapid growth is recorded in T-Bills mobilization. The major holders of treasury bills are the NRB and commercial banks. In the year 2012, 11.86% of the total treasury bills was held by NRB and 88.14% of the bills was held by commercial banks and others.

By using the curvilinear model we can forecast the amount of T-bills mobilization from 2013-2017 as below.

**Table-6**  
**Forecasted amount of T-bills from 2013-2017**

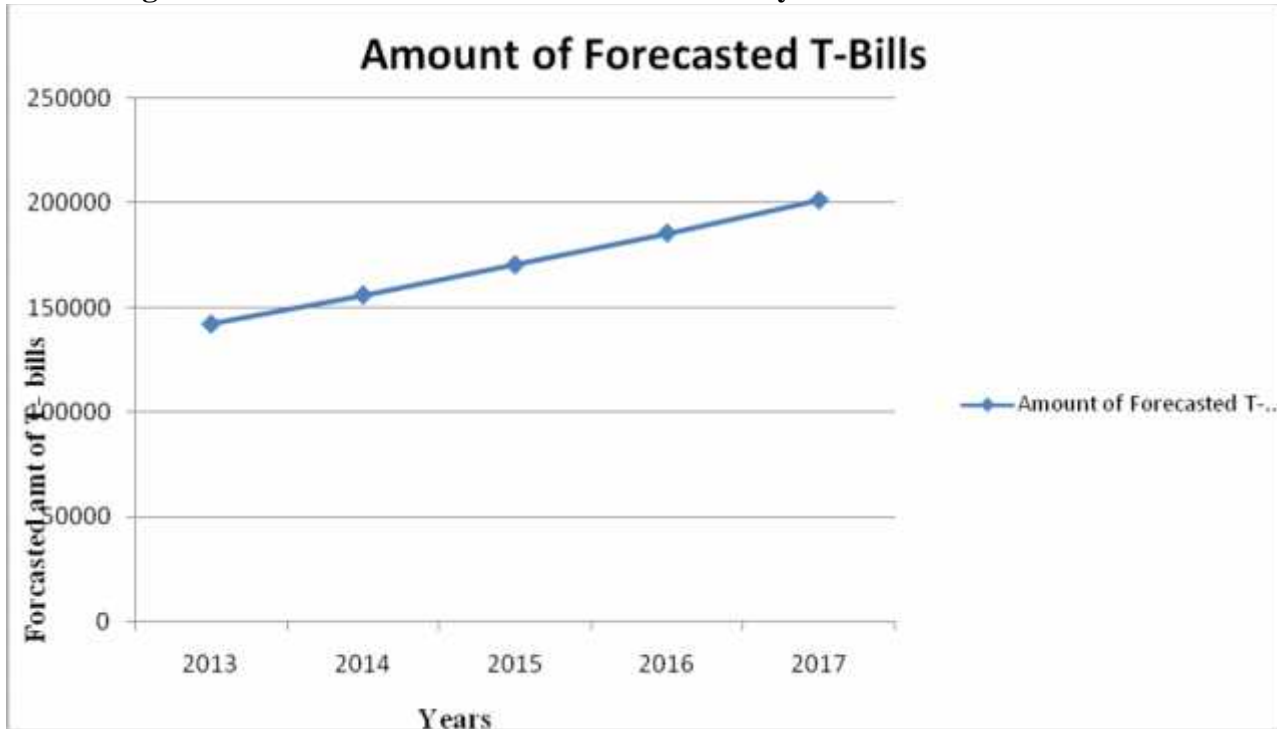
*(Rs. In millions)*

Years	Forecasted amount of T-bills
2013	142439.3
2014	156189.2
2015	170586.4

2016	185631.1
2017	201323.3

The above forecasted amount of T-bills can be presented in the form of a trend diagram as shown below.

**Figure 4: Trend line of forecasted T-bills for the year 2013-2017**



From the above figure we can see that the trend of T-bills mobilization by the government to collect fund from the general market will continue to grow for the coming five years.

#### **4.1.3.2 Trend of development bond:**

As discussed in the previous chapters, another major source of fund generation for the government has been development bonds. The below table shows the trend of development bonds mobilization by the government in the past 20 years. The same data has been later used to forecast the mobilization of development bonds for the next 5 years.

**Table:7**  
**Development bond issued by the government in the past 20 years (1993-2012)**

*Rs. In millions)*

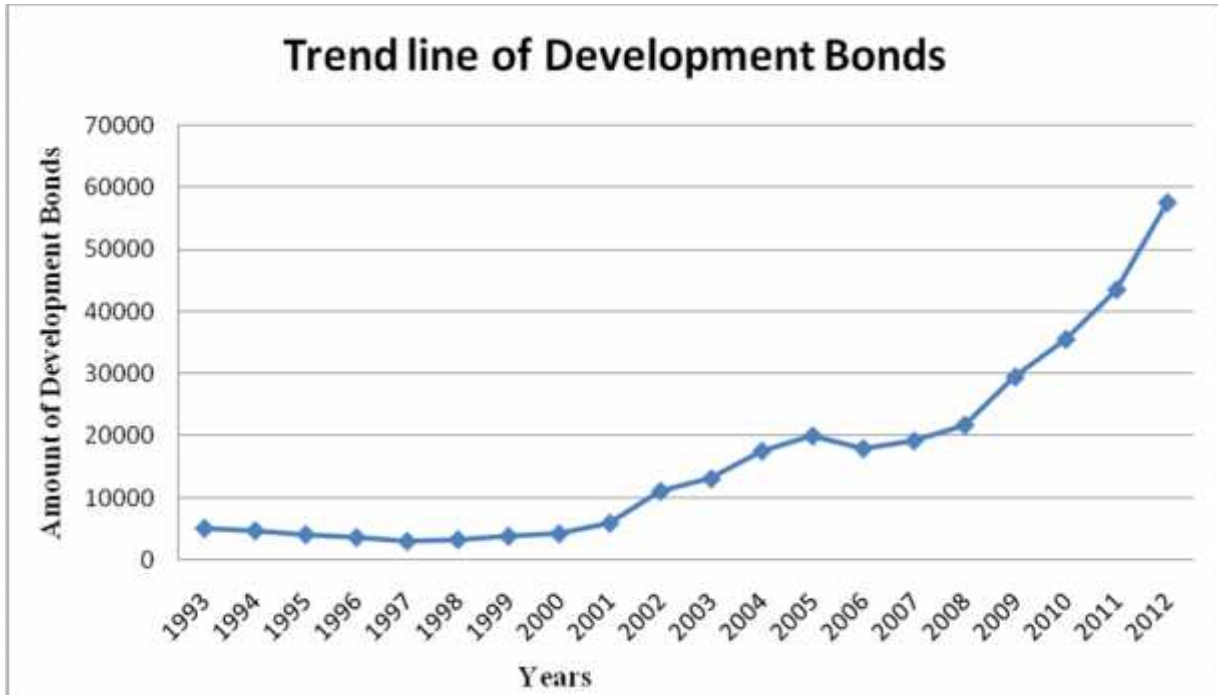
Year	Amount of Development bonds	Growth rate
1993	5132.20	-
1994	4732.20	-8
1995	4122.20	-15
1996	3672.20	-12
1997	3042.20	-21
1998	3302.20	8
1999	3872.20	15
2000	4262.20	9
2001	5962.30	29
2002	11090.70	46
2003	13090.7	15
2004	17549.2	25
2005	19999.2	12
2006	17959.2	-11
2007	19177.1	6
2008	21735.4	12
2009	29478.5	26
2010	35519.4	17
2011	43519.4	18
2012	57519.4	24

(Growth rate is calculated by taking the current year as base year)

**Source: Quarterly\_Economic\_Bulletin--2012\_(Mid-July)**

The above table can be presented in the form of a trend diagram as shown below.

**Fig 5: Trend line of development bonds**



The above table and figure replicate the Strend of development bonds issued by the government in the past 20 years. We can see that initially the trend of development bonds is highly fluctuating despite its constant level. This trend continues till the year 2001 when the development bonds reach 5962.3 million rupees. After 2001, the amount of issue increases until 2005 before the outstanding amount of development bond decrease to 17959.2 in 2006 from 19999.2 of 2005 by 11%. From then on the trend of development bonds mobilization again picks up and in the year 2012 it is observed at the maximum growth level at Rs. 57519.4 million.

Now using the curvilinear model of forecasting we can forecast the amount of development bonds that will be mobilized in the next 5 years as under.

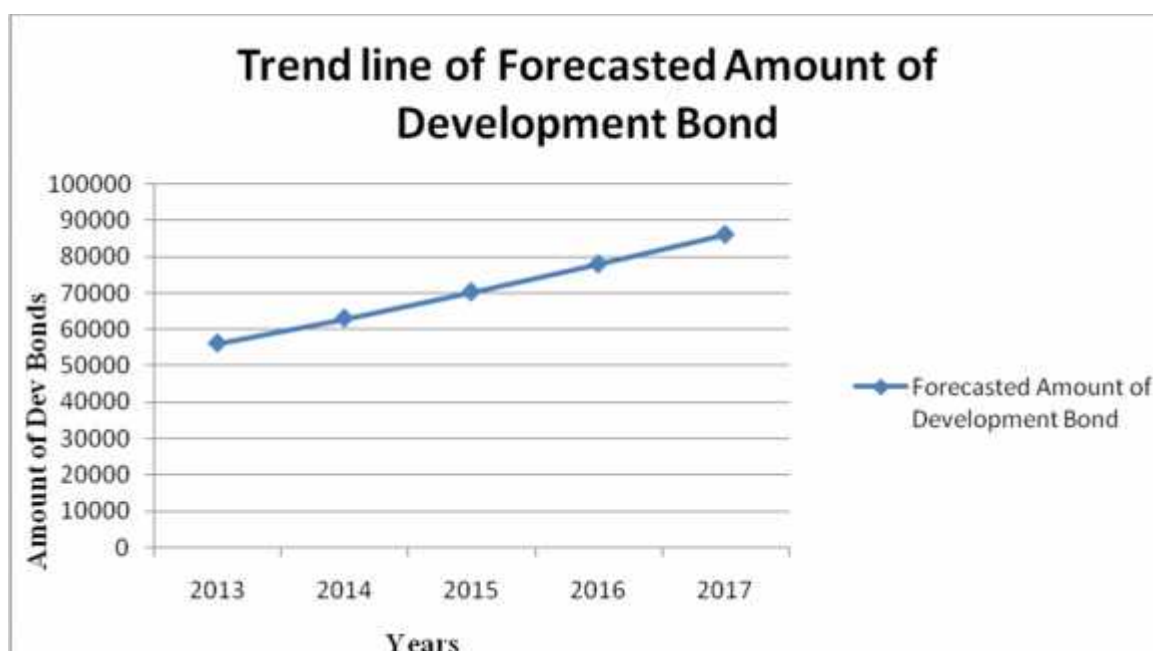
**Table:8**

**Forecasted amount of Development bonds from 2013-2017**

*(Rs. In millions)*

<b>Year</b>	<b>Forecasted amount of development bonds</b>
<b>2013</b>	56146.01
<b>2014</b>	63001.3
<b>2015</b>	70273.11
<b>2016</b>	77961.44
<b>2017</b>	86066.29

**Figure:6 Forecasted amount of development bond**



From the above figure it can be seen that the trend of mobilization of development bonds has a constant growth rate. In the recent past development bonds have been quite popular among the investors; however its popularity is in decreasing order. Hence, some correctional measures must be undertaken in order to maintain the fund generated from this bond.

**4.1.3.3 Trend analysis of National saving Bond**

National saving bonds have also been a reliable source of fund generation for the government. In this section an analysis of the mobilization of National saving bonds by the

government in the last 20 years has been conducted. The below table shows the trend of national saving bonds mobilization by the government in the last 20 years has been shown.

**Table 9:**

**National saving bonds issued by the government in the last 20 years (1993-2012)**

*(Rs. In Millions)*

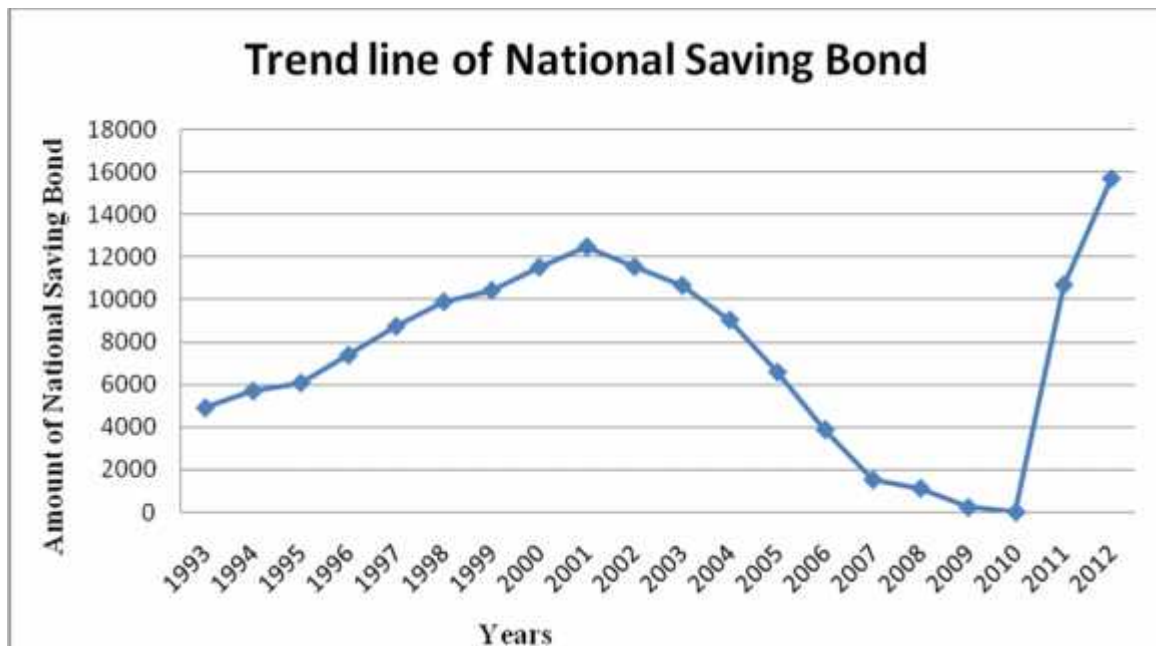
<b>Year</b>	<b>Amount of National saving bonds issued</b>	<b>Growth rate (%)</b>
1993	4901.50	-
1994	5691.50	14
1995	6076.40	6
1996	7376.50	18
1997	8736.50	16
1998	9886.40	12
1999	10426.40	5
2000	11526.50	10
2001	12476.40	8
2002	11536.50	-8
2003	10659.9	-8
2004	9029.8	-18
2005	6576.8	-37
2006	3876.8	-70
2007	1516.9	-156
2008	1116.9	-36
2009	216.9	-415
2010	0	-100
2011	10680	100
2012	15680	32

(Growth rate is calculated by taking the current year as base year)

**Source: Quarterly Economic Bulletin--2012\_(Mid-July)**

The above figure can be presented in the form of a trend diagram as shown below.

**Figure 7: Trend of National Saving Bond in the past 20 years**



The above table and the trend line show the total amount of national saving bonds mobilized by the government in the past 20 years. We can see from the above analysis that the trend of utilizing the national saving bond is on increasing trend till the year 2001. Thereafter there has been a sharp decrement in the utilization of national saving bonds by the government. The national saving bonds experienced a maximum growth of 18% in the year 1996. From the year 2001 the utilization of national saving bonds for fund generation by the government has decreased significantly. This diminishing trend is continued till year 2010, where the amount of National Saving Bond was zero. However, after the year 2010, it has experienced the highest increment in recent years reaching 15680 in 2012. This has been the greatest increment in the past 20 years besides its low amount mobilization.

The major stakeholders of the national saving bonds are the individuals like the citizens and other small business houses and financial institutions. The following table shows the forecasted amount of national saving bond mobilization for the coming 5 years.

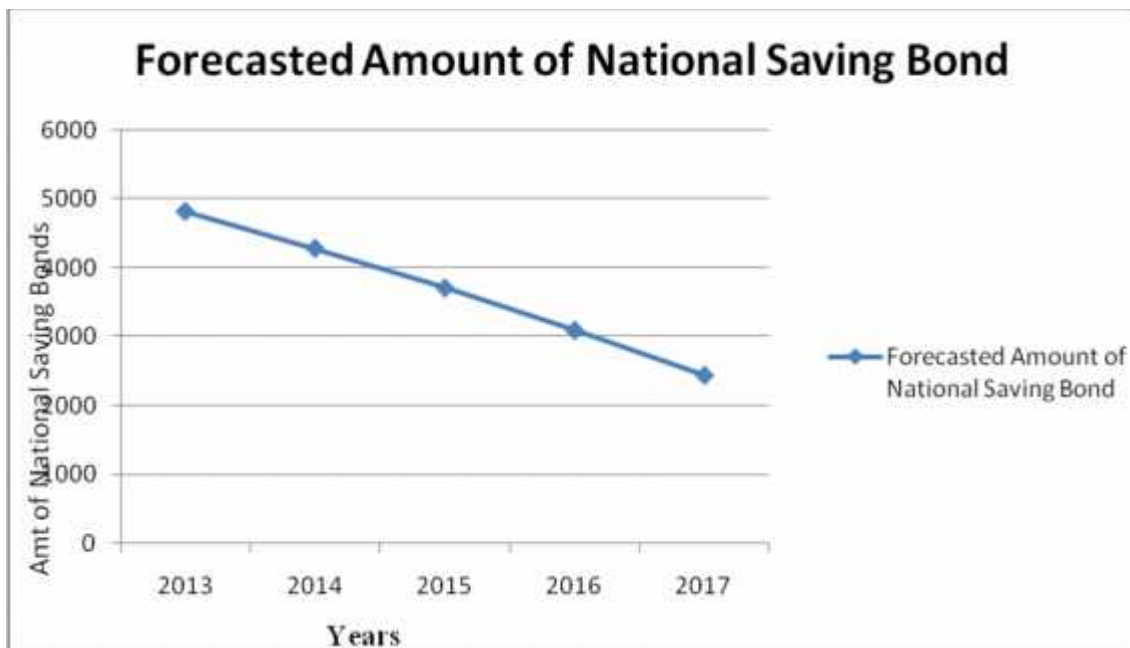
**Table 10:**  
**Forecasted amount of national Saving bond for the next 5 years**

*(Rs. In Millions)*

<b>Year</b>	<b>Forecasted amount of National Saving Bond</b>
<b>2013</b>	4810.37
<b>2014</b>	4274.4
<b>2015</b>	3698.97
<b>2016</b>	3084.08
<b>2017</b>	2429.73

The above table can be shown with the help of trend diagram as below.

**Figure 8: Forecast of National Saving Bonds mobilization for the next 5 years**



From the above trend analysis we can see that the mobilization of National saving bond is being more and more unpopular. Therefore its mobilization is in decreasing trend by the year. By the year 2017, there is a chance that the National Saving Bonds might not be mobilized at all as in 2010.

#### 4.1.3.4 Trend analysis of special bond

Special bond has also been a reliable source of funds generation for the government in the past. The below table shows the amount of Special bond issued by the government in the past 20 years to generate the required fund.

**Table 11:**  
**Special Bond issued by the government in the past 20 years**

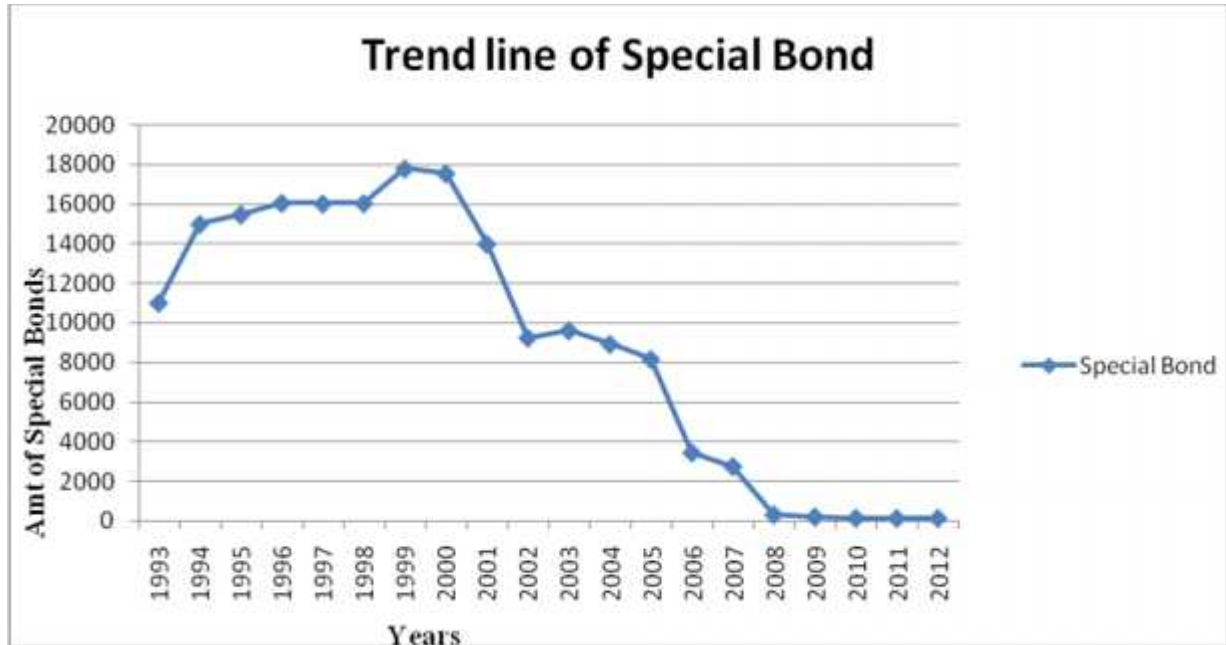
*(Rs. In millions)*

<b>Year</b>	<b>Amount of Special Bond issued</b>	<b>Growth rate (%)</b>
1993	11019.1	-
1994	14991.2	26
1995	15466.8	3
1996	16050.6	4
1997	16019.6	0
1998	16035.5	0
1999	17784.2	10
2000	17541.4	-1
2001	13994.3	-25
2002	9259.3	-51
2003	9621.7	4
2004	8946.2	-8
2005	8176.3	-9
2006	3469.8	-136
2007	2773.5	-25
2008	339.4	-717
2009	229.6	-48
2010	169.7	-35
2011	158.0	-7
2012	157.6	0

*Source: Quarterly\_Economic\_Bulletin--2012\_(Mid-July)*

The above table can be shown in the form of trend line as shown in the below figure. The below trend line represents the mobilization of special bonds by the government in the past 20 years (1993-2012).

**Figure 9: Trend line of Special Bond**



From the above table and figure we can see that the mobilization of special bond by the government has been in an increasing trend till the year 1999. We can see that in the year 1994 the growth rate was the maximum in the total 20 years. The growth rate was 26% in the year 1994. Similarly the growth rate after that has not been so significant. And from the year 1999 there has been a negative growth in the mobilization of special bond. From the year 2000 to 2008 there has been a steep drop in the mobilization of special bond and it is still continuing over next five years and the special bond is being mobilized at lower level. Special bond were issued for the fund raising by government for different special purpose, which has been not so exiting in recent years. The main holder of special bonds are NRB and commercial banks, however, the trend of holding such bonds is in decreasing trend. The main holders of special bond are the NRB and commercial banks.

Using the curvilinear model of forecasting, we can forecast the amount of special bonds that will be mobilized in the next five years as below.

**Table 12:**  
**Forecasted amount of Special bond for the next 5 years**

<b>Year</b>	<b>Forecasted amount of Special Bond</b>
<b>2013</b>	0
<b>2014</b>	0
<b>2015</b>	0
<b>2016</b>	0
<b>2017</b>	0

As we can see from the above table that the mobilization and demand for the special bond is decreasing day by day, the demand for these bonds will be negative in near future which means that they will be no such holding of special bonds. Hence, it is advisable to discontinue the issuance of these bonds in the future as forecasted.

#### **4.1.4. Key Characteristics of Corporate Debt Securities market in Nepal and their investors:**

##### **a) Key Characteristics:**

Debt securities have plenty of unique characteristics. However, debt securities in Nepal are not very popular. Most of the private institutions depend upon bank loans to fulfill their fund requirements. Very few debenture issuances have been recorded till date. In the recent time Sri Ram Sugar Mills, Himalayan Bank Limited and Nepal Investment bank, Laxmi Bank, Siddhartha Bank, NIC Bank, Nabil Bank including NEA has issued debentures. Sri Ram Sugar Mills (SRSM) issued Debentures worth 93 million in the year 1997/98 followed by Himalayan Bank limited in 2001/2002 worth 360 million Rupees. Similarly in the year 2003/2004 Nepal Investment bank (NIBL) issued debentures worth 300 million Rupees and subsequent issuance of debenture/ bond were made by different banks for fulfilling the regulatory requirement of supplementary capital. Jyoti Group and Bottlers Nepal have also been known to issue debentures but the record of these issuances was not available due to lack of data.

Hence, we can note from the above that the practice of debt securities in the corporate market in Nepal is still in its infant stage. Most of the small private organizations heavily depend upon bank loans instead of debt securities. Even most of the large organizations don't issue debt securities; rather they depend on common share distribution due to the larger participation of public in the IPO which is well briefed by IPO of Janta Bank, Commerz and Trust Bank, etc in current fiscal year. Thus, it is not a hidden fact that there is a lack of awareness among the corporate sector regarding the debt securities.

In the secondary market, at present, there are 13 debentures belonging to 10 companies — nine of commercial banks and one of NEA — but none of these bonds have ever been traded. The listed corporate debentures amount to Rs 4.97 billion. In addition to corporate debentures, there are government bonds worth Rs 22.4 billion in the secondary market which also never get traded. There is lack of interest among investors regarding bonds as most investors prefer equities. Banks usually issue debentures to raise funds through debt instruments to maintain the capacity to extend loans. Nepali investors do not maintain portfolio of investment so their investment is concentrated on stocks. Hopefully, the entry of more mutual funds in the capital market will stimulate bond trading as mutual funds are not concentrated on equity instruments only. More commercial banks are opting to issue debentures this fiscal year to expand their lending capacity. Last fiscal year too debentures worth Rs 1.2 billion of three banks applied for issue approval for the very reason. Recently, Nepal SBI Bank (NSBIL) and Laxmi Bank had issued debentures. Nepal SBI Bank's 10-year debenture offered eight per cent coupon rate, while Laxmi Bank's seven-year bond also offered eight per cent coupon rate.

Some of the most important characteristics of these debenture issued by SSRM, HBL, NIBL, SBL, NSBI and some other companies are listed in the below table.

**Table:13****Key Characteristics of Nepalese corporate Debt Securities Market**

S.no.	Characteristics	SRSM	HBL	NIBL	Nepal SBI Bank Ltd.	Bank of Kathmandu	Everest Bank Limited	Nepal Industrial & Commercial Bank
1	Par Value	Rs.1000	Rs.1000	Rs.1000	Rs.1000	Rs.1000	Rs.1000	Rs.1000
2	No. of debentures	93000	360000	300000	200000	200000	300000	200000
3	Coupon rate	14%	8.5%	7.5%	6%	6%	6%	6%
4	Maturity period	4 years	7 years	7 years	7 years	7years	7 years	7 years
5	Nature of interest payment	Semi-annually	Semi-annually	Semi-annually	Semi-annually	Semi-annually	Semi-annually	Semi-annually
6	Provision of sinking fund	-	Rs. 51.429 million each year	Rs. 43 million each year	-	-	-	-
8	Nature of business	Manufacturing and processing	Banking	Banking	Banking	Banking	Banking	Banking
10	Purpose of issuance	Expansion of production	Fulfillment of supplementary	Fulfillment of supplementar	Fulfillment of supplementary	Fulfillment of supplementary	Fulfillment of supplementar	Fulfillment of supplementar

		capacity	capital	y capital	capital	capital	y capital	y capital
11	Nature of placement	Public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering
12	Convertibility i) Conversion ratio ii) Conversion price	Convertible into i) 10 equity shares ii) Rs. 100 per share	Non convertible	Non convertible	Non convertible	Non convertible	Non convertible	Non convertible

Source: Prospectus of Debentures, Various annual reports of listed banks and SEBON annual report

**Table:14****Key Characteristics of Outstanding Nepalese corporate Debt Securities Market**

S.no.	Characteristics	Bank of Kathmandu Rinpatra 2069	Everest Bank Limited Rinpatra 2061	Himalayan Bank Limited Rinpatra 2072	Kumari Bank Limited BOND 2070.	Laxmi Bank Limited Debenture 2072	Nabil Bank Limited Bond 2075	Nepal Bidhut Pradhikaran Rinpatra 2069
1	Par Value	Rs.1000	Rs.1000	Rs.1000	Rs.1000	Rs.1000	Rs.1000	Rs.1000
2	No. of debentures	200,000	300,000	500,000	400,000	350,000	300,000	1,500,000
3	Coupon rate	6%	6.5%	8%	8%	8.5%	8.5%	7.75%
4	Maturity period	7 Years	7 Years	7 Years	5 Years	7 Years	10 Years	5 Years
5	Nature of interest payment	Semi-annually	Semi-annually	Semi-annually	Semi-annually	Semi-annually	Semi-annually	Semi-annually
6	Provision of sinking fund	Provision of Bond Redemption Reserve			Rs 210 Million outstanding on Debenture redemption reserve	Rs 200000000 outstanding on Debenture redemption reserve	Provision of Debenture Redemption Reserve to be created after 6 <sup>th</sup> Year.	-

7	Nature of business	Banking	Banking	Banking	Banking	Banking	Banking	Hydropower
8	Purpose of issuance	Fulfillment of supplementary capital	To obey the legislation for capital reserve provided by Nepal Rastra Bank as well as to increase the assistance capital reserve.	Fulfillment of supplementary Capital	Fulfillment of supplementary capital	Increase the investment for Bank Services Increase the Supplementary Capital Increase the needed capital for fulfilling the objectives of the Bank	Fulfillment of supplementary capital	Investment in Hydropower Projects
9	Nature of placement	Public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering
10	Convertibility i) Conversion ratio ii) Conversion	Non Convertible	Non convertible	Non convertible	Non convertible	Non convertible	Non convertible	Non convertible

	price							
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**Table:15****Key Characteristics of Nepalese corporate Debt Securities Market**

S.no.	Characteristics	Nepal Investment Bank Limited Bond 2075	Nepal Investment Bank Limited Bond 2070	Nepal Investment Bank Bond 2071	Nepal Investment Bank Limited Bond 2072.	Nepal Industrial and Commercial Bank Limited Bond 2070	Nepal SBI Bank Rinpatra 2070
1	Par Value	Rs.1000	Rs.1000	Rs.1000	Rs.1000	Rs.1000	Rs.1000
2	No. of debentures	300,000	250,000	225,000	250,000	200,000	200,000
3	Coupon rate	12%	6%	6.25%	8%	6%	6%
4	Maturity period	7 Years	7 Years	7 Years	7 Years	7 Years	7 Years
5	Nature of interest payment	Semi-annually	Semi-annually	Semi-annually	Semi-annually	Semi-annually	Semi-annually
6	Provision of sinking fund	Rs 42857143 outstanding on Redemption reserve	Rs 181551429 outstanding on Redemption reserve	Rs 145836142 outstanding on Redemption reserve.	Rs 110119000 outstanding on Redemption reserve.	Rs 162191781 outstanding on Redemption Reserve.	Rs 188205000 outstanding on debenture redemption reserve.
7	Nature of business	Banking	Banking	Banking	Banking	Banking	Banking

8	Purpose of issuance	Fulfillment of supplementary capital	Fulfillment of supplementary capital	Fulfillment of supplementary capital	Fulfillment of supplementary capital	Fulfillment of supplementary capital	Fulfillment of supplementary capital
9	Nature of placement	Public offering and Private Placement	Private placement and public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering	Private placement and public offering
10	Convertibility i) Conversion ratio ii) Conversion price	Non convertible	Non convertible	Non convertible	Non convertible	Non convertible	Non convertible

Source: Prospectus of Debentures , Various annual reports of listed banks and SEBON annual

) **Par value:**

The par value or principal of a bond indicates the amount of money that must be repaid at maturity. All Three debentures have par value of Rs. 1000. A debenture might be issued at premium or discount but whatever be the case the par value will remain the same at the time of repayment.

) **Minimum no. of debentures to be purchased:**

We can see from the above table that the minimum number of debentures to be purchased for SSRM is 1. However for HBL and NIBL bonds, it is 25. Also, if any investor desires to purchase more than 25 debentures the number must be divisible by 5. In case of other securities, the minimum number of debenture to be purchased varies differently.

) **Coupon interest rate;**

The coupon interest rate implies the nominal interest rate that is paid annually, semi-annually or as per the predetermined period on the bond. In the above bonds the coupon rates varied from 6% to 8.5%. However, bond of SRSM had coupon rate of 14% which was a bit higher than the average securities. The interest is paid semiannually hence only  $\frac{1}{2}$  of the total coupon interest each year period.

) **Maturity period:**

All bonds have a maturity period except for consoles which have infinite maturity period. In the above bonds, we can see that the maturity period of all bonds except of SRSM (4 Years) , Kumari Bank (5 Years) and Nabil Bank (10 Years) are 7 years.

) **Sinking fund/ Bond Redemption Reserve:**

Periodic repayment of debt is possible if bond issued has sinking fund provision/ or Bond Redemption Reserve. Most of the bonds had provision of Bond Redemption Reserve/Sinking Fund.

) **Trustee:**

A public company issuing bond to the public assigns a qualified trustee so as to represent the interest of the bond holders. In case of SRSN Nepal Bank Ltd. acted as a trustee to mediate with the bond holders. This implies that, Nepal Bank Ltd had the authority to take appropriate action in case SRSN was not able to meet any of its obligations towards the bond holders. However in other case there was no provision of trustee.

) **Convertible:**

It is a feature attached to a bond to attract investors. It has the nature of providing an option to the bond holders to convert their debentures to common shares. In the above mentioned bonds, only SRSN has this provision. In its case the conversion ratio was set at 10 shares per bond, while the conversion price was set at Rs.100 per shares.

From the above table we can see that the most of the debentures that have been issued are by banking institutions. The only non banking organization that has issued debentures is SRSN which is a manufacturing company and NEA. However, the issue received a very nominal interest from the public and was unable to fulfill the requirement of its issue. All other debenture issues by the banking sectors were generally oversubscribed on public offering.

## **4.2 Analysis of primary data:**

### **4.2.1. Analysis of questionnaire:**

A questionnaire with a set of relevant questions to point out the major problems faced by the Nepalese Debt securities market was prepared. This questionnaire included 10 different questions and a total of 60 different respondents each involved directly or indirectly to the present debt market of Nepal. The respondents included 15 listed companies, 12 brokers and market makers, 21 individual investors, and 12 other experts mainly the staffs of SEBON, NRB, and NEPSE.

The questions in the questionnaires ranged from the choice of securities by each of the respondents to the impact of political scenario on the debt securities market. A Chi-square test was performed on the thus collected data to test the relevance of the collected data with the current market trend of debt securities trading.

The major content of the questionnaire are discussed below.

### **1. Choice of Securities:**

Out of 60 respondents, 52% preferred to invest in common stocks, 27% chose to invest in debt securities, 7% chose to invest in mutual funds and 14% preferred to invest in preferred stocks. From this data we can see that debt securities is the second most preferred investment option for investors in stock market after common stocks.

### **2. Major factors responsible for slow growth of securities;**

Out of 60 respondents, 44% of them responded that the major factor for the slow growth of debt securities is the lack of investor's awareness. Another 40% of the respondents opined that the limited supply of quality bond in the market is the main reason for the slow growth of debt securities market. But a very small majority of respondents believe that this trend of slow growth is due to the lack of capital gain opportunity. This is because, though the interest rate in the market is unstable, the periodic coupon payment on a bond is always constant. Hence, even if the market interest rate diminishes the investor of a bond will be in advantage due to the higher interest payment from the bond.

### **3. Choice of debentures from various sectors:**

Out of 60 respondents, 58% preferred debentures from banking sector. The data presented in this and previous chapters also give the picture of this trend. However, there are a few respondents who prefer manufacturing sector more than other sector. Out of 60 respondents 26% voted for debentures issued by manufacturing companies. A very small majority, about 7%, chose hotel sector as their preferred investment sector. About 7% of the total respondents chose other sector rather than banking, manufacturing and hotel sector. This majority preferred debentures from other institutions such as finance companies, insurance companies, trading houses, etc.

### **4. Reason behind use of bank loan instead of issuing debenture;**

Out of 60 respondents, 42% agreed that as bank loans are easily available in the Nepalese markets compared to the hassles associated with issuing debentures. Therefore, most of the organizations prefer bank loans to debenture issue or any other instrument of raising fund. 26% of the respondents agreed that bank loan is preferred to debenture because of the long and difficult process incurred in the issue of debentures. A similar majority, 26% argued that bank loan is preferred to debentures in the Nepalese market because of the lower cost. This is actually another reason for the slow growth of Nepalese debt market. Another 6% of the respondents opined that debentures are not so popular as compared to bank loans due to other various reasons such as secrecy of financial transaction, involvement of a large number of investors which cause problems in administering the transaction, risk regarding market response (incase the bond is undersubscribed), etc.

### **5. Existence of large business organization and practice of debt instruments:**

Out of 60 respondents, 55% agree that the practice of debt instrument is not so popular in Nepal due to the lack of large business organizations. We can note from the presented data also that the only institutions that have issued debentures are related to banking sector except for SSRM which is a manufacturing firm. However from the presented data we can note that the issuance of debentures by SSRM was not much of a success as compared to the issuances

by other banking institutions. However, 35% of the majority disagrees with this argument. On the other hand 10% of the respondent were reluctant to take a stand and were unable to decide.

#### **6. Existence of sufficient legislature regarding debentures in Nepal:**

Out of 60 respondents, 25% of the majority agrees that the legal provision in Nepal regarding debt securities is not sufficient. On the other hand 75% of the respondents disagree. According to them the present legal provisions are not sufficient for the proper growth of debt securities market in Nepal.

#### **7. Political instability and Debt securities market in Nepal:**

Out of 60 respondents a large majority, almost 80%, agrees that political stability plays a vital role in the positive growth of the debt securities market and political stability is a major factor affecting the overall development of a nation. Only 20% of the responded argued that political instability doesn't have any affect in the proper growth of the debt securities market.

#### **8. Trading of government debt securities on the floor of NEPSE:**

To gain an insight about the market regarding the government securities to be traded on the NEPSE floor, this topic was included in the questionnaire. Out of 60 respondents 48 respondents (80%) agreed that government securities must be allowed to be traded in the NEPSE floor. Only 20% of the respondents did not agree on trading of government securities on the NEPSE floor. Some of the reasons given by these respondents to support their view that government securities must not be traded on NEPSE floor are as under;

- ) NEPSE alone is not capable to deal with government bonds as they require special regulatory attention which NEPSE is unable to define.
- ) Rather than the place of trading, these bonds must be more publicly available and government must be able to address this issue by formulating regulations that make such bonds more easily available to the public.
- ) Government bonds are issued by the government in order to fulfill its monetary and fiscal needs hence it has the sole responsibility of these bonds. NEPSE is an

institution to handle private and corporate sector stocks. Hence, government must not allow its bonds to be traded publicly in NEPSE.

### **9. Appropriate system of government debt securities market:**

A question was placed in the questionnaire to study the view of the market regarding how systematic is the trading of government debt securities market in Nepal. Out of the total respondents, about 75% opined that the trading of government bonds is not systematic in Nepal. Only 25% of the total respondents seemed to be satisfied with the current trading policy of the government regarding its bonds.

The respondents who voted that the trading mechanism of government bonds is not satisfactory in Nepal gave the following reasons:

- ) The trading mechanism is centralized to Kathmandu only and does not have a country wise trading policy.
- ) Government bonds are still not feasible to most of the public as they lack information regarding these bonds.
- ) Not traded on the floor of NEPSE hence unable to attract individual investors.

### **10. Issue of debentures in present market situation;**

73% of the respondents agree that the current market situation is feasible for issue of debentures along with share capital. Only 27% disagreed with this view and opined that the current market position is not feasible for issue of debentures.

#### **4.2.2. Test of hypothesis:**

The questionnaire was distributed among the different individuals and institutions directly or indirectly related to the current debt market of Nepal. As the sample size was 60 respondents in total a chi square test was performed to test the accuracy of the collected data.

### **Hypothesis 1;**

In a random sample of 60 respondents, the following distribution was noted based on the related fields of the respondents. The objective of this test is to draw the choice of securities by Nepalese investors.

**Table:16**  
**Hypothesis test regarding the choice of securities**

<b>Opinion</b>	<b>Listed companies</b>	<b>Brokers and market makers</b>	<b>Individual investors</b>	<b>Other experts</b>	<b>Total</b>
Common stock	9	7	8	7	<b>31</b>
Debt Securities	4	3	7	3	<b>16</b>
Mutual funds	1	1	1	1	<b>4</b>
Preference shares	1	1	5	1	<b>9</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

**Source:** field survey

**Setting of Hypothesis:**

**Null Hypothesis ( $H_0$ ):** There is no difference between the observed and expected frequencies regarding the choice of securities among the respondents.

**Alternative Hypothesis ( $H_1$ ):** There is a significant difference between the observed and expected frequencies among the respondents.

Fixing the level of significance at 5%.

Calculation of expected frequencies (E):

$$\begin{aligned}
 \text{Expected frequency of } R_1C_1 &= \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}} \\
 &= \frac{31 \times 15}{60} \\
 &= 7.75
 \end{aligned}$$

Similarly,

$$\begin{array}{llll}
 R_2C_1 = 4 & R_3C_1 = 1 & R_4C_1 = 2.25 & \\
 R_1C_2 = 6.72 & R_2C_2 = 3.47 & R_3C_2 = 0.87 & R_4C_2 = 1.95 \\
 R_1C_3 = 10.33 & R_2C_3 = 5.33 & R_3C_3 = 1.33 & R_4C_3 = 3 \\
 R_1C_4 = 6.2 & R_2C_4 = 3.2 & R_3C_4 = 0.8 & R_4C_4 = 1.8
 \end{array}$$

Observed frequencies (O)	Expected frequencies (E)	(O - E)	$\frac{(O - E)^2}{E}$
9	7.75	1.25	0.2016
7	6.72	0.28	0.1167
8	10.33	-2.33	0.5255
7 4 } 14 3 }	6.2 4 } 13.49 3.47 }	1.49	0.1646
7 3 1 1 1 1 1 1 1 5 1 } 22	5.33 3.2 1 0.87 1.33 0.8 2.25 1.95 3 1.8 } 21.53	0.47	0.0103

Total			1.1087
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**Test statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 1.1087$$

$$\begin{aligned} \text{d.f} &= (R-1)(C-1) - 11 \\ &= (4 - 1) (4-1) - 11 \\ &= 2 \end{aligned}$$

Tabulated value of  $\chi^2$  at 2 d.f. is 5.991.

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e.  $5.991 > 1.1087$ ), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies regarding the choice of securities among the respondents.

## Hypothesis2:

In a random sample of 60 respondents, on the basis of related fields the following distribution was noted. The test has the objective of analyzing the factors due to which the Nepalese debt securities market cannot grow smoothly.

**Table:17**

### Hypothesis test regarding the reason for slow growth of Nepalese debt securities market

Opinion	Listed companies	Brokers and market makers	Individual investors	Other experts	Total
Lack of investors awareness	9	5	6	6	26
Limited supply of quality bonds	5	5	10	4	24
Lack of capital gain opportunity	1	2	5	2	10
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

Source: Field survey

### Setting of Hypothesis:

**Null Hypothesis ( $H_0$ ):** There is no significant difference between the observed and expected frequencies of opinions regarding the reasons for the slow growth of debt securities market in Nepal.

**Alternative Hypothesis ( $H_1$ ):** There is significant difference between the observed and expected frequencies of opinions regarding the reasons for the slow growth of debt securities market in Nepal.

Fixing level of significance at 5%

Calculation of expected frequencies (E):

Expected frequency of  $R_1C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$

$$\begin{aligned} &= \frac{26 \times 15}{60} \\ &= 6.5 \end{aligned}$$

Similarly,

	$R_2C_1 = 6$	$R_3C_1 = 2.5$
$R_1C_2 = 5.2$	$R_2C_2 = 4.8$	$R_3C_2 = 2$
$R_1C_3 = 9.1$	$R_2C_3 = 8.4$	$R_3C_3 = 3.5$
$R_1C_4 = 5.2$	$R_2C_4 = 4.8$	$R_3C_4 = 2$

**Test of Chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O – E)	$\frac{(O - E)^2}{E}$
9	6.5	2.5	0.9615
5	5.2	-0.2	0.0077
6	9.1	-3.1	1.0560
6	5.2	0.8	0.1231
5	6	-1	0.17
5	5.2	-0.8	0.0593
10 4 1 2 5 2 } 24	8.4 4.8 2.5 2 3.5 2 } 23.2	0.8	.0276
<b>Total</b>			<b>2.4052</b>

**Test statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 2.2352$$

$$\begin{aligned} \text{d.f} &= (R-1)(C-1) - 5 \\ &= (3 - 1) (4-1) - 5 \\ &= 1 \end{aligned}$$

Tabulated value of  $\chi^2$  at 1 d.f and 5% level of significance is 3.841

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e. 3.841 > 2.4052), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies of the opinions regarding the reasons for the slow growth of debt securities in Nepal.

### Hypothesis 3:

In a random sample of 60 respondents from related fields, the following distribution was noted regarding the choice of debentures from various sectors in the Nepalese debt securities market.

**Table 18:**  
**Hypothesis Test regarding the choice of debentures from various sectors;**

<b>Opinion</b>	<b>Listed companies</b>	<b>Brokers and market makers</b>	<b>Individual investors</b>	<b>Other experts</b>	<b>Total</b>
Banking sector	9	6	9	8	<b>32</b>
Manufacturing sector	4	3	5	2	<b>15</b>
Hotel sector	1	2	2	1	<b>5</b>
Others	1	1	5	1	<b>8</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

**Source: Field survey**

### Setting of Hypothesis:

**Null Hypothesis ( $H_0$ ):** There is no significant difference between the observed and expected frequencies of respondent's opinions regarding their choice of debentures from various sectors.

**Alternative Hypothesis ( $H_1$ ):** There is a significant difference between the observed and expected frequencies of respondent's opinions regarding their choice of debentures from various sectors.

Fixing level of significance at 5%

Calculation of expected frequencies (E):

$$\begin{aligned}\text{Expected frequency of } R_1C_1 &= \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}} \\ &= \frac{32 \times 15}{60} \\ &= 8\end{aligned}$$

Similarly,

$R_2C_1 = 3.75$	$R_3C_1 = 1.25$	$R_4C_1 = 2$	
$R_1C_2 = 6.4$	$R_2C_2 = 3$	$R_3C_2 = 1$	$R_4C_2 = 1.6$
$R_1C_3 = 10.7$	$R_2C_3 = 5$	$R_3C_3 = 1.67$	$R_4C_3 = 2.67$
$R_1C_4 = 6.93$	$R_2C_4 = 3.25$	$R_3C_4 = 1.08$	$R_4C_4 = 1.73$

**Test of Chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O – E)	$\frac{(O - E)^2}{E}$
9	8	1	0.125
6	6.4	-0.4	0.025
9	10.7	-1.7	0.2701
8 } 4 } 15 3 }	6.93 } 3.75 } 13.68 3 }	1.32	0.1274
5 } 2 } 1 } 2 } 2 } 21 1 } 1 } 1 } 1 } 5 } 1 }	5 } 3.25 } 1.25 } 1 } 1.67 } 21.5 1.08 } 2 } 1.6 } 2.67 } 1.73 }	-0.5	0.01163
<b>Total</b>			0.55913

**Test Statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 0.55913$$

$$\begin{aligned} \text{d.f} &= (R-1)(C-1) - 11 \\ &= (4 - 1) (4-1) - 11 \\ &= 2 \end{aligned}$$

Tabulated value of  $\chi^2$  at 2 d.f and 5% level of significance is 5.991

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e. 5.991 > 0.55913), the null hypothesis is accepted. This means that there is no significant difference

between the observed and expected frequencies of the opinions regarding the choice of debt securities from various sectors.

**Hypothesis 4:**

In a random sample of 60 respondents the following distribution was noted while drawing the respondents view about the excessive use of bank loans instead of debentures.

**Table: 19**  
**Hypothesis test regarding the use of bank loans instead of debentures**

<b>Opinion</b>	<b>Listed companies</b>	<b>Brokers and market makers</b>	<b>Individual investors</b>	<b>Other experts</b>	<b>Total</b>
Bank loan is easily available	6	5	7	6	<b>25</b>
Issuing debentures a difficult process	4	3	7	2	<b>16</b>
Cost of bank loan is lower Hotel sector	4	2	6	3	<b>15</b>
Others	1	2	1	1	<b>4</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

**Setting of Hypothesis;**

**Null Hypothesis (H<sub>0</sub>):** There is no significant difference between the observed and expected frequencies of respondent's opinions regarding the use of bank loans against debentures.

**Alternative Hypothesis (H<sub>1</sub>):** There is no significant difference between the observed and expected frequencies of respondent's opinions regarding the use of bank loans against debentures.

Fixing level of significance at 5%.

Calculation of expected frequencies (E):

Expected frequency of  $R_1C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$

$$\begin{aligned} &= \frac{25 \times 15}{60} \\ &= 6.25 \end{aligned}$$

Similarly,

	$R_2C_1 = 4$	$R_3C_1 = 3.75$	$R_4C_1 = 1$
$R_1C_2 = 4.58$	$R_2C_2 = 2.93$	$R_3C_2 = 2.75$	$R_4C_2 = 0.73$
$R_1C_3 = 9.17$	$R_2C_3 = 5.87$	$R_3C_3 = 5.5$	$R_4C_3 = 1.47$
$R_1C_4 = 5$	$R_2C_4 = 3.2$	$R_3C_4 = 3$	$R_4C_4 = 0.8$

**Test of chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O – E)	$\frac{(O - E)^2}{E}$
6 } 5 } 11	6.25 } 4.58 } 10.83	0.17	0.00267
7	9.17	-1.17	0.1493
6 } 3 } 13 4 }	5 } 4 } 11.93 2.93 }	1.07	0.0960
3 } 7 } 16 2 } 4 }	5.87 } 3.2 } 15.57 3.75 } 2.75 }	0.43	0.01189
2 } 6 } 15 3 } 1 } 2 } 1 }	5.5 } 3 } 12.5 1 } 0.73 } 1.47 } 0.8 }	-0.5	0.02
<b>Total</b>			<b>0.2799</b>

**Test Statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 0.2799$$

$$\begin{aligned} \text{d.f} &= (R-1)(C-1) - 11 \\ &= (4 - 1) (4-1) - 11 \\ &= 2 \end{aligned}$$

Tabulated value of  $\chi^2$  at 2 d.f and 5% level of significance is 5.991

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e.  $5.991 > 0.2799$ ), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies of respondent's opinions regarding the use of bank loans against debentures.

### **Hypothesis 5:**

In a random sample of 60 respondents, the following distribution was noted on the basis of opinions from the related sectors. The test is conducted to analyze the existence of large business organizations and practice of debt securities.

**Table: 20**

**Hypothesis test regarding the existence of large business companies and practice of debt securities**

<b>Opinion</b>	<b>Listed companies</b>	<b>Brokers and market makers</b>	<b>Individual investors</b>	<b>Other experts</b>	<b>Total</b>
Agree	8	6	12	7	<b>33</b>
Disagree	6	5	5	4	<b>21</b>
Don't know	1	1	4	1	<b>6</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

**Source:** field survey

### **Setting of Hypothesis:**

**Null Hypothesis ( $H_0$ ):** There is no significant difference between the observed and expected frequencies of opinions regarding the existence of large business organizations and practice of debt instruments in Nepal.

**Alternative Hypothesis ( $H_1$ ):** There is a significant difference between the observed and expected frequencies of opinions regarding the existence of large business organizations and practice of debt instruments in Nepal.

Fixing level of significance at 5%

Calculation of expected frequencies (E):

Expected frequency of  $R_1C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$

$$\begin{aligned} &= \frac{33 \times 15}{60} \\ &= 8.25 \end{aligned}$$

Similarly,

$$\begin{array}{lll} R_2C_1 = 5.25 & R_3C_1 = 3.75 & \\ R_1C_2 = 6.6 & R_2C_2 = 4.2 & R_3C_2 = 1.2 \\ R_1C_3 = 11 & R_2C_3 = 5.87 & R_3C_3 = 5.5 \\ R_1C_4 = 7.15 & R_2C_4 = 5.2 & R_3C_4 = 1.3 \end{array}$$

**Test of Chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O – E)	$\frac{(O - E)^2}{E}$
8	8.25	-0.25	0.0076
6	6.6	-0.6	0.0545
12	11	1	0.0909
7	7.15	-0.15	0.0031
6 } 5 } 11	5.25 } 4.2 } 9.45	1.55	0.2542
5	7	-2	0.5714
4 } 1 } 1 } 11 4 } 1 }	5.2 } 1.5 } 1.2 } 11.2 2 } 1.3 }	-0.2	0.00357
<b>Total</b>			<b>0.98527</b>

**Test statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 0.98527$$

$$\begin{aligned} \text{d.f} &= (R-1)(C-1) - 5 \\ &= (3 - 1) (4-1) - 5 \\ &= 1 \end{aligned}$$

Tabulated value of  $\chi^2$  at 1 d.f and 5% level of significance is 3.841

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e. 3.841 > 0.98527), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies of the opinions regarding the existence of large business organizations and practice of debt instruments in Nepal.

### Hypothesis 06:

In a random sample of 60 respondents, the following distribution was noted on the basis of opinions collected regarding the sufficiency of legal provisions in Nepal related to the debt securities market.

**Table: 21**

**Hypothesis regarding the sufficiency of legal provisions related to the debt securities market**

<b>Opinion</b>	<b>Listed companies</b>	<b>Brokers and market makers</b>	<b>Individual investors</b>	<b>Other experts</b>	<b>Total</b>
Sufficient	4	2	7	2	<b>15</b>
Insufficient	11	10	14	10	<b>45</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

Source: Field survey

### Setting of Hypothesis;

**Null Hypothesis ( $H_0$ ):** There is no significant difference between the observed and expected frequencies of opinions regarding the sufficiency of legal provisions related to debt securities in Nepal.

**Alternative Hypothesis ( $H_1$ ):** There is a significant difference between the observed and expected frequencies of opinions regarding the sufficiency of legal provisions related to debt securities in Nepal.

Fixing level of significance at 5%

Calculation of expected frequencies (E):

Expected frequency of  $R_1C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$

$$= \frac{15 \times 15}{60} = 3.75$$

Similarly,

$$R_2C_1 = 11.25$$

$$R_1C_2 = 3 \quad R_2C_2 = 9$$

$$R_1C_3 = 5.25 \quad R_2C_3 = 15.75$$

$$R_1C_4 = 3 \quad R_2C_4 = 3$$

**Test of Chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O - E)	$\frac{(O - E)^2}{E}$
4 } 2 } 7 } 15 2 }	3.75 } 3 } 5.25 } 15 3 }	0	0
11	11.25	-0.25	0.00556
10	9	1	0.1111
14 } 10 } 24	15.75 } 3 } 18.75	5.25	1.47
<b>Total</b>			<b>1.5867</b>

**Test statistics:**

$$\chi^2 (\text{calculated}) = \frac{\sum (O - E)^2}{E} = 1.5867$$

$$d.f = (R-1)(C-1) - 4$$

$$= (2 - 1)(4-1) - 4$$

$$= 1$$

Tabulated value of  $\chi^2$  at 1 d.f and 5% level of significance is 3.841

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e.  $3.841 > 1.5867$ ), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies of the opinions regarding the sufficiency of legal provisions related to debt securities in Nepal.

**Hypothesis 07:**

In a random sample of 60 respondents, the following distribution was noted on the basis of opinions collected regarding the relevance of political instability with the growth of debt market in Nepal.

**Table: 22**  
**Hypothesis regarding the relevance of political instability with the growth of debt market in Nepal**

<b>Opinion</b>	<b>Listed companies</b>	<b>Brokers and market makers</b>	<b>Individual investors</b>	<b>Other experts</b>	<b>Total</b>
Relevant	12	11	17	8	<b>48</b>
Not relevant	3	1	4	4	<b>12</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

**Source: Field survey**

### **Setting of Hypothesis:**

**Null Hypothesis (H<sub>0</sub>):** There is no significant difference between the observed and expected frequencies of opinions regarding the relevance of political instability and growth of debt securities market in Nepal.

**Alternative Hypothesis (H<sub>1</sub>):** There is a significant difference between the observed and expected frequencies of opinions regarding the relevance of political instability and growth of debt securities market in Nepal.

Fixing level of significance at 5%

Calculation of expected frequencies (E):

Expected frequency of  $R_1C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$

$$\begin{aligned} &= \frac{48 \times 15}{60} \\ &= 12 \end{aligned}$$

Similarly,

$$\begin{aligned} R_2C_1 &= 3 \\ R_1C_2 &= 9.6 & R_2C_2 &= 2.4 \\ R_1C_3 &= 16.8 & R_2C_3 &= 5.2 \\ R_1C_4 &= 9.6 & R_2C_4 &= 9.6 \end{aligned}$$

**Test of Chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O – E)	$\frac{(O - E)^2}{E}$
12	12	0	0
11	9.6	1.4	0.2042
17	16.8	0.2	0.0024
8 } 3 } 12 1 }	9.6 } 3 } 15 2.4 }	-3	0.6
4	5.2	-0.8	0.1231
4	9.6	-4.4	2.017
<b>Total</b>			<b>2.9467</b>

**Test statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 2.9467$$

$$\begin{aligned} \text{d.f} &= (R-1)(C-1) - 2 \text{ (since 2 d.f lost due to pooling)} \\ &= (2 - 1) (4-1) - 2 \\ &= 1 \end{aligned}$$

Tabulated value of  $\chi^2$  at 1 d.f and 5% level of significance is 3.841

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e.  $3.841 > 2.9467$ ), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies of the opinions regarding the relevance of political instability and growth of debt securities in Nepal.

### Hypothesis 08:

In a random sample of 60 respondents, the following distribution was noted on the basis of opinions collected regarding the trading of government debt securities on the floor of NEPSE.

**Table: 23**

#### **Hypothesis regarding the trading of government securities on the floor of NEPSE**

<b>Opinion</b>	<b>Listed companies</b>	<b>Brokers and market makers</b>	<b>Individual investors</b>	<b>Other experts</b>	<b>Total</b>
Yes	11	10	18	8	<b>47</b>
No	4	2	3	4	<b>13</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

**Source: Field survey**

### Setting of Hypothesis;

**Null Hypothesis ( $H_0$ ):** There is no significant difference between the observed and expected frequencies of opinions regarding the trading of government securities on the floor of NEPSE.

**Alternative Hypothesis ( $H_1$ ):** There is a significant difference between the observed and expected frequencies of opinions regarding the trading of government securities on the floor of NEPSE.

Fixing level of significance at 5%

Calculation of expected frequencies (E):

Expected frequency of  $R_1C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$

$$= \frac{47 \times 15}{60}$$

$$= 11.75$$

Similarly,

$$R_2C_1 = 3.25$$

$$R_1C_2 = 9.4 \quad R_2C_2 = 2.6$$

$$R_1C_3 = 16.45 \quad R_2C_3 = 4.55$$

$$R_1C_4 = 9.4 \quad R_2C_4 = 2.6$$

**Test of Chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O - E)	$\frac{(O - E)^2}{E}$
11	11.75	-0.75	0.0479
10	9.4	0.4	0.0167
18	16.45	1.2	0.0875
8 4 2 3 4 } 21	9.4 3.25 2.6 4.55 2.6 } 22.4	1.4	0.0875
<b>Total</b>			<b>0.2084</b>

**Test statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 0.2084$$

d.f = (R-1)(C-1) - 4 (since 4 d.f lost due to pooling)

$$= (2 - 1)(4 - 1) - 4$$

$$= 1$$

Tabulated value of  $\chi^2$  at 1 d.f and 5% level of significance is 3.841

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e.  $3.841 > 0.2084$ ), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies of the opinions regarding the trading of government securities on the floor of NEPSE.

### Hypothesis 09:

In a random sample of 60 respondents, the following distribution was noted on the basis of opinions collected regarding how systematic is the trading of government debt securities in Nepal.

**Table: 24**

#### Hypothesis regarding systematic trading of government debt securities in Nepal

Opinion	Listed companies	Brokers and market makers	Individual investors	Other experts	Total
Yes	4	2	4	4	<b>14</b>
No	11	10	17	8	<b>46</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

**Source:** Field survey

**Setting of Hypothesis:**

**Null Hypothesis (H<sub>0</sub>):** There is no significant difference between the observed and expected frequencies of opinions regarding the systematic trading of government securities in Nepal.

**Alternative Hypothesis (H<sub>1</sub>):** There is a significant difference between the observed and expected frequencies of opinions regarding the systematic trading of government securities in Nepal.

Fixing level of significance at 5%

Calculation of expected frequencies (E):

Expected frequency of  $R_1C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$

$$= \frac{47 \times 15}{60}$$
$$= 3.5$$

Similarly,

$$R_2C_1 = 11.5$$
$$R_1C_2 = 2.8 \quad R_2C_2 = 9.2$$
$$R_1C_3 = 4.9 \quad R_2C_3 = 16.1$$
$$R_1C_4 = 2.8 \quad R_2C_4 = 9.2$$

**Test of Chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O – E)	$\frac{(O - E)^2}{E}$
4 2 4 4 11 } 25	3.5 2.8 4.9 2.8 11.5 } 25.5	-0.5	0.00980
10	9.2	0.8	0.06957
17 8 } 25	16.1 9.2 } 25.3	-0.3	0.00356
<b>Total</b>			<b>0.08293</b>

**Test statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 0.2084$$

d.f = (R-1)(C-1) – 5 (since 4 d.f lost due to pooling)

$$= (2 - 1) (4-1) - 5$$

$$= 2$$

Tabulated value of  $\chi^2$  at 2 d.f and 5% level of significance is 5.991

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e. 5.991 > 0.08293), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies of the opinions regarding how systematic is the trading of government securities in Nepal.

### **Hypothesis 10;**

In a random sample of 60 respondents, the following distribution was noted on the basis of opinions collected regarding the issue of debentures in the present market situation.

**Table: 25**

#### **Hypothesis regarding issue of debentures in the present market situation**

<b>Opinion</b>	<b>Listed companies</b>	<b>Brokers and market makers</b>	<b>Individual investors</b>	<b>Other experts</b>	<b>Total</b>
Yes	11	9	15	8	<b>43</b>
No	4	3	6	4	<b>17</b>
<b>Total</b>	<b>15</b>	<b>12</b>	<b>21</b>	<b>12</b>	<b>60</b>

**Source: Field survey**

### **Setting of Hypothesis;**

**Null Hypothesis ( $H_0$ ):** There is no significant difference between the observed and expected frequencies of opinions regarding the issue of debentures in the present market situation.

**Alternative Hypothesis ( $H_1$ ):** There is a significant difference between the observed and expected frequencies of opinions regarding the issue of debentures in the present market situation.

Fixing level of significance at 5%

Calculation of expected frequencies (E):

Expected frequency of  $R_1C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$

$$= \frac{43 \times 15}{60}$$

$$= 10.75$$

Similarly,

$$R_2C_1 = 5.2$$

$$R_1C_2 = 8.6 \quad R_2C_2 = 3.4$$

$$R_1C_3 = 15.05 \quad R_2C_3 = 5.95$$

$$R_1C_4 = 8.6 \quad R_2C_4 = 8.6$$

**Test of Chi-square:**

Observed frequencies (O)	Expected frequencies (E)	(O - E)	$\frac{(O - E)^2}{E}$
11	10.75	0.25	0.00581
9	8.6	0.4	0.0186
15	15.05	0.05	0.00017
8	8.6	0.6	0.0419
4 } 3 } 7	5.2 } 3.4 } 8.6	-1.6	0.2977
6	5.95	0.05	0.00042
4	8.6	-3.4	1.3442
<b>Total</b>			<b>1.7088</b>

**Test statistics:**

$$\chi^2 (\text{calculated}) = \frac{(O - E)^2}{E} = 1.7088$$

d.f = (R-1)(C-1) - 1 (since 1 d.f lost due to pooling)

$$= (2 - 1)(4 - 1) - 1$$

$$= 2$$

Tabulated value of  $\chi^2$  at 2 d.f and 5% level of significance is 5.991

**Decision:** Since the tabulated value of  $\chi^2$  is greater than its calculated value (i.e.  $5.991 > 1.7088$ ), the null hypothesis is accepted. This means that there is no significant difference between the observed and expected frequencies of the opinions regarding the issue of debentures in the present market situation.

### **4.3 Major findings:**

#### **4.3.1 Major findings through secondary data:**

1. While analyzing the ownership pattern of government bonds and T- Bills, it is found that NRB and commercial banks hold almost equal portions of debt securities. However latter observations show that commercial banks are the main holders of these securities ranging from 55.45% in 2004/05 to 65.58% in latest fiscal year 2011/12 of observation period. Participation of financial institutions (development banks finance co), insurance corporations and other organizations in purchasing government debt securities is comparatively low. On the other hand, participation of individual investor is increasing but not sufficiently.
2. By observing the trend of government debt securities, the amount of these securities is increased every year, which is good sign for securities market. The forecasted amount of government debt securities from 2013 to 2017 shows increasing trend with healthy growth rate. If the government maintains this trend in future, it will be helpful to reduce external debt and to mobilize internal debt in productive sectors by which nation will be benefited.
3. The trend of T-Bills issued during the observation period seems to be increasing. The forecasted amount of T-bills in coming years also shows increasing trend. That means money market of government debt securities is effectively growing, which is good sign for overall debt securities market.
4. The trend of development bond was initially decreasing in starting period of

observation, increasing in middle period with low trend and however increasing rapidly in recent year of the observation. The forecasted amount of development bond for coming years shows constant level of growth, which is a sign of good prospect of development in the country and its return on securities market.

5. The trend of national saving bond shows increasing in first nine years of observation, but it has been showing decreasing trend in last next nine years of observation. However, in recent years of observation it has rapidly increased and reached the all time peak of Rs 15680 thousand. The main holders of national saving bonds are individual investors, if this fluctuating trend continues in the future periods, participation of individual investors will be decreased (that happened in earlier periods of observation) which is a problem for debt securities market. And so forecasted amount shows decreasing trend however, we can estimate more and more individual investors will involve investing in NSB considering the fact that investment had rapidly increased in recent period of observation.
6. The trend of special bond is increasing in earlier years of observation but shows decreasing trend since 1999. The forecasted amount of special bond shows null subscription, which is a not a good sign for debt securities market.
7. Government has issued another bond instrument named public saving card since 2001/02 which can be sold only by Nepalese citizens. The initiation of public card has initiated the new step in growth of government bond. However, there is no continuation in issue of this type.
8. The characteristics of Nepalese corporate debt securities are quite worth as necessary to be a quality security.
9. Debenture of SRSM was not fully subscribed (i.e. only 18% was sold). At the time of Issuance Company's financial condition was not good. Therefore public could not believe on it. So it was undersubscribed whereas the debentures of different banks were subscribed fully apart from some. This result shows the future market of banking sector's debt securities is quite prosperous.

10. Participation of individual investors in purchasing SRSM debenture was huge (i.e. 88.30%). Although participation of this group slide down in purchasing HBL and NIBL debentures (Which is around 35-40%), it is quite satisfactory in comparison to participation of this group in purchasing government debt securities (Which is only 5-11%). Most of the debentures were subscribed through private placement to the limited nnumber of investors (most of them are institutional investors), which is main reason for lower participation of individual investors in purchasing other debentures in comparison to SRSM debentures, where SRSM debentures were subscribed through 100% public offering.

#### **4.3.2 Findings through Questionnaire Survey:**

1. With respect to preference regarding choice of securities, the majority of respondents prefer the common stock. The informal interview with respondents in this respect reveals that common stock is more marketable than other securities; they also suggest strengthening the secondary market of debt securities in order to provide marketability for debt securities and to attract more and more investors towards debt securities.
2. With respect to reason regarding slow growth of debt securities market, the majority of respondent's opinion is that lack of investor's awareness is main reason for the slow growth of Nepalese debt securities market. Also a major portion of them give their opinion that limited supply of quality bond is also a major factor. According to this group of respondents, if quality bonds are available in market, there is very low chance of under subscription. They gave examples of HBL, SBL, SBI, Laxmi and NIBL debentures to support their logic.
3. With respect to preference regarding various sectors debt securities, the majority of respondents choose banking sectors debentures. Only least percent of respondents stated that they were willing to invest in other sectors debt securities. It shows that in future, banking sectors debt securities may be prosperous. But on the other hand, least preference on other sectors debt securities create dangerous problem in growth of debt securities market, as this sectors need more debt capital by issuing debt securities that banking organization ( huge public deposit can be used by bank, therefore they rarely need to issue debentures. )

4. With respect to reason regarding Nepalese organizations prefer bank loan instead of issuing debentures, majority of respondents feel that bank loan is easily available due to which Nepalese organization prefer bank loan instead of issuing debentures. Also a major portion of them give their opinion that difficult process for collection of funds by issuing debentures is also a major factor. It is the problem faced by debt securities market of Nepal.
5. With respect to opinion regarding relevancy between existence of large business organizations and practice of debt instruments, majority of respondents agree with the view that due to lack of large business organizations various kinds of debt instruments are not practiced in Nepal. It indicates the problem of Nepalese debt securities market.
6. With respect to sufficiency of legal provisions regarding debt securities market of Nepal, majority of the respondents agreed that the existing legal provisions regarding debt securities market are insufficient. The informal interview with the respondents in this respect reveals that investors' interest protection provision, provision for price sensitive information disclosure etc are not sufficient. It also indicates the problem of debt securities market growth in Nepal.
7. Most of the respondents agree that political instability is also a huge problem for Nepalese debt securities market growth. According to them if political stability exists in country, sense of certainty would be promoted and demand as well as supply would be improved. So that, overall industrial environment would be promoted. As result of this, debt securities market also would grow rapidly. Political instability in form of domestic war, emergency declaration, strike etc is creating problems in Nepalese debt securities market growth directly and indirectly.
8. One of the questions asked to respondent is whether the government securities should be traded on the floor of NEPSE or not, majority of respondents have felt that government securities should be traded on the floor of NEPSE. It will be encouraging to note here that government securities mainly Bikas Rinpatra is

being traded by listing at NEPSE, which was announced in the budget speech of 2002/03. However, other government securities besides mentioned aren't traded till date of observation period, which is creating suspicion about capital gains in the general investors.

9. One of the questions asked to the respondents is whether government debt securities market is systematic or not, the majority of respondents opined that government securities market is not systematic and it is a problem for debt securities market growth. According to the respondents, price competition and centralized market is lacking.
10. With respect to issue of debenture in present market situation, most of the respondent suggests to issue debenture at present market situation. It indicates a good prospect for debt securities market growth. The informal interview with respondents in this respect reveals that interest rate on deposit of commercial bank is in declining trend due to which investors will attract toward debt securities. Although the huge public wants to buy debt securities (which is proved by oversubscription of bank's debentures in recent issuances). Though due to fixed interest earning feature and low prospects of capital gain on secondary market, the debt securities are still considered as less attractive. This indicates the problem for debt securities market

## CHAPTER -5

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

This is the last chapter of the study. The research study completely concentrates around present status of Nepalese debt securities market and this chapter summarizes the overall study and draws conclusion from the study. Some necessary recommendations and suggestions are also provided for systematic growth of Nepalese debt securities market.

#### 5.1 Summary:

For the growth of economic development of country, capital market is extremely necessary because it collects and mobilizes necessary funds to industrialization process. Since debt securities market being significant contributor in capital market development, it should be well developed and well functioned. The history of Nepalese debt securities market is very short and it is at initial stage of development. In the previous decades, limited efforts were made to develop debt securities market. But government and corporate debt securities are not going according to country demand till now.

This study has some specific objectives which are:

- i. To study the position of debt securities market in the structure of Nepalese securities market
- ii. To identify the major problems of debt securities market growth in Nepal
- iii. To analyze trend and ownership pattern of government securities
- iv. To examine key investors and characteristics of Nepalese corporate debt securities
- v. To provide recommendation for systematic growth in Nepalese debt securities market

This study is based on secondary as well as primary data. The study on position of debt

securities in total securities market was accomplished by using secondary data for the period of 1993/94 to 2011/12. The ownership pattern and trend of government securities were also analyzed by using secondary data for the period of 1993 to 2012. This study also examines the key investors and characteristics of Nepalese corporate debt securities by using secondary data obtained from SEBO and issuing companies. Some statistical tools such as curvilinear model, time series analysis were also made to analyze secondary data.

Total 60 samples were drawn from different strata for the purpose of finding problems related to the debt securities market by questionnaire survey. The questionnaire contains 10 different questions relating to Nepalese government and corporate debt securities market. Out of 60 respondents, 15 were listed companies, 12 were markets and brokers, 21 were individual investors and 12 were other experts especially staff of NEPSE, SEBO and NRB. The personal interviews were also conducted to support the data. The data obtained from questionnaire survey were analyzed using percent method and chi-square test.

By analyzing secondary data, researcher found various issues related to the debt securities market. From analysis, it is found that major portion of securities market is covered by debt securities, most of them is government debt securities, corporate debt securities, are not issuing regularly and only small portion of securities, market is covered by it. From analysis of ownership pattern of government debt securities, it is found that major portion of government securities are held by NRB and commercial banks, participation of individual investors in purchasing government securities is not at satisfactory level. The trend of issuing government securities is increasing. It is also found that characteristics of Nepalese corporate debt securities are quite worth, participation of individual investors in purchasing corporate debt securities is at satisfactory level and it is expected to increase if the issuing companies issue more debentures through public offering rather than private placement.

The researcher has found many problems related to the Nepalese debt securities market such as low preference of investors to invest in debt securities in comparison to common stock, lack of investors awareness towards debt securities, limited supply of quality bonds, difficult process of issuing debenture, high preference of investors in banking sector's debenture and low preference in other sector's debenture, insufficient legal provision political instability, few issuances of debt securities in spite of good public response, unsystematic government debt securities market. Another major problem is the problem of our whole economy, our economy is not so huge and there is lack of large business organizations due to which various kinds of debt instruments are not properly practiced.

## **5.2 Conclusion**

Nepalese debt securities market is still at infant stage. Government debt securities market is slightly at maturity stage in comparison to corporate debt securities market. So that, emphasis should be given in the development of corporate debt securities market and if it is done, corporate debt securities market will grow up very soon because there are some positive signals felt by researcher such as oversubscription of HBL and NIBL debenture, declining interest rate on deposit of commercial banks, growing participation of banking sector in issuing debentures. Researcher also come into conclusion that there are a number of problems due to which debt securities market of Nepal is not growing smoothly. Mainly the problems are investor's increasing attraction towards common stock, lack of public awareness, limited supply of quality bonds, difficult process of issuing debenture, high preference in purchasing banking sector's debentures and low preference in other sectors debentures, political instability, unsystematic government debt securities market, lack of large business organization, insufficient legal provision and few issuances of corporate debt securities in spite of encouraging public response.

## **5.3 Recommendations**

The researcher found so many scattered weaknesses in all areas and overall system of debt securities market. The researcher desires to give some suggestions to the stakeholders such as government, investors, corporate sector for growth of Nepalese debt securities market.

### **1. To Government:**

- i. Political stability should be maintained.
- ii. Heavy reliance on external debt should be minimized and try to borrow required fund through internal sources as much as possible.
- iii. Nepal Government should give tax exemption in income from debt securities by which investors will be attracted towards debt securities and needed funds will be easily available for government as well as corporate sectors.
- iv. Existing legal provisions regarding debt securities should be reform as per market demand.

Since participation of individual investors in purchasing debt securities is very low government should issue national saving bond and citizens savings bond (which focuses mainly the individual investors) as much as possible to collect required funds.

- i. Government should initiate the trading of government securities on market principal.
- ii. Mass population is unknown about government securities. So government should initiate effective promotional activities to remove this problem.

## **2. To Investors:**

There are two types of investors in debt securities market, which are individual investors and institutional investors. The following suggestions are given to investors (mainly individual investors)

- i. It is found that Nepalese investors are not aware about their investment scheme. Therefore it is suggested that they should be aware about their investment scheme by properly analyzing risk and return.
- ii. Investors should change the perception towards other sectors debentures (i.e. manufacturing and trading sectors mainly). All manufacturing and trading companies may not be weak. So they should identify strong companies and their debentures issue should be taken positively.

## **3. To corporate sectors:**

Corporate sector is an important stakeholder of debt securities market. If they don't issue debentures, growth of corporate debt securities will be impossible. The researcher gives following suggestions to the corporate sectors

- i. They should understand market demand and grab the opportunity by issuing debentures to fulfill the cash requirement.
- ii. Huge portion of issued debentures should be subscribed through public offering rather than private placement. So that more and more investors can purchase it.
- iii. Provision of trustee should be made in debenture issue.
- iv. Company should give priority to issue secured debenture.
- v. True financial condition and future plan should be disclosed at the time of issuance.
- vi. Price sensitive information should be completely disclosed.
- vii. Number of minimum debentures to be purchased should be minimized, so that poor people may also buy it.

viii. Issued debentures should be listed in NEPSE in order to provide secondary market.

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