

# **DEVELOPMENT OF DEBENTURE MARKET IN NEPAL**

## **A THESIS**

**Submitted to:**

**Shanker Dev Campus  
Faculty of Management  
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Putali Sadak, Kathmandu**

**For the Partial Fulfillment of the Requirements of the  
Masters Degree in Business Studies (M.B.S.)**

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## **RECOMMENDATION**

**This is to Certify that the Thesis**

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*Entitled*

**Development of Debenture Market in Nepal**

Has been prepared as approved by this Department in the prescribed format of Faculty of Management. This Thesis is forwarded for Examination.

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## **VIVA- VOCE SHEET**

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

requirement for the

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## DECLARATION

I hereby declare that the work reported in this thesis entitled "**Development of Debenture Market in Nepal**", submitted to Shanker Dev Campus Faculty of Management, Tribhvan University, is my original work done for the partial fulfillment of the requirement for the Degree of Master of Business Studies (M.B.S.) under the guidance and supervision of Mr. Kishor Maharjan and Mrs. Indira Rijal lecturer of Shanker Dev Campus

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**Durga Prasad Dhakal**

**Date:**

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## **ABBREVIATION**

BOK	=	Bank of Kathmandu
CB	=	Commercial Bank
EBL	=	Everest Bank Limited
HBL	=	Himalayan Bank Limited
IPO	=	Initial Primary Offering
NEPSE	=	Nepal Stock Exchange
NIBL	=	Nepal Investment Bank Limited
NICBL	=	Nepal Industrial and Commercial Bank Limited
NIDC	=	Nepal Industrial Development Corporation
NRB	=	Nepal Rastra Bank
SEBO	=	Security Exchange Board
SRSM	=	Shree Ram Sugar Mill
YTM	=	Yield to Maturity

# **CHAPTER-I**

## **INTRODUCTION**

### **1.1 General Background of the Study**

The term 'market' is place or centre where selling and buying transaction take place or it may be just the buying and selling transaction without any physical facility. Financial markets are centers where the people with surplus funds interact with the business firm. These markets also provide financial risk hedging facilities and speculative opportunities. They not only facilitate to channelize funds systematically into various productive operation but also provide many other services including assets pricing, trading of derivatives such as option and futures underwriting of securities etc.

One of the main sectors of financial market is the capital market, where stocks, bonds and other long term securities are traded. Capital market plays a crucial role in mobilizing a continuous flow of saving and channeling these financial resource for expanding productive capacity in the economy. Among these, debt securities market is crucial one because it provides strong base for implementing monetary and debt management process.

A debt instrument is a long term contract under which a borrower agrees to make payments of interest and principal on specific date to the holders of the bond. It means that debt securities represent a piece of paper as financial claim. Debt contract such as bond and mortgage are the most common fixed income securities although preferred stocks are also of this type. But debt holders get interest before the stock holders get dividends. They are no any restriction to get interest by debt holders whether the

issuing agencies suffer loss. The debt securities are of collateral based or non collateral based, perpetual or redeemable, convertible or non convertible types.

Now our concern are mainly about debt securities market. The debt securities market is that types of market in which financial instruments (mainly bond) dealing in outstanding debts are bought and sold. In other words debts markets simply refers to the demand and supply pattern as well a trading mechanism of debt securities. Basically the issuing agencies and debt securities are also divided into two segments, the primary market and secondary market. New issues are made in primary market whereas outstanding issues are traded in the secondary market. Again secondary market can be divided into wholesale and retail part. The wholesale market is the market in which profession including institutional investors trade with one another and transactions are usually large. The retail market is the market in which the individual investors buy and sell the debt securities.

## **1.2 Introduction of Debt Securities Market of Nepal**

Nepal is developing country in which financial market is also at developing stage. Nepalese capital market as well as debt securities market has not reached its maturity stage. There is not proper exercise of debt securities till now. We can say the history of debt securities market started from the year 1962 A.D. when the government issued debt securities for the first time. After that period the government has been issued the debt securities regularly to meet is financing needs. Presently, the public debt Act 2059 and its laws and bye laws are active in regulating Nepalese government debt securities. While talking about the corporate debt securities, the debt of NIDC and the debt of Bottlers Nepal

Limited are the early debt securities. The security exchange centre involved for transaction later, when it was converted into Nepal Stock Exchange. The transaction of government debt securities has not been done through Nepal stock exchange. As government and corporate bodies should go into debt securities market for required debt capital. So we can categorize the Nepalese debt securities market as

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

#### **a. Government Debt Securities Market**

The market that deals on securities issued by the government in order to collect fund to meet its financial needs with promises to pay a certain percent of interest at certain period of time with predetermined maturity period is known as government debt securities market. Government raises fund from market to conduct the regular activities, to conduct development programs, to recover the deficit budget etc. these securities are as follows: -

- i) Treasury Bills:** Treasury bills are the short-term money market instrument of the government. It normally matures in 91 days while some mature in 364 days. Thus, treasury bills are issued to meet short term financial requirement of the government. Treasury bills are sold to the bidders in the order that one who bids with the expectation of low interest rate. Government of Nepal initiated the process of selling treasury bills to bank, financial institutions and individuals since 2018 and through an auction process since 2045 till, Poush 2062 government has 25,57,140 million liability on treasury bills.
- ii) Development Bond:** by definition, it is issued to perform the development works it is a kind of long term government bond. It

matures normally in five years or more. It can be used as collateral if holder's need to take loan. It has fixed and minimum interest rate. The payments of the interest are paid on semi-annual basis. The income from these bonds is taxable. It is purchased by individual and institutions. Government of Nepal initiated the process of selling development bond since 2020. NRB issued the development bond through the auction process first at 2062, Jestha, 19. After listing in the security board, its transaction will be made in the NEPSE through the brokers. Till 2062 Poush government has Rs. 19999. 214 million liability on development bond.

- iii) **National Saving Bond:** it is also long term bond. It has fixed interest rate payable Simi-annually. The main holders of these bonds are general public. Government initiated the process of selling NSB since 2040. till 2062 Poush, government has Rs. 5576.759 million liability on national saving bond. (Rastra Rin Khabar Patra, 2062 Chaitra)
- iv) **Public Saving Card:** it is also a long term debt instrument of government. The main holders of these bonds are general public as well as organization and financial institutions. It has also fixed interest rate and payable semiannually. It is also taxable government bond. Government initiated the process of selling public saving card since 2059. Till 2062 Poush, Government of Nepal has Rs. 1428.879 million liabilities on public saving card.
- v) **Special Bond:** By definition, it is issued on special occasion when government falls sort of funds. The government issues special bonds to these parties to whom the government has to make payments. Instead of paying cash, the government issues special bonds as a

substitute of cash repayment and extends the period of payments. The holders of this bond can be issued it a collateral to fulfill their funds need. Normally its maturity period is 1 year and more than one years. The main holders of these bonds are organizations and financial institutions and interest rate is fixed. Government of Nepal initiated the process of selling special bond since 2023. Till 2062 Poush, Government of Nepal has Rs. 3465.627 million liability on special bond. (Rastra Rin Khabar Patra, 2062 Chaitra)

**b. Corporate Debt Securities Market:**

The market deals on the debt securities issued by the corporation is known as the corporate debt securities market. Corporate debt securities market is very new and initial stage in Nepal. Firstly, Bottlers Nepal issued debenture of Rs. 5 million in fiscal year 1986/87 and was redeemed at maturity. Similarly, Shree Ram Sugar Mills Ltd has issued debenture worth Rs. 93 million in the fiscal year 1997/98 A.D. it was convertible in nature and having 14% coupon rate annually. But due to insufficient public response it failed in its target. The whole money was refunded before maturity.

While talking about involvement of banking sector in debt securities market of Nepal, only six banks viz. , Himalayan Bank, Nepal investment Bank, Everest Bank, Bank of Kathmandu, Nepal industrial and commercial Bank Ltd, and Nepal SBI Bank Ltd have issued debentures.

The bonds issued by above banks have some similar features which are as follows:



.N	Company	Amounts Rs. (Million)	Maturity period	Coupon rate
1	Himalayan Bank Ltd.	360	7 Years	8.5%
2	Nepal Investment Bank Ltd.	300	7	7.5%
3	Everest Bank Ltd	300	7	6%
4	Bank of Kathmandu	200	7	6%
5	Nepal Investment Bank Ltd	250	7	6%
6	Nepal Industrial and Commercial Bank Ltd.	200	7	6%
7	Nepal SBI Bank Ltd.	200	7	6%

Besides this coupon is payable in semi-annual basis, unsecured in nature and par value of Rs. 1000. The above presented statement of Nepalese debt securities markets shows Nepalese government is more forward than corporate sectors in exercising debt instruments. It is clear that in growth of debt securities market of Nepal, there is great contribution of NRB, Security Board Nepal, Commercial Banks, Finance Companies, Public-Government, Private Organization.

There has been made some important legislative provision, which are directly and indirectly concern on debt securities market of Nepal which are prevailing securities legislation.

- ) Security Exchange Act, 1983
- ) Security Exchange Regulation, 1993
- ) Security Allotment Guidelines, 1994
- ) Issues Management Guidelines, 1997
- ) Membership of stock exchange and transaction bye- laws, 1998
- ) Securities regulation and issue approval guidelines 2000 etc.

**Other Relative Acts:**

- ) Company Act, 1997
- ) Insurance Act, 1992
- ) Commercial bank Act, 1994
- ) Finance Company Act, 1986 etc.

**1.3 Statement of the Problem**

Debt securities are assumed least risky securities of investment. There is fixed regular interest income in such securities and very few chances of losing principle and interest even in liquidation of company. Debt securities are means of maximizing value of firm. Funds required in the process on industrial expansion and growth can be received from issuing debt securities. Government and other local authorities also can receive fund required in development of country and local community. So it is important types securities, but Nepalese debt securities market is not being able to grow significantly. Even having so many opportunities, only few concerns arises on it due to which there may be lack of information about the debt securities market to the investors and even to the issuing agencies. So it is necessary to study about debt securities market. This study is mainly related to debt securities market of Nepal.

Nepalese economy is at underdeveloped stage. There is lack of appropriate investment opportunities due to which investor can not find suitable sector to invest their fund. On the other side, debt securities are appropriate investment sector to potential investor. But the investors have not given much concern towards debt securities. Most of the government securities are held by institutional investors rather than individual investors.

The investor who invest in debt securities and the deposit holders who make deposit at commercial bank are the same group of people, both of them get fixed income (i.e. interest). While studying trend of average interest rate on deposit of commercial banks, it is gradually decreasing, but the potential savers are not so interested towards debt securities.

In corporate sector, there is only few issuance of debenture. In each issuance, there is over subscription from these exercises. It may be due to few issuances or public concern towards debt securities market is increasing. Anyway, there are too much confusion for investors and issuing agencies. Now the question may arise, there may be inadequate legal provision or absence of large business organization or limited supply of quality bonds due to which Nepalese debt securities market is under developed stage.

The general conclusion that the development of debt securities market influenced not by a single factor but number of factors are responsible such as legal provisions, quality of bond, investors, issuing agencies, government, interest rate etc.

#### **1.4 Research Question:**

- a) What is the position of debt securities market in the structure of Nepalese securities market?
- b) What is the contribution of different types of investors in government securities?
- c) Who are the key investors and what are the key features of Nepalese corporate debt securities?
- d) What are the main problems of existing debt securities market in Nepal?
- e) What should be done for systematic growth of Nepalese debt securities market?

## **1.5 Objectives**

The specific objectives of this study are as follows

- a) To study the position of debt securities market in the structure of Nepalese security market.
- b) To analyze the trend and ownership pattern of government securities.
- c) To examine key investors and characteristics of Nepalese corporate debt securities.
- d) To identify the major problems of debt securities market growth in Nepal.

## **1.6 Significance of the Study**

This study is concerned with the present status of Nepalese debt securities market. Debt securities market is the important part of capital market. This study will make clear about the debt securities market and its present conditions and problems.

It is indispensable fact that development of the debt securities market is essential because it is likely to play vital role for the improvement of the economic status of the nation through industrialization. Therefore, this study is significant because the debt securities market growth is national phenomenon and it helps to industrialization. I hope the output of the study will be helpful for potential bodies, governing bodies, brokers, researcher, students and market makers.

## **1.7 Limitation of the Study**

Due to various constraints this study is focused to analyze the only certain aspects of debt securities market in Nepal. Having outlined the objectives,

statement of problem and methodology of the study, now brief note of its principal limitation which is as following:

The present study is based on pure aspect of debt securities market. The study, thus, relates to analysis of debt only such as receivable debt, bank loan, inventory loan, informal borrowing, overdraft etc have not been covered.

This study is based on both primary and secondary data. Secondary data has the own limitation (i.e. reporting error) and in case of primary data the respondent, sometimes may not be willing to give exact opinion. And some of the questionnaires have been returned by the respondent with incomplete responses.

In the context of Nepal, data problem is acute in corporate and government level. Related sector still feel burden to provide required data of all necessary. There is not only systematic data base which makes it difficult to carry out on any research in Nepal. This problem is also incorporated with this study.

## **1.8 Organization of the Study**

This study has been organized into five chapters. The titles of each chapter are as follows:

- Chapter I : Introduction
- Chapter II : Literature Review
- Chapter III : Research Methodology
- Chapter IV : Data Presentation and Analysis
- Chapter V : Summary, Conclusion and Recommendation

The rationale behind this kind of organization is to follow a simple research methodology approach the contents of each of chapters of the study are briefly mentioned below.

**Chapter I:** As already mentioned, this chapter describes the major issues to be investigated on long with the objectives and scope of the study.

**Chapter II:** Consists of 'Review of Literature'. This chapter is divided into two sections viz. Theoretical analysis and brief review of related literature.

**Chapter III:** Explains the "Research Methodology" used in this research to find the result for meeting the objectives set in the chapter one.

**Chapter IV:** Focuses on the "Data Presentation and Analysis". This is the main and key chapter of the research study.

**Chapter V:** States the "summary, conclusion and recommendation" of the study.

## **CHAPTER–II**

### **REVIEW OF LITERATURE**

Review of literature means reviewing research studies or other relevant proposition in past studies. This chapter refers to a glance to the past studies and progress on the similar field. All those studies related to the “Development of Nepalese Debt Securities Market” are categorized into three sections. The first section is conceptual framework which covers the concept of creditorship securities, meaning of debenture, bond and their classification, which are developed by various scholars and writers. The second section refers to review of related studies. It includes review of journals and review of dissertation. And the third section refers to the valuation of the bond. All the reviewed literature has been presented orderly as follows.

#### **2.1 Conceptual Framework**

A corporation may raise capital in two ways (i) By taking the person who furnishes it into the enterprises as owners, and (ii) By making them creditors. Those who become owners are known as the shareholders or stockholders and the capital they furnish is known as equity capital. The money that creditors furnish is known as borrowed capital. The former serves as the base, while the latter is only subsidiary because without the permanent investment of equity capital by the share or stockholder it would not be possible for a corporation to borrow.

Financially, there seems to be no difference between equity capital and borrowed capital both the owner and the lender supply the corporation with funds, both seek to obtain income from their investment and both expect their principal to be returned to them. Legally, the contract between

the lender and borrower provides that the borrower will pay the lender a specified rate of interest during the life of the loan and repay the principle at specified time.

### **2.1.1 Meaning of Debenture**

The word “Debenture” is derived from the Latin word Debre which means “To owe” people who used to supply provisions to royal household in ancient days, were given vouchers which were paid after sometimes on presentation. Thus, a debenture is an acknowledgement of a debt, given under the seal of company sum at a specified date for the payment of interest “usually half yearly” at a fixed rate percent, until the principle some is repaid and it may or may not create a charge on the assets of the company as security for the loan.

### **2.1.2 Classification of Debentures**

Debentures may be classified on basis of

- a) Transferability
- b) Security, and
- c) Redeemability.

#### **a. Transferability:**

**i) Registered Debenture:** They are registered “interred in books of the company and are payable to the registered holders who cannot negotiate their holdings, except in the manner laid down in the law. The interest is also payable to the registered holder through the interest warrant. The interest coupons are, how ever, negotiable.

**ii) Bearer Debentures:** The debenture which are not registered in the books of the company and payable to the bearer therefore,



are called bearer debentures. The interest due is paid to the holder irrespective of identity. Coupons are frequently attached to such debentures for the payment of interest. They are transferable by mere delivery.

**b. Security**

**i. Simple, Naked or Unsecured Debentures:** On such debentures no security is given to the lender for the payment of interest and repayment of capital. Their holders rank as ordinary creditor for the company in liquidation. Such debentures are not very popular since nobody likes to put his capital to risks.

**ii. Secured or Mortgage Debentures:** These debentures are secured by a charge on assets of the company. In case of default, the creditors can make good his loss from the assets charged. The charge may be fixed “specific” or floating charge.

**c. Redeemability**

**i. Redeemable Debentures:** These are repayable after a stated period of time.

**ii. Irredeemable Debentures:** These are not repayable during the life time of the company issuing them. They are also known as perpetual debentures. When the company goes into liquidation, they become repayable. They also become repayable in case of serious default on the part of the company (Non payment of interest).

### **2.1.3 Meaning of Bonds**

A corporate bond is a written promise, under seal, to pay a specified sum of money at a fixed time in the future, usually more than ten years after the promise is made, with interest at a fixed rate, payable at specified

interest date. The amounts of bond are ordinarily thousands. Usually a corporate bond is one of a number of similar bond, all of which are covered by a so called deed of trust that sets forth the obligation of the corporation and rights of the bond holders. The deed of trust is made out to a trustee who represents all of the bondholders, however and wherever they may be at any time.

**The more prominent features of a bond are:-**

- A definite promised to pay, as to principal amount.
- A definite promised to pay, as to interest.
- A definite life.
- A statement of the tender or medium of payment.
- The place of payment.
- Reference to the bond indenture for other writes and power such as limitation upon the issuance of additional securities, curtailment of management prerogative in the event of failure to meet prescribed conditions, action in the event of default of interest or principle payment etc.

**2.1.3.1 Classification of Bonds**

Bonds are by far the most important mode of corporation finance. They have such a large variety of forms that it is almost impossible to arrive at an agreed classification. Rigid classification is impossible, tentative groupings may be presented as an aid to study. Broadly four basis have been adopted for the classification of bonds.

### **According to Character of the Security of the Bonds:**

1. **Unsecured Bonds:** Debentures bond, Income bonds, receiver certificate, Convertible bonds and Short-term notes.
2. **Secured or Reinforced:**
  - i) **Non property Security:** Assumed, Guaranteed and joint bonds
  - ii) **Property Security**
    - a. **Personal Property:** Collateral trust, Equipment trust, Sinking funds bonds.
    - b. **Real Property:** First Mortgage, General mortgage, Consolidated mortgage, First and refunding mortgage, First and consolidated mortgage bonds.

### **According to Purpose of Issue:**

1. Civil, Drainage, School, Street etc.
2. Corporation improvement: Refunding, purchase of equipment or plant and consolidation etc.

### **According to Payment of Interest and Principal**

1. Payment of interest:- Registered, Coupon and Contingent etc.
2. Payment of Principle:- Collateral, Convertible, Serial, Sinking fund and maturity etc.

#### **2.1.3.2 Parties to Bond Issue**

There are three parties to a bond issue

1. The corporation wishing to borrow the money
2. **The Trustee:-** Through whom the corporation deals with the bondholder. Because there may be many bond holders (when bond are sold to the public) scattered widely, under the circumstance it is not practical to deal with each of them

individually, and the corporation appoints a third party as a trustee to represent the bondholders. The corporation makes an agreement with the trusty or trust company, which variously call the deed of trust, trust agreement, trust indenture etc. Setting forth the obligation assumed by the corporation and the rights to be acquired by the bondholders.

3. **The Bond Holders:-** Who participate in the loan and who receive as evidence of there participations one or more bonds. The contract between the corporation and the bondholders consists of the bonds and the deed of trust.

### **2.1.3.3 Document of Bond issue**

Bond is a sort of contract between the corporation and the bondholders. There are several conditions governing the issue. The conditions are laid down in a document and serve as the basis of the contract an the protection to the bondholders. In the United states of America, there are three such documents in use.

- a. **The Indenture:** One of the must important instrument relating to corporate financing in USA is the indenture. An indenture is a contract or an contract or an agreement between the company, the trusty and the bondholders, which covers the terms and conditions pertaining to the bond issue. It is usually called a mortgage indenture when used in connection, which securities supported, by a mortgage, when used with unsecured obligation, it is generally known as trust indenture. Corporate indenture, or trust agreement. Besides including the duties of the trusty, it contents complete provisions having a bearing upon the bond issue as a result, the indenture is commonly as large as a book covering fifty several hundred pages, the existence

and contents of which are known to but a few bondholders seldom would any on the asked read it. Yet it is the source of bondholder's rights and the corporation's obligations. The following summary of its contents may clear its nature and purpose:

- Preliminary recitals of the parties, authorization of the bonds, and the form of the bonds, interest coupons, registration and trusty's certificate.
- Statement of the mortgage or deed of trust with a detail description of the property security.
- Covenants of the company issuing the bonds to pay the principle and interest when due, to carry insurance and pay taxes, and usually to protect the bonds with such provisions as limitation of additional securities issues according the term of indenture, limitation on dividends on common stock in the event of failure to meet prescribed standards.
- Provisions covering the sinking fund and the redemption of the bonds.
- Statement of the duties of the trustee.
- Definition of defaults and provisions for action by the trustee in this event.
- Miscellaneous provisions covering supplemental indentures, status of bonds in the event of merger or consolidation, bondholder's meeting etc.

**b. The Bond:** The bond instrument itself merely contents of promise to pay a certain specific amount of total debt with interest and gives a summary of the main terms of the borrowing. The bondholders most

look to the indenture for the full details of the issue. The bond is negotiable instrument executed by the borrower, usually in the name of bearer. This instrument then passes without registration, though by election a purchaser may choose to have registered bond in his own name. Each one of the bonds is a unique part of the whole loan, the full terms of which are contained in the indenture. A bond issue without security would be complete with a certain of the two instrument (Indenture and Bond). Should the issue have and agreement for mortgage security, the indenture would describe the full term of the mortgage also.

- c. **The Mortgage:** When it is desire to give security upon the real or personal property as a grand of priority in payment to a creditor, a document is special form known as mortgage is made. In the case of corporate issues, this mortgage will be the signed by the corporations and made over the trusty of the bond issue part of the indenture. The trusty becomes the legal holder of the mortgage but on behalf of the equitable interest of the bondholders. This instrument is placed upon the public record in the accordance with the feeling requirement of each jurisdiction where any of the property is located.

#### **2.1.4 Valuation of Bond.**

The value of a bond is the sum of the present value of the periodical interest payments and the par value that is due at the end of bond life. As a matter of fact, the market value of a bond is affected not only by its par value and the rate of interest, but also by several other factors, such as the market price, bond life, and the bond buyer's opportunity rate of return or the market rate of return on the securities of similar risk. Therefore, the bond value ( $V_b$ ) is a function of several factors as presented below.

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

Here,

F= face value or par value

N= No. of years of bond life or maturity period.

I= interest rate specified in the bond (coupon interest rate)

K<sub>b</sub>= opportunity rate or market rate of return or bond

P<sub>m</sub>= market price of bond.

#### 2.1.4.1 Valuation of Perpetual Bond

The perpetual bond pays a specified amount of interest every year forever and never returns the principal. The return from the bond is just a series of interest payments for infinite period. Therefore the present value of a perpetual bond would simply be equal to the capitalized value of on infinite stream of interest payments. If bond promises on fixed annual payment of I forever, its present (intrinsic value V<sub>1</sub> at the investor's required rate of return for this debt issue, K<sub>d</sub> is

$$\begin{aligned} V &= \frac{I}{(1+K_d)^1} + \frac{I}{(1+K_d)^2} + \dots + \frac{I}{(1+K_d)^t} \\ &= \sum_{t=1}^{\infty} \frac{I}{(1+K_d)^t} \\ &= I (PVIFA, K_d, \infty) \\ &= \frac{I}{K_d} \end{aligned}$$

Thus, the present value of a perpetual bond is simply the periodic interest payment divided by the appropriate discount rate per period.

### 2.1.4.2 Valuation of Callable Bond or Non Zero-Coupon Bond:

The value of a bond is the sum of present value of the interest for the remainder of the bond life and the par value. The equation to calculate the value of callable bond is as follows.

$$\begin{aligned}
 V &= \frac{I}{(1 + K_d)^1} \Gamma \frac{I}{(1 + K_d)^2} \Gamma \dots \dots \dots \frac{I}{(1 + K_d)^n} \Gamma \frac{M_v}{(1 + K_d)^n} \\
 &= \sum_{t=1}^n \frac{I}{(1 + K_d)^t} \Gamma \frac{M_v}{(1 + K_d)^n} \\
 &= I (PVIFA, K_d, n) + M_v (PVIF k_d, n)
 \end{aligned}$$

### Semi-annual Compounding of Interest

The interest on bonds may be paid at different time intervals generally every six months or once a year. Since the valuation process is based on time value of money, the interest payment period affects the value of bond. The equation to calculate the value of bond with semi-annual interest payment is as follows.

$$\begin{aligned}
 V &= \sum_{t=1}^{n/2} \frac{I}{2} \frac{1}{(1 + \frac{K_d}{2})^t} \Gamma \frac{M_v}{(1 + \frac{kd}{2})^{n/2}} \\
 &= I/2(PVIFA kd, n/2) + M_v(PVIF kd, n/2)
 \end{aligned}$$

### 2.1.4.3 Zero Coupon Bonds

A Zero coupon bond makes no periodic interest payments but instead is sold at a deep discount from its face value.

The valuation equation for zero-coupon bond is as follows.



$$V = \frac{Mv}{(1 + k_d)^n}$$

$$= Mv (\text{PVIF } k_d, n)$$

#### 2.1.4.4 Yield to Maturity (YTM)

The yield to maturity (YTM) is the rate that equalizes the price with the value. To computing the YTM. Some important assumption are.

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

**There are several ways the YTM can be calculated, such as**

- a) Trial and error method which finds the YTM by using a rate that makes the value of bond equal to the price. Which can be expressed as follows.

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

- b) Approximate YTM formula.

$$\text{YTM} = \frac{\text{Interest} + \frac{\text{face value} - \text{Purchase price}}{\text{Years to maturity}}}{\frac{\text{face value} + \text{Purchase price}}{2}}$$

But it should be used with some caution as it is useful for a bond of short life only.

## **2.2 Review of Related Studies**

### **2.2.1 Review from Journals.**

Shiba Raj Shrestha in his article, "An introduction to Bond Pricing" has stated that the financial market in Nepal is relatively undeveloped. A small corporate bond market is in operation. The government bond market is more developed, but prices are not market oriented. The activities in the capital market is hampered by following four problem.

- ) The issuer and investors base in insufficient
- ) Infrastructure of laws, regulation and institution is weak.
- ) Nepal Rastra Bank and the Securities Board of Nepal have overlapping roles, and
- ) Incentives and private initiative are not strong enough to drive market developments.

The ability to develop the local corporate bond market is seriously constrained by a weak supply of and demand, for the product. The number of potential blue chip issuers and the size of the collective investors base are insufficient to create an institutionalized market and too few financial instruments are available in which to invest. An effective interest rate structure, a fundamental ingredient of an efficient and deregulated business environment, is absent, as are the credibility, Accountability and trust that come from solid corporate governance.

In Nepal, the need to develop a domestic bond market received increased attention with the introduction of financial sector reforms and restructuring programmes in recent years. Initiatives have been taken in regard to providing conducive macro economic policy environment, strengthening the institutional and legal framework and market infrastructure including payments and settlements systems. It has enabled the issue of more long term debt securities and facilitating their trading in the secondary market, aiming the development of depth of the market and liquidity of long term debt instruments. The experience thus far indicates that this has been a process of undertakings of many complexities involving immense challenges, as some of the problems that inhibit the market development are deep rooted in the economy. Though the licensed market makers are active in primary issue of government bonds. They are, however, effortless in the secondary market as well as in the case of issue of corporate bonds. The fair pricing is still lagging behind the normal activities amongst the market makers. Since last fiscal year the government long term bonds have been listed in NEPSE. However, the trading activities are almost nil. Thus, the concerned authorities should effort for development of bond market by assuring fair price dealing.

Nepal has taken a few steps towards becoming a more efficient market place, but it still has a long way to go. Several critical foundations for active financial markets do not exist and there are constraints on the attributes and abilities of key market participants that would make trying to build a corporate bond market extremely difficult at this time. At the regulatory level, clear boundaries are needed between the Nepal Rastra Bank and the Securities Board of Nepal. The Nepal Rastra Bank could act as a central bank only with responsibility for areas such as monetary policy, payment systems and bank supervision. The Securities Board of

Nepal could be the sole regulator of the corporate fixed income securities market, which will help reduce confusion and help increase its credibility in the market place.

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 the secondary market those are call 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 borrow 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 is appreciated in the market more over, international loans substitute bonds in emerging markets. In Nepal, international loan use to substitute the domestic debt securities market of government. Bond price should be determined competitively in market. Which is lacking for the government debt so there may be problem of corporate and severing bond market development. The market paved the way for debt security market development when market interest rates goes down price of previously issued bonds at higher coupon rate goes up and investors receive capital gains. While government borrows at rate lower then market rate of interest, the government interest rates some times provide real return on government debt security in negative at a time when the 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. NEPSE has not started transacting governments securities in its floor. Buy and sell cannot be placed through electronics means and exchange of government securities is hindered by the fixed price of the securing. Securitized government debts, as percentage of GDP is low marketable government securities are lower than 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 holders of government bank. Higher proportion of ownership of government security needs to be transferred to the house holds sector for secondary market development

Shiba 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 should have a number of bad effects as illustrated below.

- If the cost of servicing the debt accounts for a large part of the government revenue, the scope for public spending on desirable items suchas health, education and infrastructure is correspondingly diminished.
- If the government preempts a large part of the 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 stokes up inflation.
- The building up of excessive debt today entails higher servicing cost 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 Mann in their article "Explaining the rate spread on corporate bonds." Explain the spread between rate 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 a risk premium in corporate bonds spreads and if so, why it exist , they have shown that the spread can almost entirely be explained by three influences, the loss from the expected loss, state and local taxes which must be paid on corporate bonds but not on government bonds and a premium required for bearing unsystematic risk.

Rabindra Bhattarai in his article, "Debentures are welcome" in 2004 has started " Bond market 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 recently issued corporate bonds, it can be predicted that more of corporate bonds will be expected to issue in the future, particularly from the banks to meet their higher capital requirement under NRB directives.

### **2.2.2 Review of Thesis**

Acharaya (1968) studied on "A Case Study on Public Debt in Nepal" has reached on the conclusion that, public debt is most popular in 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 the purchasing bonds issued by government should be developed among the people so that any of difficulty may not be faced in getting the bonds purchased by people. He also concluded that investors have full trust on government bond and subscription of government bond is higher than the bonds issued by other non government institution.

Joshi (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 nation's national topography and human behavioral limitation. He concluded that the internal borrowing is most essential to develop the money and capital market in the nation. He recommended floating or introducing the different public borrowing schemes 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 (1988) in his thesis "Burden of public debt in Nepal", has 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 toward 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 the debt securities market is to provide and allocate funds to firm with profitable investment

opportunities and to offer an avenues of liquidity for individuals to invest current income or borrow against future income there by 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 (1997) studied on "Public debt in Nepal", he has concluded that the internal borrowing mobilization for development purpose has been fluctuating and the banking sector has dominated the total internal borrowing. Government should initiates policies to attract maximum borrowing form non banking sector. It is the most non-inflationary source of internal borrowing since it is simply transfer of idle saving form people to government for development purpose

Khanal (2000) studied on "Public debt in Nepal", A study of its structure and Burden form 1974/75 to 1997/98 has summarized that internal public debt has played a significant role in financial resources for development expenditure as well as in growth of money and capital markets, and it facilitate 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 government should try to maximize the mobilization of internal resources for development purpose and excessive dependency upon foreign assistance for development program should be reduced and it should be continued to the desired extent.

Sharma studied (2001) 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. These mean that the government is efficacy us to draw the attention of rich and poor, 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 area are more aware to the government securities. The study also draws the conclusion that the people who have not sufficient time to run the private enterprise and who are not dexterous to grab the opportunity in the market 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 (2002) in his thesis "A study on government securities practice in Nepal". Summarized that government securities is issued to meet short term and long-term financial requirement. The government expenditure through public debt is quite beneficial to the nation if used productively. But a large public debt may create problems in the economy in future. He further given in his findings that, 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 the government securities. Both poor as well as rich, and educated as well as uneducated people are

interested towards government securities. He concluded that Nepalese are attracted towards government sectors most of the investors of Nepal are risk averter and they need less risky investment. Lastly he recommended that people pride themselves on their financial contribution to the nation, if there are suitable debt securities to them. Therefore government should develop various methods to influence the business and private individuals to buy more and more government securities.

Kafle (2003) in his thesis "A Problem and Prospect of Debt Market Growth in Nepal" has summarized, capital market of Nepal is in infant stage and debt securities market is growing but it is not growing as expected. The heavy reliance of government in foreign debt has created huge problem in debt securities market growth in Nepal. According to him, in Nepal investments made on impulse rather than through 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 (2003) studies "Problem and Prospects of Debenture Market Growth in Nepal", 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 in Nepalese debenture

market growth. Not only problems, he also found many prospects of debenture market growth. Additional capital supply, tax saving interest income, means of meeting deficit budget, growth on public debt are some plus point which signifies the prospects of debt market growth.

In this way there are various studies conducted by different researchers 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 capital market should function well. That means its equally and debt markets are well existed and functioning well. But in case of Nepal, the debt market of corporate bodies is limited in its existence. So the reason for its limited existence is a matter of curiosity. Therefore the present study is focused on the development of debt securities market in Nepal

## **CHAPTER –III**

### **RESEARCH METHODOLOGY**

Simply 'research' refers to search again and again. Research means to get new things, techniques and to verify existing tools, techniques by hypothesis and other relevant information. Methodology is the research method used to complete the study systematically and test the hypothesis. This chapter aims to familiarize the relevant techniques of data collection analysis of data using statistical tools and techniques required for preparation of research report and include research design, population and samples of the study, Sources of data and research methods.

#### **3.1 Research Design**

Research design refers to the entire process of planning and carrying out a research study. It is outline of a good research employed for the investigation of the required result. This study describes and explores the scenario of issues of financial instruments as well as tries to analyze the investor's preference toward the instrument. So descriptive , exploratory and analytical methods are combined as the study demands for the best output.

#### **3.2 Population and Sample**

The entire number of investors of financial instruments is the population of this study. The total population of investors is very large, Which includes very small investors to analyst and professional's investors. Investors were taken as subjects or random sampling basis. 122 investors were taken as subjects for this study including all types of investors randomly like small, large, male, female, less informed, analyst and so

on. Survey was conducted on various points like NEPSE floor, brokers office, and other several places.

### **3.2.1 Rationale of Sampling**

Investors are surveyed as per the accessibility i.e. those which are in Kathmandu valley only irrespective to their native place. Only 200 questionnaires were distributed where as Just 122 responses could be collected. Institutional investors are selected randomly from among those who have invested in government securities and share of other companies.

### **3.3 Sources of Data**

To know about the financial instrument the historical data are used for this the secondary sources like NEPSE reports, SEBON reports, NRB reports, reports of issue manager etc are used. Various annual reports and other publication are used to collect the data concerned with institutional investors on the other hand to know about the preferences of the investors primary data are collected. Thus, both primary and secondary sources are used for the data collection.

#### **3.3.1 Data Collection Techniques**

To collect the primary data questionnaire survey has been done along with some interviews and observations. Structured questionnaire are use in this regard and some unstructured interviews are also taken as per necessity for the secondary data different publication, reports, journals, bulletins etc of different relevant source like NRB, NEPSE, SEBON etc are used.

### 3.4 Data Analysis Tools and Techniques

Different relevant statistical tools are used to find out the best appropriate results as per the designated objectives of the study several hypotheses are also formulated during the course of study and analysis. The study has used the mix of statistical tools from simple percentage analysis to the hypothesis testing tools as per the requirements and their suitability. The statistical tools that are applied in this study are:

#### 3.4.1 Non Parametric Statistical Tools

- a) **Median Analysis:** Median gives the middle value of the numbers of divides the total observation into halves one half comprising the various grater than median and other half comprising smaller value than median. This tool has been selected to find the preferences of investors. Median has been calculated on the basis of rank sum. So those observations which have rank sum more than median are the preferred observation and vice-versa.
- b) **Chi-Square ( $\chi^2$ ):** Chi –square test has been used to check whether there is any association between two independent variables as well as to check the uniform. Distribution of investors responses toward various option. Chi- square statistic helps to test the association as well as uniformity.

Formula of chi-square is given below

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(n_{ij} - E_{ij})^2}{E_{ij}} \quad \text{Where,}$$

$\chi^2$  = chi-square statistics

R= no. of rows

C= no. of columns

$n_{ij}$ = observed no. of cases categorized in the  $i^{\text{th}}$  row of  $j^{\text{th}}$  column

$E_{ij}$ = no. of case expected in the  $i^{\text{th}}$  row of  $j^{\text{th}}$  column

$$E_{ij} = \frac{R_i C_j}{N}$$

N= total no. of case

d.f. = (r-1) (c-1)

- c) **Coefficient of Contingency (c)** : Coefficient of contingency has been used as a supplement to chi-square test what is the degree of arrangement or association between two variables. Coefficient of contingency can be calculated by given formula. Higher 'C' represents the grater degree of association.

$$C = \sqrt{\frac{\chi^2}{N\Gamma t^2}}$$

Where,

$t^2$  = chi-square

N = total no. of observation

- d) **Friedman two-way analysis of variance by Rank  $t^{r2}$** : During The analysis the options or the objects are ranked as their rank sum. Those with highest rank sum are given the first rank to denote the best one. To test the ranks assigned to turn. Friedman chi-square has been calculated and tabulated value on the desired level of significance

and required degree of freedom. Null hypothesis is accepted if the calculated value is less than tabulated value.

$$t^{r^2} = \frac{n(t-1)ss\ condition}{ss\ people}$$

$$ss\ condition = \frac{T^2}{n} - \sum \frac{G^2}{t_n}$$

$$ss\ People = \sum X^2 - \frac{G^2}{t_n}$$

Where,  $t^{r^2}$  = Friedman's chi-square

$X^2$  = Summation of square of rank

$n$  = No. of subjects

$t$  = no. of condition

$G = T$

$T$  = total rank/ rank sum

- e) **Spearman rank order correlation coefficient ( $r_s$ )** : To check whether the preferences vary with the size of investments/ investors. Spearman rank order correlation coefficient  $r_s$  has been calculated. This  $r_s$  gives the correlation between the assigned by two categories.

$$r_s = 1 - \frac{6 \sum d^2}{N^3 - N}$$



Where,

$r_s$  = spearman rank order correlation coefficient

$d$  = difference of rank

$N$  = no. of conditions

**Graphs:** Pie charts are used to show the sector wise and instrument wise coverage of total corporate securities issues.

**Charts:** Line charts are used to show the trend line of government securities.

**Bar diagram:** Bar diagram are used to show the ownership pattern of government securities.

## **CHAPTER -IV**

### **PRESENTATION AND DATA ANALYSIS**

The main of this chapter is presenting and analyzing data according to research methodology to attain the objectives of this study. In this chapter, presentation and analysis are shown as Analysis of secondary and analysis of primary data.

#### **4.1 Analysis of Secondary Data**

##### **4.1.1 Position of Debt Securities Market in the Structure of Nepalese Securities Market.**

Securities market is the back-bone of capital market in both developed and also developing countries. Securities markets are built on some elements, a number of issuers with financing needs, investors with need to place savings or other liquid funds in securities. Intermediaries that bring together investors and issuer and an infrastructure that provides a conducive environment for securities and settlement of transactions. Types of securities available in Nepal are limited as compared to the developed nations. The development and composition of securities market in Nepal are presented in table 1.

**Table: 1**  
**Position of debt securities market in the structure of Nepalese securities Market**

Year instrument	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Ordinary shares	227.90 (0.74%)	204.21 (0.63%)	224.74 (0.65%)	57 (0.16%)	119.40 (0.31%)	148 (0.30%)	412.46 (0.75%)	268.50 0.44%	528.76 (0.70%)	551.50 0.65%	657.50 0.379%	377.48 0.125%	379.83 0.208%
Rights shares	-	-	69.00 (0.20%)	275.20 10.76%	249.96 0.64%	30 0.06%	124.60 (0.23%)	365.79 0.60%	387.87 0.52%	162.24 0.19%	70 0.04%	949.34 0.541%	1013.45 0.556%
Preference share	16.50 (0.05%)	-	-	-	-	80 0.16%	-	-	140 0.19%	-	-	-	-
Debentures	-	-	-	-	93.00 0.24%	-	-	-	360 0.48%	-	3.. 0.173%	300 0.171%	850 0.466%
Mutual fund	100 (0.32%)	50 (0.15%)	-	-	-	-	-	-	-	100 0.12%	-	-	-
Government Securities	30631.2 98.89%	32057.9 (99.15%)	32241.8 (99.21%)	35890.8 0 99.08%	38406.5 99.81%	49669.7 (99.48%)	54357 99.02%	60043.8 98.96%	7320.7 98.11%	84645.3 99.05%	172267. 4 99.05%	173848.6 99.67%	179957.2 25 98.7687
Total	39975.6 (100%)	32312.1 1 (100%)	34535.5 4 100%	36223 100%	38868.9 6 100%	49927.7 100%	54894.0 6 100%	60678.0 9 100%	75037.3 3 100%	85459.0 4 100%	173294. 9 100%	175475.4 2 100%	182200.5 05 100%

Source: annual report SEBO 2005/06 and NRB quarterly economic bulletin mid July 2006.

Table: 1 shows that the total capitalization of shares. Bonds and government securities is dominated by government securities. The government securities represent 98.89% in 1993/94 and 98.7687% in the year 2005/06. It means corporate bonds and stock market represents only 1.11% in 1993/94 and 1.2312% in 2005/06. It shows that corporate securities market in Nepal is at initial stage. The equity shares are getting more and more popular among the corporate securities in the period of time. The equity issues approved by SEBO in 1993/94 was 227.90 million and it was 657.50 million in 2003/04 which is highest during the study period and comes to fall to 3.79.83 million in the year 2005/06. The right shares also issued for Rs. 69 million in 1995/96 which in followed by 275.20, 249.96, 30, 124.60, 365.79, 387.87, 162.24, 7., 949.34 and 1013.45 in the respective year 1996/97, 1997/98, 998/99, 1999/00, 2000/01, 2001/02, 2002/03, 2003/04, 2004/05, and 2005/06. This shows that the trends of issuing right share are increasing. However, the preference shares and debentures are not yet popular in Nepal. So far, there has been only the issue of preference shares and five issues of debentures during the period of 1993/94 to 2005/06. as listed in SEBO/N, the first issuance of debenture was made by Sri Ram Sugar Mill (SRSM) in 1997/78 and followed by Nepal SBI bank limited has issued debentures of Rs. 200 Million in 2005/06.

Above table also indicates that, the corporate securities market is dominated by equity shares. Government securities and corporate equity share were issued regularly overtime. But other types of securities were not issued regularly. Limited issuance made as debentures and preference share.

From the above table, it is clear that corporate debt securities are still unpopular in Nepal. But debentures of Rs. 1053 million is issued from

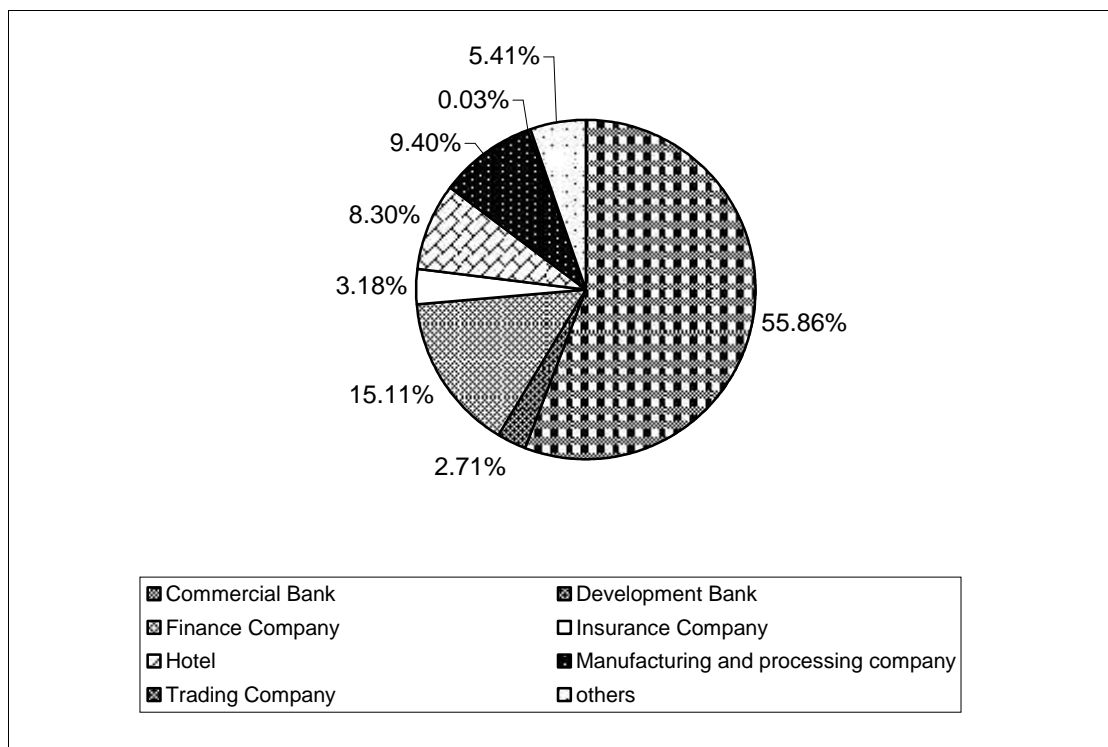
1993/94 to 2004/05 plus Rs 850 million in year 2005/06. in other words 0.24% of total securities is issued as debenture in the year 1997/98 which is followed by 0.48% in the year 2001/02 0.173% in the year 2003/04 0.171% in the year 2004/05 and 0.466% in the year 2005/06.

#### 4.1.2 Market scenario of corporate securities

**Figure:1**

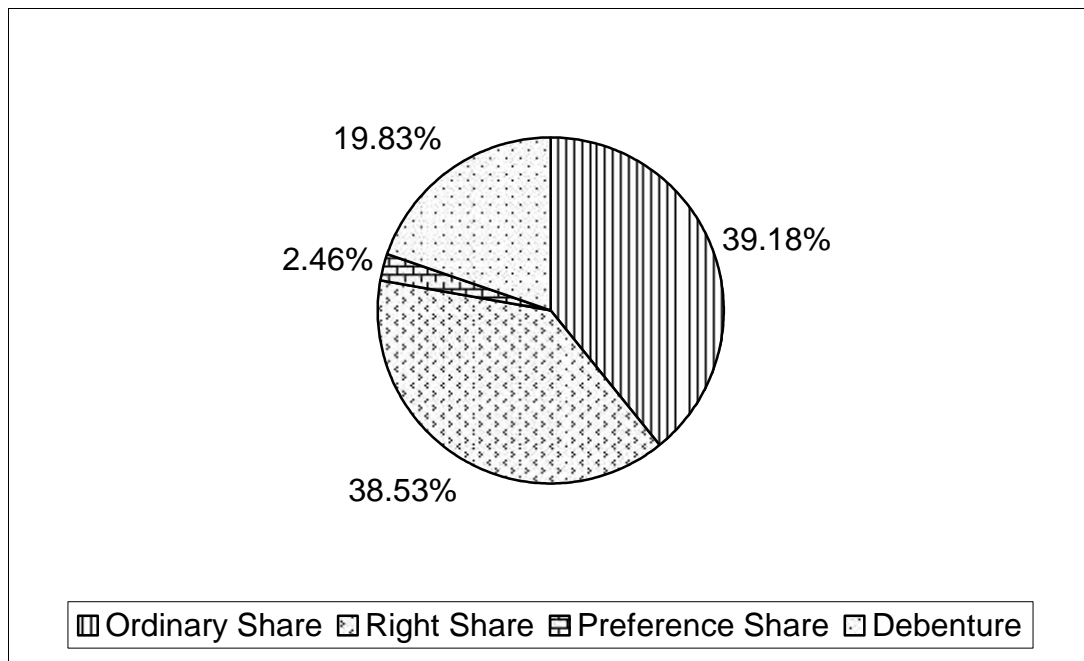
#### **Market scenario of corporate securities**

**Fiscal year 1993/94–2005/06.**



The above figure shows that the major portion of the issues are made by commercial bank. Which is followed by finance companies. Which occupies 15.11% manufacturing and processing companies occupies 9.04%, insurance company occupies 3.18%, development bank occupies 2.71% and Trading companies occupies only 0.03%.

**Figure: 2**  
**Instruments wise**



The above figure shows the financial instrument issued by the corporate sector. Which is 39.18% occupies by ordinary share followed by 38.53% by rights shares, 19.83% by debentures and 2.46% by preference shares.

Hence we concluded that the corporate debt securities are also dominated by ordinary and rights shares. There are number of reasons for a dismal state of corporate debt securities market in Nepal. First the population of corporate bodies which can sell debentures in the market is small. Second. Listed companies shows that a significant number of them belong to banking, insurance and finance companies (out of 135, they are 87) which can mobilize public money in their own ways or they prefer ordinary share or rights shares to raise capital or debenture is less preferable than the above two instruments. Third out of remaining companies, most of them are incurring heavy loss and hence are not in a position to raise funds from the market. Fourth, Nepalese organization heavily rely on bank loan instead of using loan from debt instruments the small size of financial requirements of organization also discourage the

use of debentures because of high flotation cost associated with debt securities.

#### **4.1.3 Ownership Pattern of Government Securities and T-Bills**

Total bonds and T-Bills of Nepalese government consists of treasury bills, development bonds, national saving bonds special bonds and heavily practiced public saving card. The ownership pattern of Government bonds and T-Bills deals with the portion of total governments bonds and T-Bills purchased by different institutions and individuals.

#### **4.1.4 Trend and Amount of Government Securities Issued in Nepal.**

Since 1961, Government of Nepal has started to borrow from the internal sources to fulfill the resource gap in the budget by means of issuing various kinds of securities. In the initial year 1961, the government issued only T-bills for internal borrowing. Now the government mobilizes internal borrowing by issuing T-bills. Development bonds, special bonds, national saving bonds and public saving cards. Table 3 shows substantial increasing occurred in the structure of government securities during the period of 1987-2006. The total amount of government securities amounted to Rs. 8997.4 million in 1987. Trend of government securities shows increasing and growth rate is positive in every years of observation by the end of 2006 the total amount reached to Rs. 89754.575 million. Although amount is in increasing trend the growth rate show the fluctuating trend.

**Table: 2**  
**Trend of total government securities from 1987 to 2006.**  
(Rs. In million)

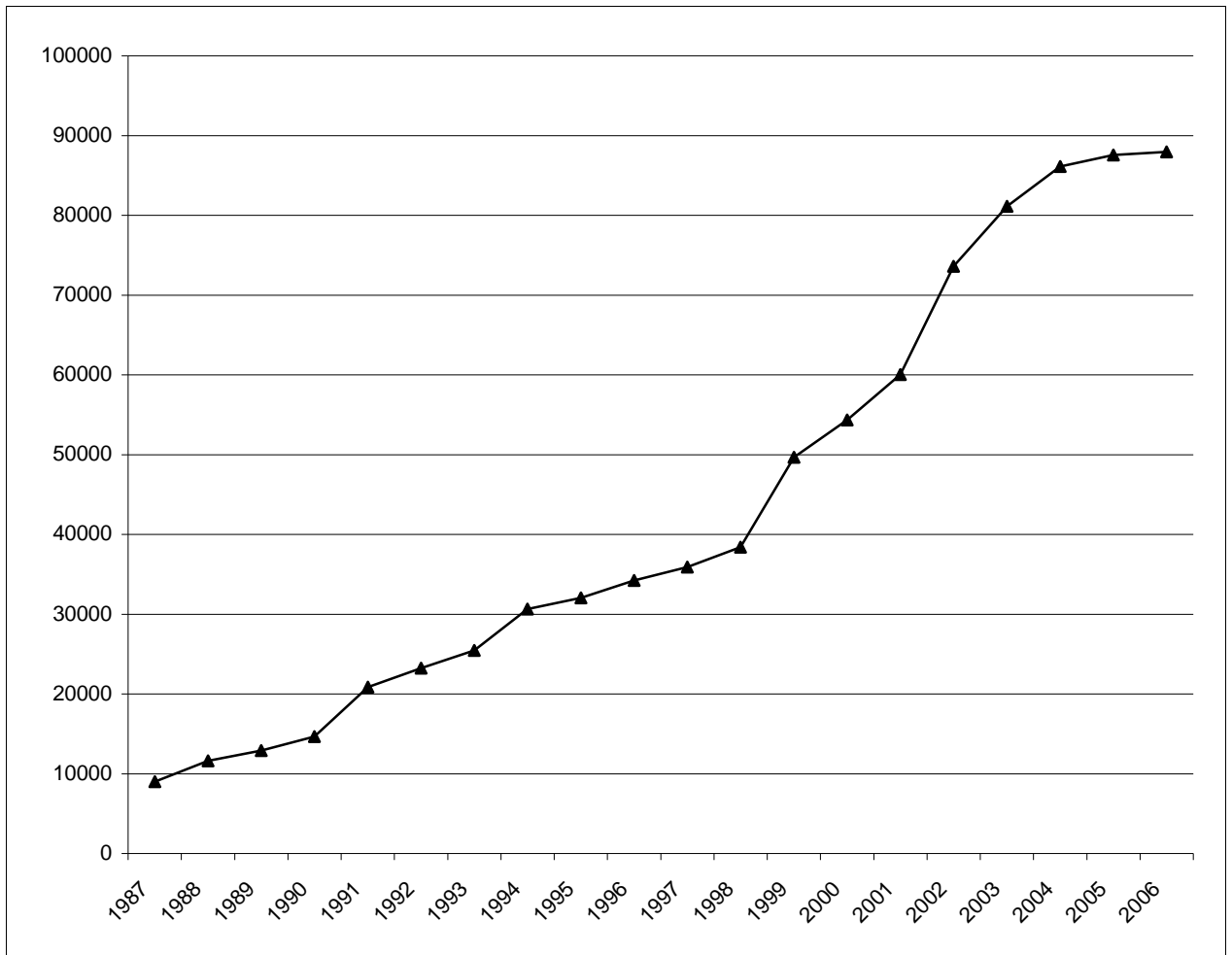
Year	Total amount of government securities (Rs)	Growth rate (in %)
1987	8997.4	-
1988	11636.0	29.33
1989	12887.9	10.76
1990	14673.1	13.85
1991	20855.9	42.14
1992	23234.9	11.41
1993	25456.0	9.56
1994	30631.5	20.33
1995	32057.9	4.66
1996	34241.8	6.81
1997	35890.8	4.82
1998	38406.6	7.01
1999	49669.7	29.33
2000	54357.0	9.44
2001	60043.8	10.46
2002	73621.0	22.61
2003	81148.3	10.22
2004	86133.7	6.14
2005	87564.3	1.66
2006	89954.9	2.78

Source: NRB Quarterly Economic Bulletin. Mid. July 2007

\*Growth rate is calculated by taking previous year as base year

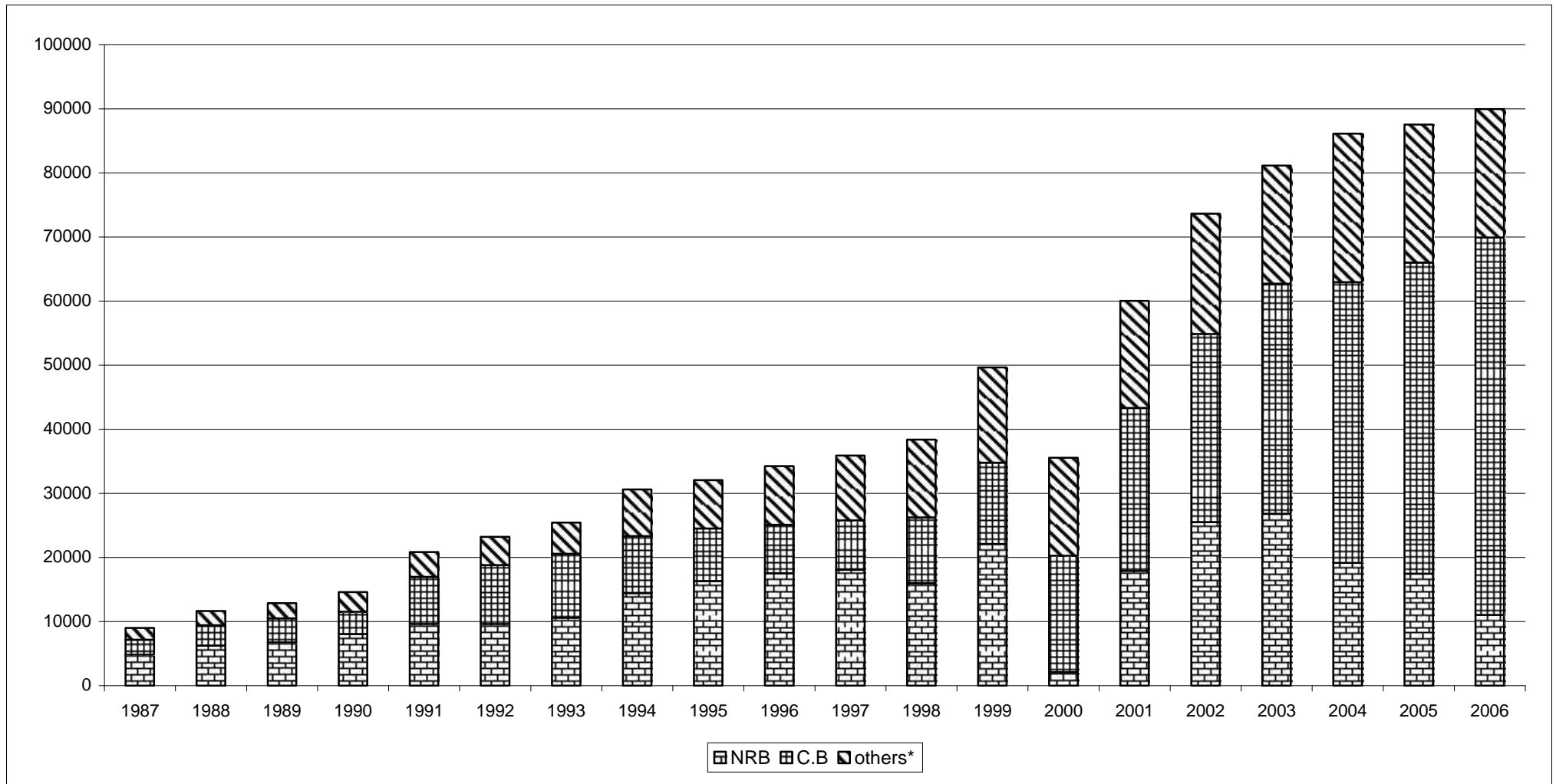


**Figure: 3**  
**Trend line of total government securities**



The above table shows the trend of the total government securities. The government of the Nepal had issues securities first time in the year 1987 for Rs. 8997.4 million, which is increase every year. In the 2006 it reached to Rs. 89954.9 million. From the figure also it is clear that the trend of total government securities is increasing trend. The ownership partner of total government securities is shown by the following figure.

**Figure: 4**  
**Ownership pattern of total bonds and treasury bills**



\* Manufacturing Processing Companies, Trading Companies and Individual Investors

#### 4.1.4.1 Trend of Treasury Bills

The table given below shows the amount of T-bills issued by the government of collects the required fund in 20 years period.

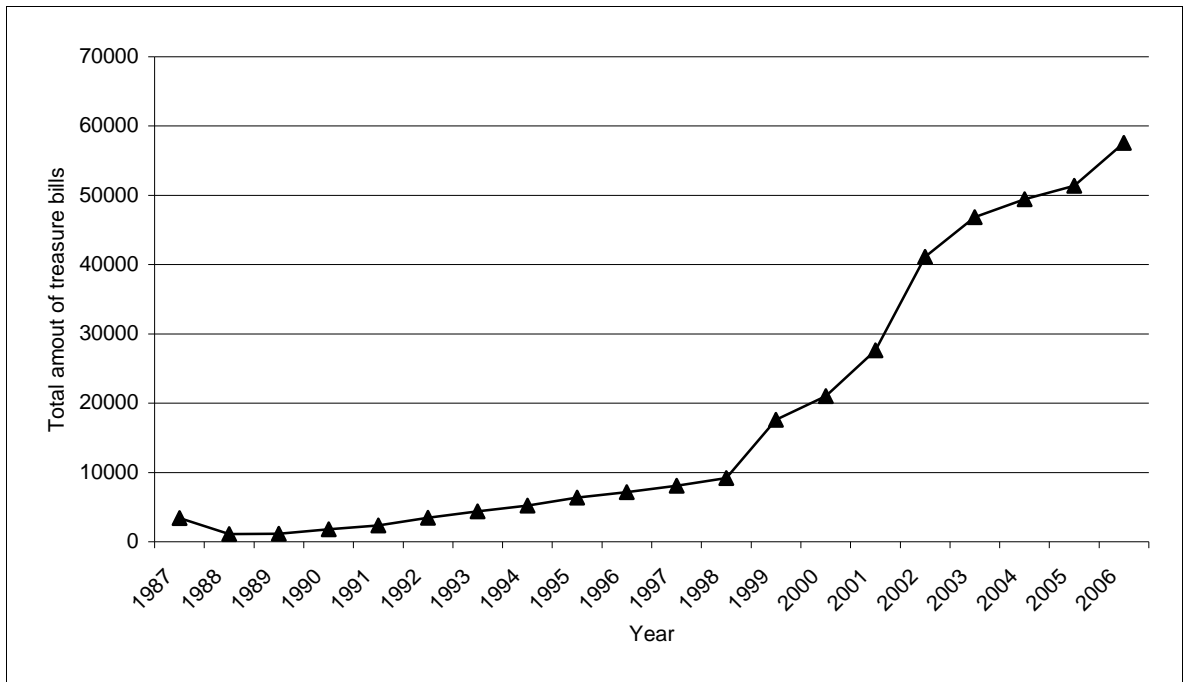
**Table: 3**  
**Trend of Treasury Bills**

Year	Total amount of government securities (Rs)	Growth rate (in %)
1987	3440	-
1988	1090	18.90
1989	4171	(71.37)
1990	1821	55.51
1991	2351	29.10
1992	3483.2	26.41
1993	4403.2	26.41
1994	5216.3	18.47
1995	6392.5	22.55
1996	7142.5	11.73
1997	8092.5	13.30
1998	9182.5	13.47
1999	17586.9	91.53
2000	21026.9	19.56
2001	27610.8	31.31
2002	41106.6	48.88
2003	46844.9	13.95
2004	49429.6	5.52
2005	51383.1	3.95
2006	62970.3	22.55

Source: NRB Quarterly Economic bulletin. Mid. July 2007

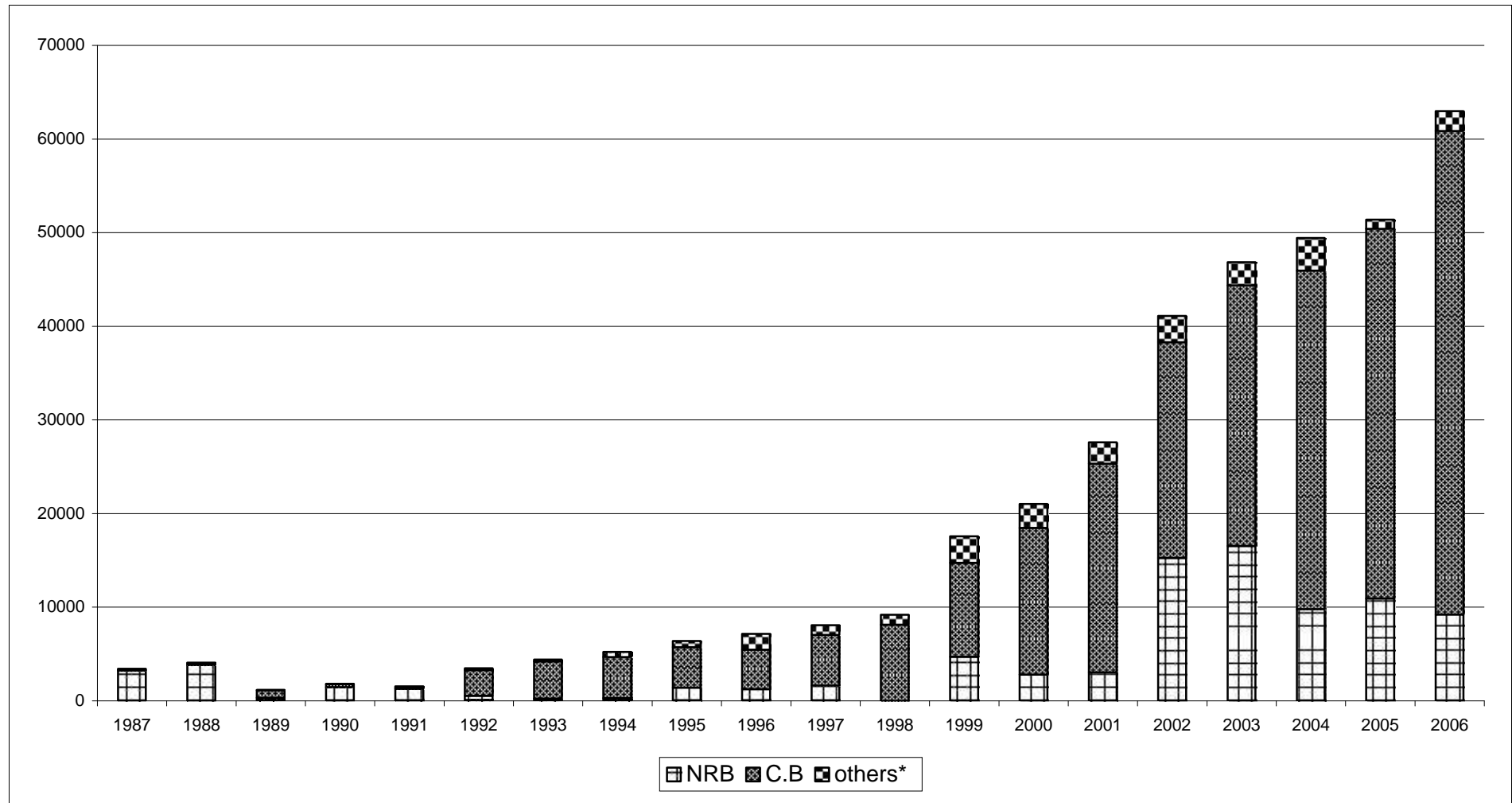
\* Growth rate is calculated by taking previous years base year

**Figure: 5**  
**Trend of Treasury Bills**



The figure: 5 show that trend of the total amount of treasury bills issued by the government during the past 20 years. (i.e. 1987-2006). Trend of borrowing from money market has been increasing sharply as shown in the figure except in the year 1987). The growth rate column shows the maximum increment in 91.52% in the year 1999.the ownership pattern of Treasury Bills are shown in the following figure.

**Figure: 6**  
**Ownership Pattern of Treasury Bills**



\* Manufacturing Processing Companies, Trading Companies and Individual Investors

#### 4.1.4.2 Trends of Development Bond

**Table: 4**

**Development Bond Issued by the Government from  
1987-2006**

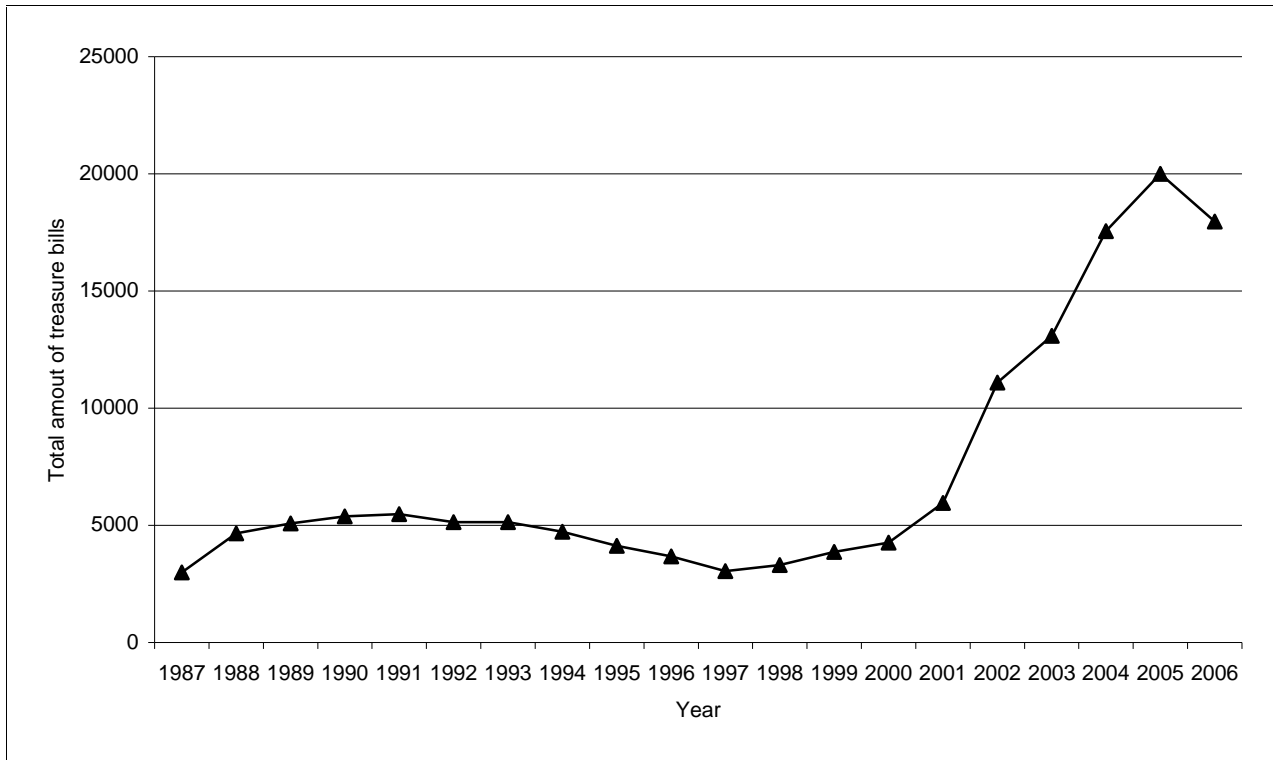
(Rs in million)

Year	Total amount of government securities (Rs)	Growth rate (in %)
1987	2990.00	
1988	4651.7	55.57
1989	5088.6	9.39
1990	5388.6	5.89
1991	5482.3	1.74
1992	5132.2	(6.39)
1993	5132.2	0
1994	4732.2	(7.79)
1995	4122.2	(12.89)
1996	3672.2	(10.92)
1997	3042.2	(17.16)
1998	3302.2	8.55
1999	3872.2	17.26
2000	4262.2	10.07
2001	5962.3	39.89
2002	11090.7	86.01
2003	13090.7	18.03
2004	17549.2	34.05
2005	19999.2	13.96
2006	17959.2	(10.20)

Source: NRB Quarterly Economic Bulletin. Mid. July 2007

) Growth rate is calculated by taking previous years base year

**Figure: 7**  
**Trend line of development Bond**



The above given table shows the amount of development bond issued by the government during the past 20 years (1987-2006). Which is in increasing trend in first five years and reached to Rs. 5482.3 million in the year 1991. Then after it the trend is decreasing and reached to Rs. 3042.20 million in the year 1997. From 1998, again growth rate shows the positive trend. Except in the year 2006 (i.e. in 2006, it is negative by 10.20% in comparison to the previous years).

#### 4.1.4.3 Trend of National Saving Bonds

The table given below shows the amount of National Saving Bonds issued by the government during the 20 years period. (1987-2006)

**Table: 5**  
**Trend of National Saving Bonds**  
(Rs in million)

Year	Total national saving bonds (Rs)	Growth rate (in %)
1987	1940	-
1988	2196.5	13.22
1989	2196.5	0
1990	2896.5	31.86
1991	3646.5	25.89
1992	4546.3	24.68
1993	4901.5	7.81
1994	5691.5	16.12
1995	6076.4	6.76
1996	7376.5	21.39
1997	8736.5	18.43
1998	9886.4	13.16
1999	10426.4	5.46
2000	11256.5	10.55
2001	12476.4	8.24
2002	11536.3	(7.53)
2003	10659.9	(7.59)
2004	9029.8	(15.29)
2005	6576.8	(27.16)
2006	3876.8	(41.05)

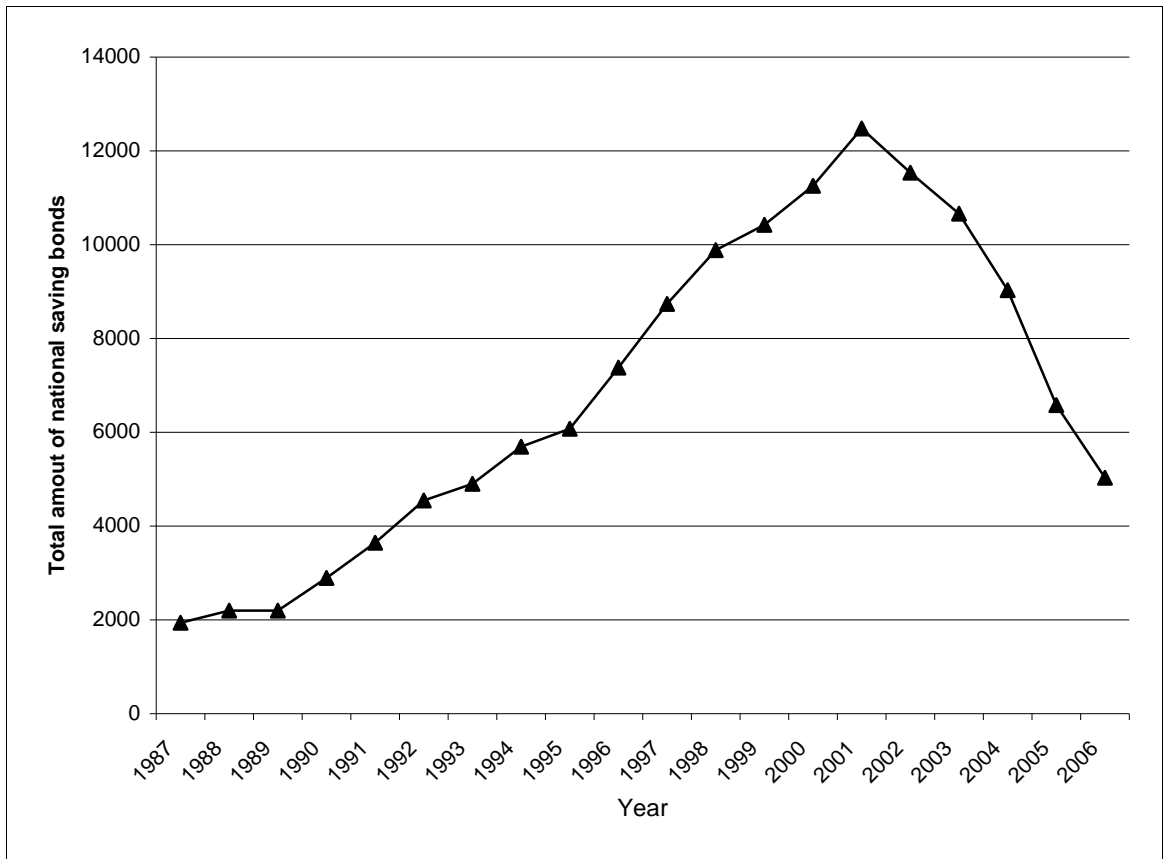
Source: NRB Quarterly Economic Bulletin. Mid. July 2007

\* Growth rate is calculated by taking previous years base year.



**Figure: 8**

**Trend of national Saving Bonds**



The above table and fig. shows the amount and trend of the national saving Bonds issued by the government during past 20 Years (1987-2006) . which is increasing trend and reached to Rs. 12476.4 million in the year 2001 then after it decrease regularly by 7.53% , 7.59% 15.29%, 27.16% and 41.05% in the respective year 2002, 2003, 2004, 2005, and 2006.

**4.1.4.4 Trend of Citizen Saving Certificate**

The table given below, shows the amount of citizen savings certificate by the government during 20 years period (1987-2006)

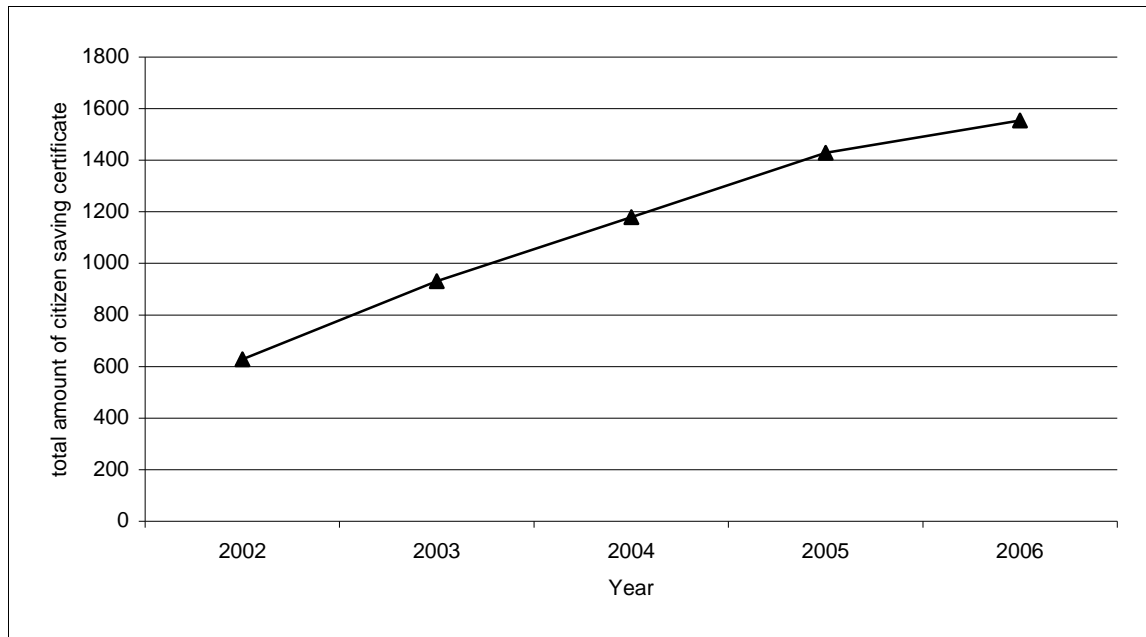
**Table: 6**  
**Trend of Citizen Saving Certificate**  
(Rs in million)

Year	Total national saving bonds (Rs)	Growth rate (in %)
1987	0	-
1988	0	-
1989	0	-
1990	0	-
1991	0	-
1992	0	-
1993	0	-
1994	0	-
1995	0	-
1996	0	-
1997	0	-
1998	0	-
1999	0	-
2000	0	-
2001	0	-
2002	628.1	-
2003	931.1	48.24
2004	1178.9	26.61
2005	1428.9	21.20
2006	1678.9	17.49

Source: NRB Quarterly Economic Bulletin. Mid. July 2007

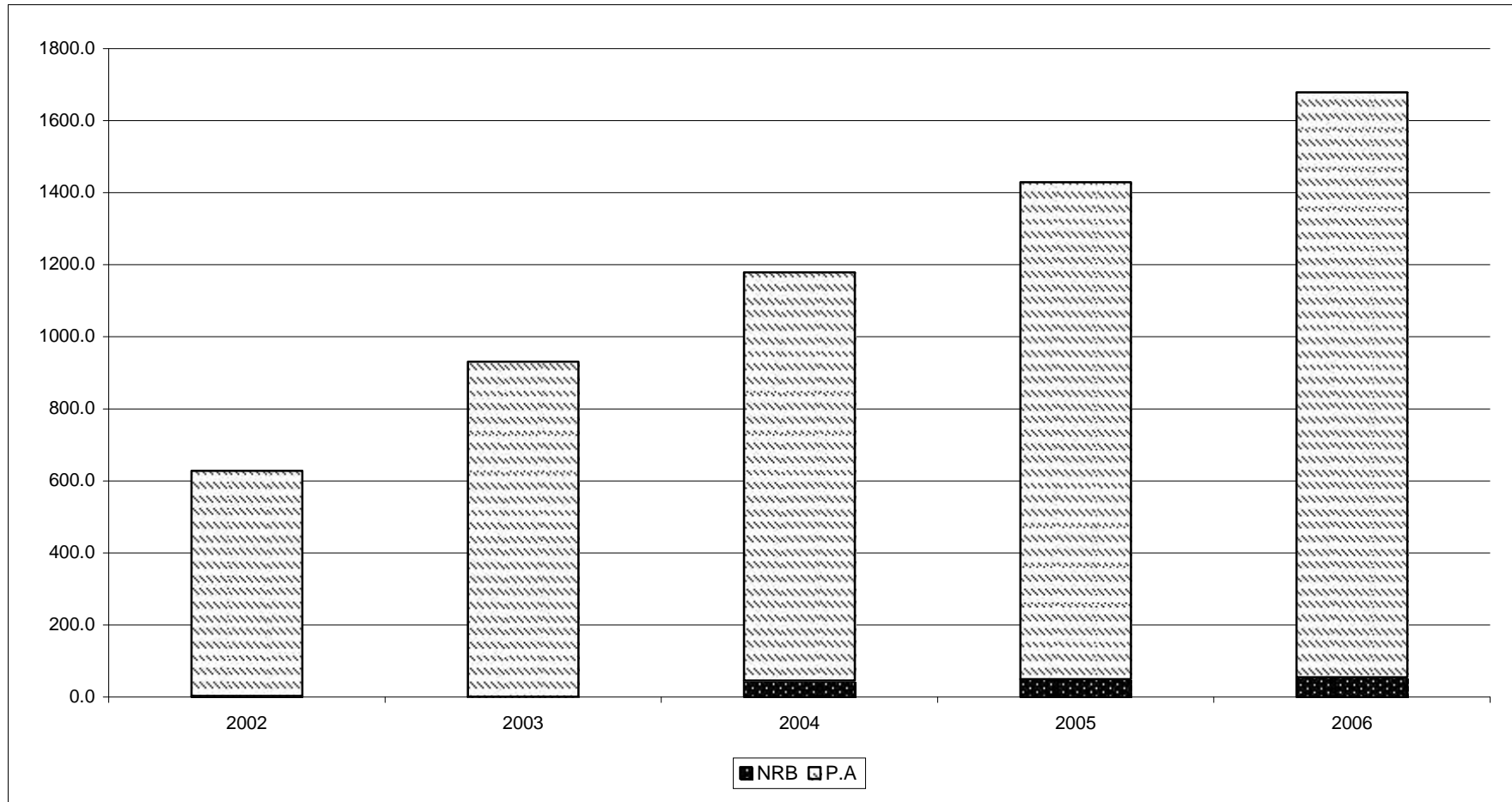
\* Growth rate is calculated by taking previous years base year

**Figure: 9**  
**Trend line of citizen saving certificate**



Form the above table it is clear that the government of Nepal had issued citizen saving certificate first time in the year 2002 for Rs. 62.8.1 million which is followed by Rs. 931.1 million Rs. 1178.9 million Rs. 1428.9 million and Rs. 1678.9 million in the year 2003, 2004, 2005 and 2006 respectively and from the figure it is clear that the issued of citizen saving certificate issued made by government is increasing trend and ownership pattern of citizen saving certificate is shown by the following figure.

**Figure: 10**  
**Ownership pattern of citizen saving certificate**



From the above fig. the main holders of the citizen saving certificate are NRB and personal area. In the year 2002 the government issued first citizen certificate which was totally hold by NRB. In the year 2003 the NRB holds 0.49% or Rs, 3.1 million and rest by 3.47% or Rs. 49.6 million, 3.38% or Rs. 52.6 Million respectively and rest of by personal area i.e. 96.11% or. Rs. 1133.1 million in year 2004 which is by 96.53% or Rs. 1379.3 million and 96.61% or Rs. 1501.3 million in the year 2005 and 2006 repetitively.

#### 4.1.4.5 Trend of Special Bond

The table given below shows the amount of special bonds issued by the government during 20 years period (1987-2006).

**Table: 7**  
**Trend of Special Bond**

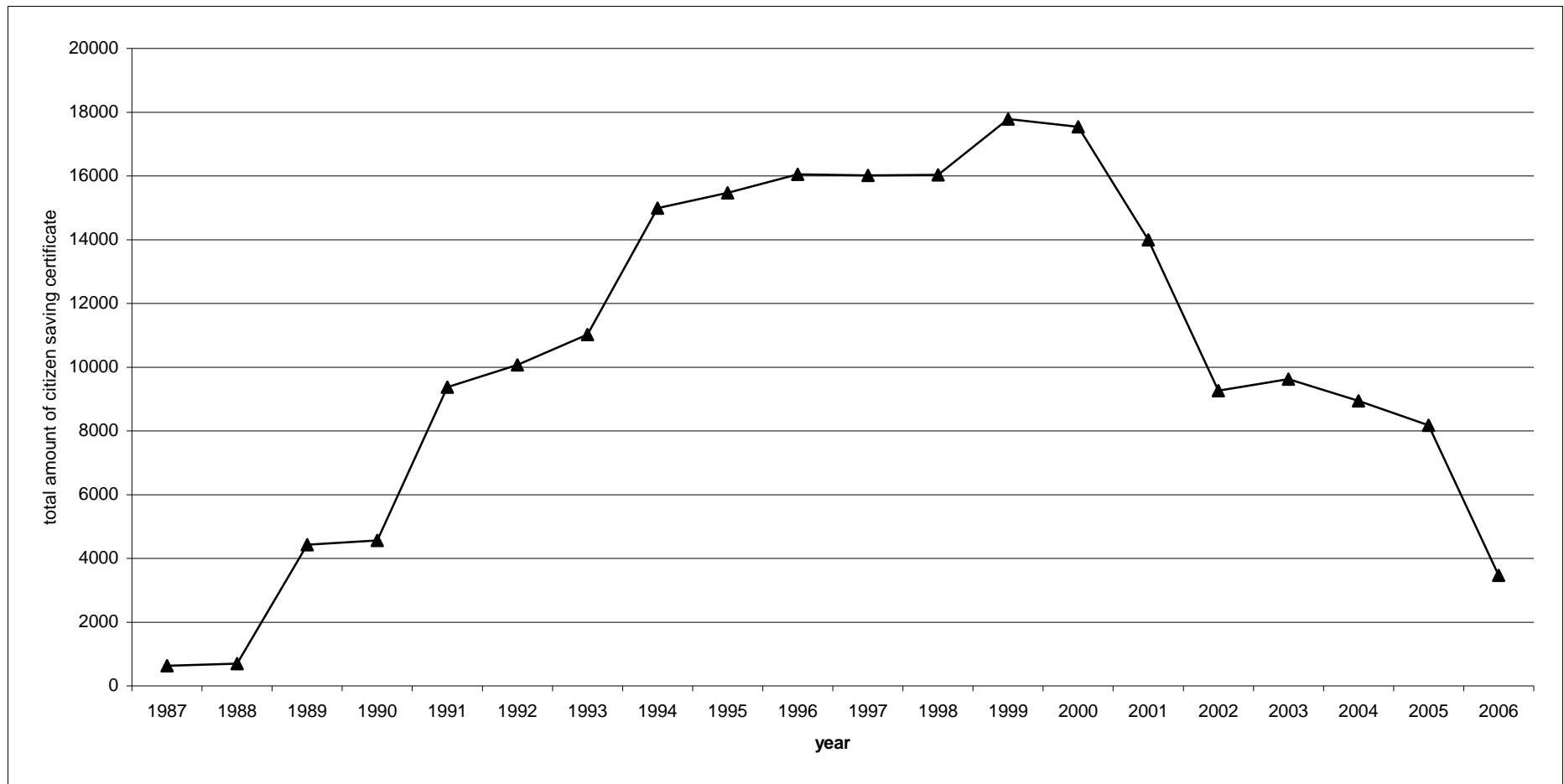
(Rs in million)		
Year	Total amount special bond	Growth rate (in %)
1987	627.4	-
1988	697.8	11.22
1989	4431.8	53.11
1990	4567	3.05
1991	9376.1	105.30
1992	10073.2	7.43
1993	11019.1	9.39
1994	14991.2	36.05
1995	15466.8	3.17
1996	16050.6	3.77
1997	16019.6	(0.19)
1998	16035.5	0.10
1999	17784.2	10.91
2000	17541.4	(1.37)
2001	13994.3	(20.22)
2002	9259.3	(33.84)
2003	9621.7	3.91
2004	8946.2	(7.02)
2005	8176.3	(8.6)
2006	3469.8	(57.56)

Source: NRB Quarterly Economic Bulletin. Mid. July 2007

\* Growth rate is calculated by taking previous years base year

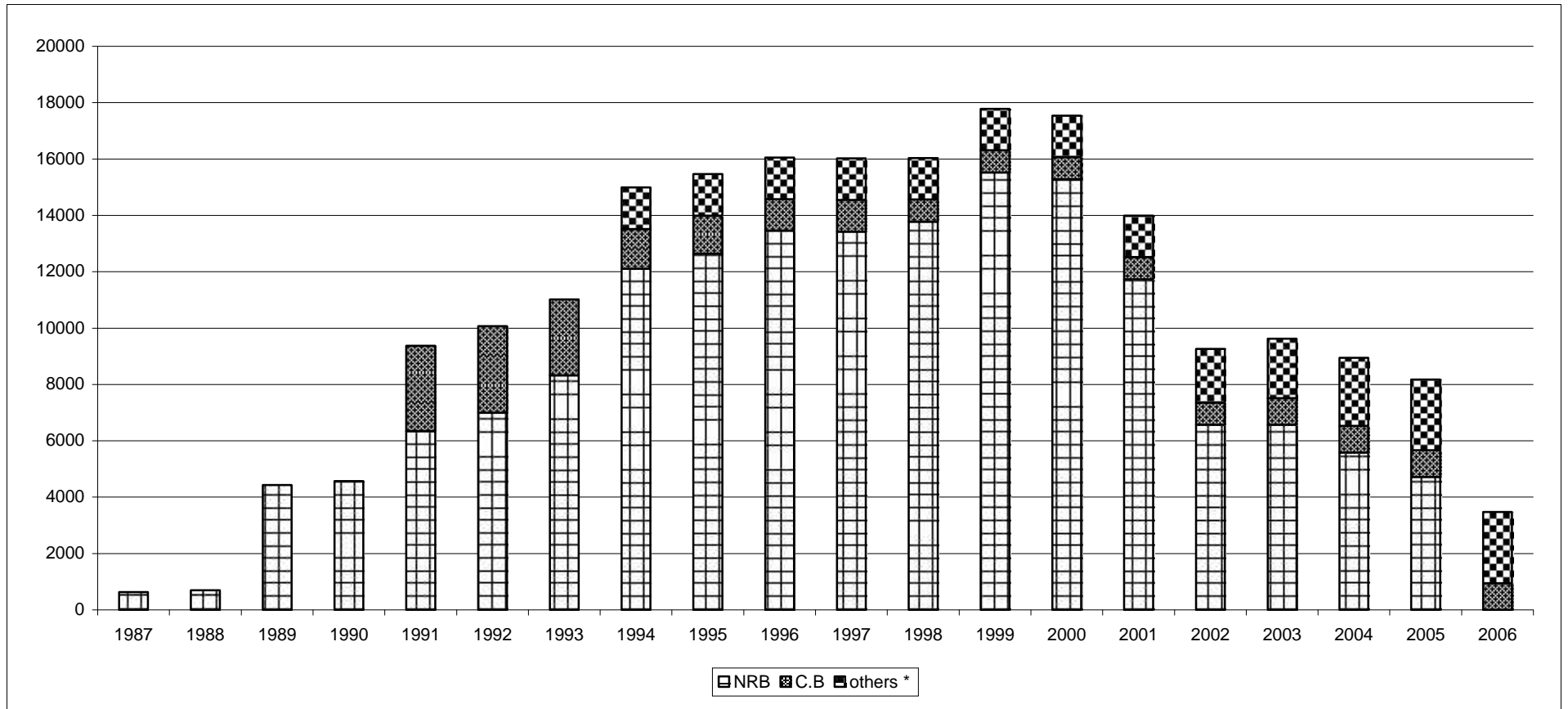
**Figure: 11**

**Trend line of Special Bond**



From the above table the amount of special bond issued by government during past 20 years (1987-2006) which is increasing trend upto the year 1996 then after it falls by 0.19% then after it increase slightly by 0.10% and 10.91% in the year 1997 and 1998 respectively. From the year 2004 it is continuously decrease by 7.02%, 8.6% and 57.56% in the year 2004, 2005 and 2006 respectively. From the figure also it can concluded that the amount of special Bond issued by the government is very much fluctuating during the last 20 years period. (1987-2006) and ownership pattern of special bonds are show by the following figure.

**Figure: 12**  
**Ownership Pattern of Special Bond.**



\* Manufacturing Processing Companies, Trading Companies and Individual Investors



#### **4.1.5 Key Characteristics and Investors of Nepalese Corporate Debt Securities**

Bonds can have many unique and important characteristics. In Nepal, Corporate debt securities are not very popular. The enterprises depend upon banks for debt capital that they want to employ in business. Only seven issuance of debentures are recorded by SEBO. In 1997/98 Sri Ram Sugar Mill (SRSM) issued debentures for Rs. 93 million followed by Nepal SBI bank limited in 2005/06 for Rs. 200 million. Bottlers Nepal and Jyoti group issued debentures the record of these issues could not be obtained. Some of most important characteristic of debentures of SRSM, HBL, NIBL, EBL, BOK, NICBL and Nepal SBI bank Ltd are given as.

**Table: 8****Key characteristic of Nepalese corporate debt.**

S.N	Characteristics	SRSM	HBL	NIBL	EBL	BOK	NIBL	NICBL	Nepal SBI.
1	Par values	Rs. 1000	1000	1000	Rs. 1000	Rs. 1000	Rs. 1000	Rs. 1000	Rs. 1000
2	No. of Debenture	93000	360000	300000	300000	200000	250000	200000	200000
3	Coupon rate	14%	8.5%	7.5%	6%	6%	6%	6%	6%
4	Maturity period	4 years	7 years	7 years	7 years	7 years	7 years	7 years	7 years
5	Nature of interest payment	Semi annually	Semi-annually	Semi-annually	-	-	-	-	-
6	Provision of sinking fund	-	Rs. 51.429 million each year	Rs 43 million each year					
7	Provision of trustee	Nepal Bank ltd.	-	-					
8	Nature of business	Manufacturing and processing	Banking	Banking	Banking	Banking	Banking	Banking	Banking
9	Subscription	Under	Over	Over	100%	Over	100%	100%	over

		subscribed	subscribed	subscribed					
10	Purpose of issuance	Expansion of production capacity	to follow NRB's directives and to fulfillment of supplementary capacity						
11	Nature of placement	Public offering	Private placement and public offering						
12	Convertibility i) conversion ratio ii) conversion price	Yes i) 10 equity share ii) Rs. 100 each equity share	No	No	No	No	No	No	No
13	Issue managers	NIDC capital market	`Nepal merchant Bank	Ace finance comp. ltd	CIT	NMB	AFC	AFC	CIT
14	Minimum no. of debentures to be purchases.	1	25 or more than 25 debenture it should be divisible						

### **Par value**

The par value or principal of a bond indicates the amount of money that must be repaid at maturity. All of seven debentures have par value of Rs. 1000.

### **Minimum no. of debentures to be purchased**

In the case of SRSM, minimum no. of debenture to be purchased is 1. but it is 25 in HBL, NIBL, EBL, BOK, NIBL, NIC and Nepal SBI. Again if any investors want to purchase more than 25 debenture. The total no. of purchased debentures should be divisible by 5,

### **Coupon interest rate**

The coupon is established at the time bond is issued and represents the nominal interest rate that will be paid. The coupon rate were 14%, 8.5%, 7.5%. of SRSM, HBL, NIBL, respectively EBL, BOK, NIBL, NIC and Nepal SBI offered same as 6% semi annually.

## **4.2 Primary Data Analyses**

Questionnaire survey was made among investors of different nature randomly. The total number of subjects or cases is 122. Details of the descriptive statistic are shown in appendix I.

### **Gender and Age**

Among subjects only 19.7% were female investors where as 80.3% were male investors. As per the age 30.3% are of below 30 years and rest are of 30 and above group.

## **Education**

On the basis of education investor are categorized in three groups- undergraduate, graduates and postgraduates and above, among them majority were graduates 50.8%, 35.2% of respondents were postgraduate and above and the rest 13.9% were undergraduates.

## **Employment Status**

Majority of investors i.e. 62.3% were found the jobholders. Which means that they are the regular earners 22.1% of respondents were found to be self employed they are also the regular earners very few were found retired (i.e.2.5%) , they have not the current regular income source except pensions and provident funds. 13.1% were found unemployed. Which means that they have not the regular source of income beside depending on other sources.

## **Category**

When they were asked in which category of inviters they belong to a significant portion of respondents (35.2%) answered they are less informed investors. Likewise, 12.3% were found to be analyst or professional investors, and 10.7% said that they are well informed investors and rest 41.83% were informed investors. During the survey it was found that these investors which were found in NEPSE, as well as Brokers offices were mostly well informed and analyst.

## **Size**

On the basis of amount of investment on financial instrument investors are categorized into two groups-small and medium and large investors. Exactly 50% of investors were found under the category of medium and large investors and rest 20% were small investors.

#### 4.2.1 Preference over Major Investment Alternative

For this study, corporate securities, government securities, real estate and bullion were taken as the major investment alternatives prevailing in investment environment. Table 9 shows the total of ranks (rank sum) and ranks assigned.

**Table: 9**  
**Ranks of investment alternatives**

Alternatives	Rank sum	Rank
Corporate securities	355	1
Government securities	327	2
Real Estate	300	3
Bullion	238	4

Source: questionnaire survey (Q. 4) Appendix II

$$\text{Median} = \text{value of } \frac{N + 1}{2}^{\text{th}} \text{ item}$$

$$= \text{value of } 2.5^{\text{th}} \text{ item}$$

$$= \frac{327 + 300}{2} = 313.5$$

As per the median analysis the alternatives which have the rank sum of more than 313.5 are the preferred alternatives and those with less rank sum are the less preferred alternatives. From this, we can say that corporate securities and government securities are the preferred alternatives where as real estate and bullion are less preferred. In this

case, corporate securities are the most preferred investment alternative, and bullion is the least preferred investment alternatives.

Taking responses of total cases (122), the investment alternatives are ranked as per their rank sum. It shows that corporate securities are the most preferred alternatives, government securities is second preferred alternative and then comes real estate. The bullion falls in the least preferred category.

### **Rank Test**

Ranks given in the above table are valid only if the difference of rank sum is statistically significant. A suitable test that can establish the significance of the differences of the rank sum is the Friedman test. It consists of computing a test statistic called Friedman chi-square. Before computing the test statistics, we have to accept the assumption that each individual respondent prefer all alternatives. They rank only because of restriction imposed on them to select one. The hypothesis to be tested is that all sectors are equally preferred, against the alternative that at least one instrument is preferred more than the other remaining sectors.

$H_0$ = corporate securities, government securities, real estate and bullion all are equally preferred by the investors.

$H_1$ = corporate securities, government securities, real estate and bullion are not equally preferred by investors and of them is more preferred.

### Calculation of Friedman test statistics

	Corporate securities	Government securities	Real estate	Bullion	Total
T	355	327	300	238	1220
T <sup>2</sup>	126025	106929	90000	56644	379598
x <sup>2</sup>	1145	1005	904	606	3660

### Sum of Squares

Between sectors	$Ss \text{ alternative} = \frac{T^2}{n} = \frac{G^2}{t_n} = 61.459$	t-1=3
With in subject	$ss \text{ people} = x^2 Z \frac{G^2}{t_n} X610$	n (t-1)=366
Residual	ss res = 548.541	(n-i) (t-1) = 369

Notations:

T=total rank/rank sum

$X^2$  Xsummation of square of rank

n= no. of subjects

t = No. of instruments

$G = T$

Now,

$$t^2 = \frac{n(t-1)ss_{\text{alternative}}}{ss_{\text{people}}} = 36.875$$

Since the calculated value of chi-square (36.8765) exceeds the tabulated value (7.815) the null hypothesis is rejected. So it can be said all alternatives are not equally preferred. The new ranks given to the sectors valid. It means that the most preferred alternative for investment is the corporate securities as best alternative because of the reason also,



like bank interest rates are going down, government bonds are rarely available, there is persistent slump in real estate business and the bullion market is not systematically organized.

#### 4.2.1.1 Preference as per Size of Investor

To find if the preferences differs with the size of investors, the ranking made by both size of investors were analyzed.

**Table: 10**

#### **Ranks given by size of investors**

	Investment alternatives	Rank sum	Rank
Small Investors	Corporate securities	164	3
	Government securities	152	2
	Real estate	178	4
	Bullion	124	1
Large Investors	Corporate securities	191	4
	Government	173	3
	Real estate	132	2
	Billion	114	1

Source: Questionnaire survey Appendix III

The above table should the rank sums and ranks given to the investment alternatives by the small and large investors. Highest coefficient means the best rank. Spearman rank correlation coefficient rho ' $r_s$ ' is calculated to find if there is any correlation between the ranks given by these two groups of investors.

$H_0$ = there is not any relation between the small and large size of investors and their preferences. They are totally independent.

$H_1$ = size of investment and preferences are not totally independent

**Table: 11**

**Calculation of spearman rank correlation**

	X	Y	d	d <sup>2</sup>
Corporate securities	3	4	-1	1
Government securities	2	3	-1	1
Real Estate	4	2	2	4
Bullion	1	1	0	0
			<i>d X0</i>	<i>d<sup>2</sup> X6</i>

$$r_s = 1 - \frac{6 \sum d^2}{N^3 - N} = 0.4$$

Where, x = Ranks given by small investors

Y = Ranks given by large investors

r<sub>s</sub> = spearman rank order correlation coefficient

d = difference of ranks

N = number of condition

Spearman's rho in this case is 0.4 which is significant of the =0.60 level (two tailed test). This result means that correlation in between different size of investors preferences is very insignificance. Two sizes of investors are not matching.

**4.2.2 Preference over Financial Instruments.**

Previously we have seen the preferences of investors over the major investment alternatives. Now we have dropped the alternatives like real estate and bullion are focused only on the financial instruments.

Study had considered common stock, preferences shares, government bonds, debentures mutual funds and treasury bills as the major financial instruments. Since these are the major instruments that prevail in Nepalese financial market.

**Table:12**

**Ranks of financial instruments**

Instruments	Rank sum	Rank
Common stock	283	1
Government bonds	180	2
Preference shares	110	3
Debentures	59	4
Mutual funds	55	5
T-bills	45	6

Sources: questionnaire survey 2008, Appendix IV.

The above table lists down these financial instruments, as well as it presents the rank sums and ranks. Where we can see common stocks have the highest rank sum and T- bills have got the lowest rank sum

Calculated median=84.5

Median has been calculated on the basis of rank sum. As per median the stock which has score (rank sum) more than 84.5 are the preferred instruments in comparison to others with less scores. Scores show that common stock is the most preferred stock. Since it has the highest score and T-bill is the least preferred stock since it has the lowest score. Common stocks, government securities and preference shares are the preferred instruments in comparison to debentures, mutual fund and T-Bill.

## Rank test

On the basis of rank sum ranks were given to the instruments, as shown in table 12. To test the statistical validity of these ranks, Friedman test is used. Hypothesis to be tested in this regard are.

$H_0$  = common stocks, government bonds, preference shares, debentures, mutual funds and T-Bills all are not equally preferred instruments.

$H_1$  = These financial instruments are not equally preferred, some of them are more preferred than others.

Friedman test statistics  $\chi^2 = 225.14$  .....( see Appendix V)

d.f (n-1)=5

Tabulated-critical value of  $\chi^2$  at 0.05 level of significance (5.D.F) =11.070.

Since the calculated value of  $\chi^2$  225.14 is greater than the tabulated value (11.670) the null hypothesis is rejected. So, all alternatives are not equally preferred. The new ranks given to the sectors are statistically valid. The differences in the rank sum have not occurred only due to the channel. It means that the most preferred instrument is the common stock and very least preferred alternative are the mutual fund and T-bill was found very low, it is also because of the lack of access of general investors to the T-Bills.

#### 4.2.2.1 Preferences as per size of Investors

**Table: 13**

##### **Rank made by size of investors**

Size	Financial instruments	Rank sum
Small investors	Common stock	143
	Preferences shares	56
	Debentures	28
	T-bill	24
	Government bonds	91
	Mutual funds	22
Large investors	Common stocks	140
	Preferences shares	54
	Debentures	31
	T- bills	21
	Government bonds	87
	Mutual funds	33

Source: Questionnaire Survey, 2008. Appendix-VI

The above table summarizes the ranks assigned by small investors and large investors to the six different financial instruments. Spearman rank correlation coefficient rho ' $r_s$ ' is calculate to find if there is any correlation between the ranks given by these two groups of investors. Hypothesis to be tested in this regard are

$H_0$ = There is not any relation between the small and large investors preferences, they are totally independent.

$H_1$ = Size of investment and preferences are not totally independent, their presences are matching.

In term of instruments the ranks given by small investors and large investors are almost similar. The preferences of small and large investors over these financial instruments are almost similar. Common stocks

appear as the most preferred instrument either the investor is large or small.

#### 4.2.2.2 Preference over Investment Sectors

SEBO and NEPSE have categorized the listed companies, in 8 sectors as commercial banks, Finance Companies, Insurance Companies, Development Banks, Manufacturing and Processing, Trading, Hotels and others. For this study also same sectors of investments are considered to see which sector the investors prefer more to invest.

**Table:14**

**Ranks of investment sectors**

<b>Sectors</b>	<b>Rank total</b>	<b>Rank</b>
Commercial bank	356	1
Finance companies	191	2
Insurance companies	110	3
Development banks	60	4
Manufacturing & processing	8	5
Trading companies	4	6
Hotels	3	7

Source: Questionnaire Survey 2008 (Appendix VII)

The above table shows the list of the investment sectors of Nepalese financial system and summarizes the ranking made by investors.

Calculated Median = 60

As per the median calculated the sectors which have the rank sum more than 60 are the preferred sectors and the sectors which have less rank sum than 60 are the less preferred sectors. According to this result commercial banks finance companies and insurance companies are found to be the most preferred sectors where as the manufacturing and processing, trading and hotels are the less preferred sectors. Among them commercial banks are most preferred hotels are least preferred sectors for investment.

## **Rank Test**

To check the statistical validity of the ranking, Friedman chi-square has been calculated. Here we have to accept the assumption that each individual respondent prefers all sectors. The hypothesis to be tested is that all sectors are equally preferred against the alternatives that at least one instrument is preferred more than the other remaining sectors.

$H_0$  = all seven sectors are equally preferred by the investors to make investments

$H_1$  = all seven sectors are not equally preferred, some are more preferred than other by the investors to make investments.

Calculated Friedman test statistics  $\chi^2 = 568.92$  ...(See Appendix- VIII)

Tabulated value for  $\chi^2$  at 0.95 (6d.f) = 12.591

Since the calculated value of chi-square exceeds the tabulated value the null hypothesis is rejected. That is all sectors are not equally preferred. The new ranks given to the sectors are significantly valid. Commercial bank is the most preferred sector of investment where as hotels, trading and manufacturing and processing are least preferred sector.

### 4.2.2.3 Preferences as per size of Investors:

**Table:15**  
**Ranks made by size of investors:**

Large investors	Rank sum
Commercial banks	177
Finance companies	96
Insurance companies	60
Development banks	32
Others	1
Small investors	Rank sum
Commercial banks	179
Finance companies	260
Insurance companies	59
Development banks	28
Others	14

Sources: Questionnaire Survey, 2008, Appendix IX

Note: Here three sectors, manufacturing and processing, trading and hotel are merged as others because of very low (0) frequency.

The above table presents the totals of ranks generated from the ranking made by small and large investors preferences of small and large investors over investment sectors have been studied to explore whether preferences change with the size of investments or not. Hypothesis to be tested in this regard are

$H_0$  = there is no significant difference between the ranks given of small and large investors i.e. there is no difference in the preferences of small and large investors over those sectors.

$H_1$  = there is significant difference between ranking made by small and large investors.

Test statistic in this regard is one way non-parametric ANOVA.

Calculated  $H = 0.0982$  (d.f =  $k - 1 = 1$ )



Tabulated value of chi square at 0.05 level of significant with 1 d.f. is 3.841. Since the calculated value is less than the tabulated value null hypothesis is accepted. So, it can be concluded that both small and large investors have similar type of preference toward the investment sectors both types of investors prefer the commercial banks are the best investment sectors where as the sectors like manufacturing and processing, trading and hotels are least preferred.

### 4.2.3 Preferences over Investment Objectives

Every investor has some objective over the investment she/he makes. Major investment objectives are the price increment or growth, regular return, liquidity and safety. Different investors might have different objectives. Here the study had tried to know the preferences of investors over these objectives.

**Table:16**  
**Ranks of investment objectives**

	Rank sum	Rank
Price increment/growth	424	1
Regular return	347	2
Safety	186	4
Liquidity	263	3

Sources: Questionnaire survey, 2008, Appendix X

The above table shows the frequency of ranks provided by respondents to these objectives, rank sum and ranks.

Calculated median = 305

Calculated median means that the investment objective which has the rank sum of more than 305 is the preferred objectives and vice versa. It means growth/ price increment and regular return are the preferred objectives in comparison to liquidity and safety.

#### Rank test

Friedman test is used to test whether the rank we have assigned is statistically valid or not. In this regard,

$H_0$  = investors equally prefer the investment objective like growth, return, safety and liquidity.

$H_1$  = investors do not prefer all the objectives equally.

Calculated Friedman test statistics  $\chi^2 = 156.639$  (d.f = 3)

The tabulated value of chi-square at 0.05 significance limit with 3 d.f. is 7.815. Since calculated value of chi square 156.639 is greater than tabulated value (7.815) the null hypothesis is rejected so it can be said that, the investors don't prefer all the objectives equally. The ranks assigned in term of rank-sum are valid in this case, from the above analysis is found that investors prefer the price increment or the growth of investment as the best objective of investment. In comparison to other objective risk factor is less considered.

#### **4.2.3.1 Awareness of Financial Instruments**

Among the 122 randomly selected investors, only 12.3 percent were found to be professional investors who are really informed and aware as well as they do the analysis while making investment. 10.7% said that they are well informed about financial market. Around 43 (35.2 percent) of investors said that they are less informed type of investors. A large

segment of investors (rest 41.8 percent) said that they are neither less informed nor well informed. They are informed just to satisfactory level. It shows how much aware are the Nepalese investors. Only 28 among 122 said that they are really much informed. This scenario depicts that majority of investors are not well informed and much aware.

#### **4.2.3.2 Education and Market Information**

In the samples taken majority of investors were found informed but not well informed and also significant portion said they are less informed. A test has been made to see if the awareness of market information varies with the level of education. Theoretically it can be said that highly educated person has much knowledge of market. To test it, chi-square test has been made for the variables like education and categories of investors.

$H_0$  = the two variables, level of education and market information has no association.

$H_1$  = the two variables have significant association.

Chi-square = 6.199

d.f. = 3

Contingency coefficient = 0.220

Tabulated value of chi-square at 0.05 level of significance (3.f.d.) = 7.815

Since the tabulated value exceeds the calculated value null hypothesis is accepted. It means that there is not any significance association between level of education and market information.

### 4.2.3.3 Consideration for Corporate Security Investment

**Table: 17**

#### **Consideration for corporate security investment**

	Frequency	Percent
Companies goodwill	59	48.4
Forecasted profit	46	37.37
Friend and relatives motivated them	16	13.1
Advertisement appealed them	1	0.8
Total	122	100

Sources: Questionnaire survey, 2008, Q. No. 7

From the above table, most of the investors 48.4 percent said that company's goodwill is the most important which guides their investment decisions. Where as 13.1% of investors said that they just buy the corporate securities because of the friends and relatives. 37.7 percent investors consider forecasted profits before investing in corporate securities. It means that only 37.7 percent analyze the forecasts profits of companies before making decision.

### 4.2.3.4 Attitude toward Government Securities

**Table: 18**

#### **Investment on Government Securities**

	Frequency	Percent
Investors who have invested in government securities	85	69.67
Investors who have not invested in government securities	37	30.33
Total	122	100
For those who have invested in government securities, what factor made them invest on government securities.		
Marketability	9	10.59
No risk/safety	73	85.88
NRB notices	3	3.53
Friends and relatives	0	0
Just followed the whim	0	0
Total	85	100

Sources: Questionnaire survey, 2008, Q.No. 9

The above table shows that 69.67 percent of investors have invested in government securities. 85.88 percent of them have invested on government securities because of safety or no-risk, 10.59 percent have invested because of the liquidity of the government securities and very few investors 3.53 percent have invested on government securities just by studying NRB notices. However, no body said that they were affect by the whim and their relatives and friends.

#### **4.2.3.5 Attitude toward varying Risk-Return Alternatives**

**Table: 19**

**Varying Risk-Return and Preferences of Investors**

	Frequency	Percent
Nominal return/No risk	9	7.38
Small return/ Less risk	17	13.93
Moderate return/ Moderate risk	69	56.56
High return/Higher risk	23	18.85
Super return/ Max risk	4	3.28
Total	122	100

Sources: Questionnaire survey, 2008, Q. No.10

The above table shows that maximum response is toward alternative which is moderate risky and yields moderate return. Then next comes alternative with responses of 18.85 percent with high return and high risk.

#### **4.2.3.6 Attitude towards the Development of Financial Market**

**Properly**

**Table: 20**

#### **Attitude towards the Development of Financial Market**

	Frequency	Percent
Political instability	29	24.16
Small market	47	38.52
Investment awareness	24	19.67
Rules and regulation	22	18.05
Total	122	100

Sources: Questionnaire survey, 2008 (Q. No. 12)

From the above table, most of investors 38.52 percent said that the small market is the main cause of the development of financial market properly. Where as 24.16 percent said that the political instability is the main obstacles. Similarly 19.67 percent respondent said that investment awareness plays important role for the development of proper financial market. Likewise 18.05 percent investors believe that the rules and regulation are insufficient for the proper development of financial market.

### **4.3 Major Findings**

#### **4.3.1 Major Findings through Secondary Data**

- i. The total volume of securities issued form 1993/94 to 2005/06 are in increasing trend. The major portion of securities market is covered by government securities and is also in increasing trend. Government securities are main dominant securities in sense of volume. which covered more than 98 percent of total securities market and which are issuing regularly. The volume of corporate debt securities occupies nominal percent i.e. less than 0.5 percent

of total security volume and irregular only seven issuance can be seen during the twenty years period.

- ii. While analyzing the ownership pattern of government bonds and T-bills it is found that major portion of these securities are hold by Nepal Rastra Bank in early stage of the issuance which is dominated by the commercial banks, participation of financial institutions, insurance companies and other organization in purchasing government securities is comparatively low on the other hand, participation of individual investors is increasing but not sufficiently.
- iii. By observing the trend of government debt securities, the amount of these securities is increased every year. Which is good sign for debt securities market. If the government maintain 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.
- iv. The trend of T-bills issued during the study period seems to be increasing. It means money market is growing effectively which is good sign for overall debt securities market also.
- v. The trend of development bond was increasing trend in the early five years which is decreasing upto the early ten years and increases sharply in recent year of the study period. Which also shows good prospect of debt securities market. The trend of national saving bond is increasing sharply in first 15 years but it decrease sharply in last five years.

- vi. The main holders of national saving bond are individual investors. Which shows the individual investor are attractive towards the debt securities.
- vii. The trend of special bond is increasing in the first 13 years but it decrease sharply in last 7 years. The main holders of special bond are Nepal Rastra Bank and followed by commercial banks and others respectively.
- viii. The characteristics of Nepalese corporate debt securities are quite worth as necessary to be quality security.
- ix. Debenture of SRSM was not fully subscribed. At the time of issuance company's financial performance was not proper so the public could not believe on it. So it was undersubscribed. Where as the debentures of HBL, NIBL and Nepal SBI are oversubscribed. This shows the future market of banking sector's debt securities is quite prosperous.

#### **4.3.2 Major Findings Through Primary Data**

- i. With respect to preference regarding choice of securities, the majority of respondents prefer the common stock responses to ward T-bill were found very low. However, government bond appeared as the second most preferred financial instrument. Those investors who are more aware and educate have welcoming attitude toward government bonds also. Preferences of different categories of investors, as well as different size of investors were also found similar. Common stock appeared as the most preferred instrument for all of them. As per the issuance also, Nepalese capital market



heavily depends upon common stock. The issuance of other instrument in corporation to common stock is very poor.

- ii. With respect to preference regarding the choice of investment sectors and investors preferences major of respondents prefer banking and financial sector very much in comparison to other sectors like manufacturing and processing trading, hotels and other. Commercial bank, finance companies and insurance were found to be the most preferred sectors. This preferences did not change with the change in size of investors. This means, weather small or large all investors prefer commercial banks as the most preferred sector to invest where as sectors like hotel and trading are the least preferred sector to invest.
- iii. Investment objectives and investor's Preferences: Growth (capital gain) was found to be the most preferred investment objective for all type of investors either they are less informed, informed, small or large investors. While considering the stock investment only, then only investors preferred capital gain. Bonus shares appeared as the second preferred objective of stock investment. Some large investors preferred voting rights and representation in board as the objective of stock investment.
- iv. Government securities and investor's preferences: More than 30 percent respondents have never invested on government securities. Majority of those who have invested said that they have invested because of safety. Those who are aware and have invested in government securities disagree with the proposition since the yield of government securities are low, they are not attractive to

individual investors. But those, who mostly play in corporate securities and risk taker, they agreed with the proposition.

v. Nepalese financial market is lacking well informed and professional investors. Most of the investors are educated but education has not do much with the knowledge of market and investment opportunities only 37.7 percent were found who consider the factor like fore-coasted profits of the companies while investing rests of them follow the whim. Investors said that before investing the major factors what they should consider are companies track record, promoters of company forecasted profit and environment factors.

vi. Commercial banks and finance companies are the major institutional investors. They are found investing heavily on government securities in comparison to common stocks. While comparing these two bodies, it was found that commercial banks prefer government securities more than the finance companies. Although there are not any restriction for the government securities, their investment on shares and debentures are guided by the directives issued by NRB. So they are not completely free to decide on this matter. So guidelines matter much rather than their independent preferences.

To sum up in one line, Nepalese investors are found interested to investment in common stocks of financial institutions with the expectations of capital gain.

## **CHAPTER-V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary**

In Nepal practice of raising capital from publics has started in 1936. In the corporate sector the share floated by the Biratnagar Jute Mills in 1936 A.D. were the first common stock issued for public. Likewise, the treasury-bill for the first time was issued four and half decades ago, in 1962 and development bond in 1964. Before the establishment of security exchange centre, there were no institutional arrangements to undertake and manage the new issues of securities. IPOs have to be made as per the provisions of then company acts although they were not adequate and relevant. With the fled need of facilitating security market. SEC comes into existence in 1976, in 1983 security exchange act 1983 got enactment. The act prohibited the exchange of unlisted securities. The first amendment in security exchange act (enacted in 1993), converted SEC into Nepal stock exchange limited (NEPSE) and created a separate body as securities board (SEBO). NEPSE is the only body which handles the trading of securities of financial market of Nepal. SEBO on the other hand, works in policy level matters as a regulator to promote the securities market in Nepal.

The phenomenon started with the Biratnagar Jute Mills get momentum only after the restoration of democracy and liberalization policy. Between 1984 and 1990, 42 companies were listed. Till now, the companies like bank, finance, insurance, hotel, manufacturing trade, aviation etc have entered security market but the companies from construction, information technology, hydropower etc. have not entered yet. Ordinary shares, right shares preference shares, debentures, mutual funds and unit schemes are

the major corporate securities of Nepalese capital market. Common stocks appear as the most widely used corporate securities. To turn toward the government securities there are T-bill and bonds of several type like development bonds, national saving bond special bonds and IMF promissory notes.

Nepalese financial market consist varied types of investors form very small to large investors. There are those investors who are completely unaware of market mechanism on the other hand there are professionals players of security market also. However, the institutional investors seem very much passive in secondary market although their participations in IPOs are very significant.

## **5.2 Conclusion**

Although history begins from 1936 with the issues of Jut-Mill, the scenario of Nepalese financial system has not developed significantly. First, it looks very long to give financial market a well structured organized shape. It's only since 1993 that the capital market of Nepal had got regulated and organized shape. The fifteen years of history might not be a long history for a capital market. History shows that in Nepal only four types (common stock, preference share, debentures and mutual funds) of securities were issued at varying time. Nepali security market is completely dominated by the equity shares and also debt market is dominated by government debt securities. Investors have not more choice so they are pouring their saving on those equity instruments. There are very less number of professional giant individual investors. We can almost count them easily. However, there are large numbers of tiny investors, who just hold 10 to 50 shares of 2-3 companies. A dualism can be found if we see the scenario of investors, there are very large investors

(although less number and there are small investors too, in very large number. The awareness level of those large professional investors is really good but small investors seldom know about the market mechanism. Many of them, who have just invested due to the influence of friends and relatives, even don't know how the transfer of share ownership takes place and what its process is. The awareness level of general investors is really poor. They just follow the whim of the market. Who don't know about the financial market and investment scenario prefer real estate and bullion where their capital gets stuck for the long time in a hope of rise in their price. Institutional investors are also very passive in Nepal. Commercial banks, finance companies, insurance, pension fund, investment trusts are the major institutional investors of any economy. It seems stock market liquidity needs to be improved seriously. The efficient services of market intermediaries, conducive and realistic policies of regulating authorities, awareness campaigns for investors, better concern toward the investor's psychology and preferences and so on are the major felt need, in this regard.

### **5.3 Recommendation**

With the study of findings of research and the literatures reviewed finally some recommendations can be forwarded to the concerned parties.

- i. Nepalese capital market is small, to day any how it is sustaining with the maximum use of equity stocks. But we cannot rely on this scenario in long term. Nepal had already entered WTO, and after restored of political stability, definitely the development pace will increase. This will increase the demand for capital mobilization. At the market cannot attract the investors only by equity instruments. So, financial engineering and innovations are very crucial for

Nepalese financial market. To later the different investors of different nature and to attract all the savings toward financial system new securities of different nature are to be invested. Hybrid type of instrument, assets backed instruments forward future, option, swaps etc. can be some of the examples.

The same in with the case of government securities, the holding of individual is just around 26 percent to increase this new type of bond and saving cards, municipal bonds etc. should be issued.

- ii. The banking sector seems as the only viable sector for investment. The major cause of this is the possibility of stock dividend as well as the disclosure practice. The listed companies of other sectors should also have the effective disclosure practice so as to gain the trust of investors over them. Institutions should not only focused on the mandatory disclosure practice other crucial information like change in management, cash and stock dividend declaration, major projects and contracts of the institution, expansion and diversification of business etc. should also be timely made public.
- iii. Comments like we don't have wide choice of instruments, so we are compelled to buy whatever floats in the market do not reflect the good scenario. Investor's psychology and preferences had always been a neglected area in Nepalese financial market. Issuers should consider the investors psychology are preferences while issuing the securities whether that be money market instruments or capital market instrument. They should adopt the concepts of behavioral financing, engineering and securities innovation, to design new types of securities so as the attract more savers in the securities investment arena.

- iv. It seems that the investors outside the Kathmandu valley are neglected as if they are not supposed to participate in security exchange. These days they can participate in primary market because of various outlets of the issuers. However, they are completely deprived from the secondary transactions. So security exchange centre outside the valley should also be established to cater the preferences of those investors who are residing outside the valley.
- v. Regulating authorities like SEBO should act for the well beings of investors with the pro-investor policies. They should not be simply watching the mal practices of listed companies. Investors are the main pillar of capital market. Without the trust of investor regulating authorities should act on the best interest of investors. While giving the approval to the new issues and types of issues the inventors preferences should also be taken into account.
- vi. The regulating authorities like SEBO/N and NRB should try to bring the investors in the main streamline so as to increase their trust and participation in financial system. Representatives from investors in regulating mechanism can be one strong move in this regard. Regulating authorities should act as the facilitators rather interveners.
- vii. Study shows that investors are in confusion, or unaware of market mechanism. Due to this they are investing haphazardly as well as a big chunk of capital is flowing toward unproductive investments like real estate and bullion. If awareness level of the investors can be improved more savings can be pulled toward financial instruments. Awareness programmes and campaigns should be

launched for this. This also helps to increase the number of smart investors who will not just gamble on the basis of rumor and whim.

viii. There are not any body who effectively council and give investment management information to the current as well as prospective investors. Specialized firms, consultancy or forums to provide financial assistance and advice to the investors are really needed for the betterment of investors investment decisions.

ix. To attract the institutional investors in the market of financial instruments and to avoid their passiveness in secondary market. Some flexibility in the directives should be brought. The limitations imposed currently like 30 percent of core capital for finance companies and 30 percent of paid up capital for commercial banks prohibition on the investments over hybrid-instruments etc. can be loosened to make them invest more on the financial instruments.

x. Investors should always try to know more about the capital market mechanism. They should have some knowledge of technical and fundamental analysis. This will reduce the tendency of taking security investments as a mere gamble and will create rational investors with rational judgment.

xi. Investors should try to be well informed of the alternatives prevailing investment environment. They should not be carried away by the whim and rumor. They should develop the habits of studying related publications, periodicals and reports.



xii. Investors should always be clear of their preferences or the investment objectives. This helps them to choose the investment alternatives. During the survey, many of the investors were found in confused state. They say they prefer safety, but were found neither investing on the government securities nor fixed- income securities. This is because of the lack of clarity of preference as well s lack of the knowledge about financial instruments. They should try to haphazard investment.

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## APPENDIX -I

### Primary data -Descriptive statistics

<b>Gender</b>	Frequencies	Percentage
Male	98	80.3
Female	24	19.7
<b>Age</b>		
Below 30	37	30.3%
30 and above	85	69.7%
<b>Education</b>		
Less than graduate	17	13.9
Graduate	62	50.8
Past graduate and above	43	35.2
<b>Employment status</b>		
Unemployed	16	13.1
Job holder	76	62.3
Self employed	27	22.1
Retired	3	2.5
<b>Category</b>		
Less in formed	43	35.2
Informed	51	41.8
Well informed	13	10.7
Analyst / professional	15	13.3
<b>Size</b>		
Small	61	50
Medium and large	61	50

## APPENDIX- II

### Frequency table for the ranking of investment alternatives

<b>Investment Alternatives</b>				
<b>Rank</b>	<b>Corporate securities</b>	<b>Govt. securities</b>	<b>Real state</b>	<b>Bullion</b>
1	10	22	32	58
2	32	24	38	28
3	39	47	16	20
4	41	29	36	16
Rank sum	355	327	300	238

## APPENDIX-III

### Frequency table for rankings made by small and large investors

#### Small investors

<b>Investment Alternatives</b>				
<b>Rank</b>	<b>Corporate securities</b>	<b>Govt. securities</b>	<b>Real state</b>	<b>Bullion</b>
1	6	15	16	24
2	18	16	11	16
3	26	13	6	16
4	11	17	28	5
Rank sum	164	152	178	124

## Large investor

<b>Investment Alternatives</b>				
<b>Rank</b>	<b>Corporate securities</b>	<b>Govt. securities</b>	<b>Real state</b>	<b>Bullion</b>
1	4	7	16	34
2	14	8	27	12
3	13	34	10	4
4	30	12	8	11
Rank sum	191	173	32	114

## APPENDIX -IV

### Frequency table for the ranking of financial instruments

<b>Financial instruments</b>						
<b>Rank</b>	<b>Corporate securities</b>	<b>Preference share</b>	<b>Debenture</b>	<b>T-bill</b>	<b>Govt. bonds</b>	<b>Mutual funds</b>
1	15	26	29	10	23	19
2	20	30	12	16	26	18
3	76	8	2	1	35	0
Rank sum	283	110	59	45	180	55



## APPENDIX -V

### Calculation of Friedman statistics

Rank	Common stock	Government bond	Preference share	Debentures	Mutual fund	T-bill	Total
T	283	180	110	59	55	43	730
New rank	1	2	3	4	5	6	
R	111	84	64	43	37	27	366
T <sup>2</sup>	80089	32400	12100	3481	3025	1849	132944
X <sup>2</sup>	779	218	95	83	442	91	1708

	Sum of squares	d.f
Between instruments	$SS \text{ instruments} = \frac{T^2}{n} - Z \frac{G^2}{t_n} = 361.699$	t-1 =5
Within subjects	$SS \text{ people} = X^2 - Z \frac{G^2}{t_n} = 979.99$	N(t-1)=610
Residual	SS res. = 18.291	(n-1) (t-1) = 605

$$t^2 = \frac{N(t-1)SS \text{ instrument}}{SS \text{ people}} \times 225.14$$

## APPENDIX -VI

### Frequency table for rankings made by small and large investors

Small investors	1	2	3	Rank sum	Rank
Common stock	8	12	37	143	6
Preference share	11	15	5	56	4
Debentures	17	4	1	28	3
T- bill	5	8	1	24	2
Government bonds	10	15	17	91	5
Mutual funds	10	6	0	22	1

Large investors	1	2	3	Rank sum	Rank
Common stock	7	8	39	140	6
Preference share	15	15	3	54	4
Debentures	12	8	1	31	2
T- bill	5	8	0	21	1
Government bonds	13	10	18	87	5
Mutual funds	9	12	0	33	3

### Calculation of spearman's Rank

	X	Y	d	d <sup>2</sup>
Common stock	6	6	0	0
Preference shares	4	4	0	0
Debentures	3	2	1	1
t-bills	2	1	1	1
Government bond	5	5	0	0
Mutual funds	1	3	-2	4
Total				6

$$\begin{aligned}r_s &= 1 - \frac{6 \sum d^2}{N^3 - N} \\&= 1 - \frac{6 \times 6}{6^3 - 6} \\&= 1 - \frac{36}{216 - 6} \\&= 1 - 0.171 \\&= 0.829\end{aligned}$$

## APPENDIX -VII

Frequency table for the ranking of investment sectors

	1	2	3	Total	Freq.	Man rank	Rank
Commercial bank	2	6	114	358	122	2.92	1
finance company	35	72	4	191	111	1.72	2
Insurance company	57	22	3	110	82	1.34	3
Development banks	23	17	1	60	41	1.46	4
Mfg. and processing	2	3	0	8	5	1.60	5
Trading company	2	1	0	4	3	1.33	6
Hotels	1	1	0	3	2	1.50	7

$$\text{Median} = \text{value of } \frac{N+1}{2}^{\text{th}} \text{ item} = \text{value of } 4^{\text{th}} \text{ item} = 60$$

## APPENDIX -VIII

Calculation of Friedman statistics

	Commercial bank	Finance comp.	Insurance comp	Dev. Banks	Mfg and processing	Trading	Hotels	Totals
r	122	111	82	41	5	3	2	366
T	356	191	110	60	8	4	3	732
T <sup>2</sup>	126736	36481	12100	3600	64	16	9	179006
X <sup>2</sup>	1052	359	172	100	14	6	5	1708

	Sum of squares	d.f
Between instruments	SS instruments = $\frac{T^2}{n} Z \frac{G^2}{t_n} = 839.833$	t-1 =6
Within subjects	SS people = $X^2 Z \frac{G^2}{t_n} \times 1080.57$	N(t-1)=732
Residual	SS res. = 240.737	(n-1) (t-1) = 726

$$\begin{aligned}
 X^2 &= \frac{N(t-1)SS \text{ instrument}}{SS \text{ people}} \\
 &= \frac{732 \times 839.833}{1080.57} \\
 &= 568.92
 \end{aligned}$$

## APPENDIX –IX

### Frequency table for ranking made by size of investors

Large investors	1	2	3	Rank sum	Rank
Commercial bank	1	4	56	177	8
Finance company	19	37	1	96	7
Insurance company	27	12	3	60	6
Development banks	13	8	1	32	4
Other	1	0	0	1	1
Total					26

Small Investors	1	2	3	Rank sum	Rank
Commercial bank	1	2	58	179	9
Finance company	16	35	58	260	10
Insurance company	30	10	3	59	5
Development banks	10	9	0	28	3
Other	4	5	0	14	2
Total					29

## APPENDIX –X

Frequency table for the ranking of investment objectives

<b>Investment Alternatives</b>				
<b>Rank</b>	<b>Price increment / gro with</b>	<b>Regular return</b>	<b>Safety</b>	<b>Liquidity</b>
1	6	8	75	33
2	9	32	35	46
3	28	53	7	34
4	79	29	5	9
Rank sum	424	347	186	263

## APPENDIX –XI

### Dear Respondent,

This questionnaire is designed to explore the "Development of Debenture market in Nepal". The data provided by you will be used only for this research study as partial fulfillment of MBS degree. I assure, your responses and views will be kept completely confidential. Your correct information in this regard will help to explore actual scenario in this context. So, I cordially request you to kindly answer the question below.

**Durga Prasad Dhakal**

(Researcher)

Shanker Dev Campus

Putali Sadak, Kathmandu

### A. Respondent's Profile.

Sex                      Male                       Female

Age.                      a) Below 30 years                     

                                    b) 30 years and above                     

Education                      a) under graduate                     

                                    b) Graduate                     

                                    c) Post graduate and above                     

### 1. from the investor's points of view in which category you belong.

b) Less informed investor                     

c) Informed investor                     

d) Well informed investor                     

e) Analyst /Professional



**2. In which category of investor you belong to regarding the amount of investment. (Please do not include the investments on real estate, gold, silver and bank deposit)**

a) Small Investor (If less than Rs. 50000)

b) Medium and large Investor (If more than Rs. 50000)

**B. Responses towards Financial Instruments.**

**3. How did you come to know about investment alternatives?**

a) Through relatives or friends

b) Through Media

c) Self learning

**4. Please rank these alternatives? (Mark 1 to the best, 4 to lowest, and follow accordingly.)**

a) Corporate securities.

b) Government securities

c) Real estate

d) Bullion (Gold, Silver)

**5. Among these financial instruments, please mark best three as per your preference.**

**(Mark 1 to the best, 2 to just lower, and 3 to lower)**

a) Common stock / share

b) Preference share

c) Debentures

d) Treasury bills

e) government bonds

f) Mutual funds

**6. Please rank these as per your preference, that you prefer in your investment?**

(Mark 1 to the best, 4 to lowest and follow accordingly)

- a) Price increment (Capital gain)
- b) Regular return / Dividend
- c) Less risk
- d) Marketability (easily buying and selling)

**7. What made you to buy corporate securities (like share, debentures) etc?**

- a) Companies Good Will
- b) Companies' forecasted profits
- c) Your friends and relatives
- d) Advertisements appealed you
- e) Because most of people are buying.

**8. Which sector do you prefer to invest? (Mark the best three options) (Mark 1 to best, 2 to just low and 3 to lowest)**

- a) Commercial banks
- b) Finance companies
- c) Insurance companies
- d) Development banks
- e) Manufacturing and processing companies
- f) Trading companies
- g) Hotels

**9. If you have invested in government securities, what made you buy government securities?**

- a) Marketability
- b) No risk / safety
- c) Your friends and relatives
- d) NRB notices
- e) Because most of people are buying

**10. If you have to decide on either of these investment alternatives which will you prefer to invest?**

- a) Nominal return / No risk
- b) Small return / Less risk
- c) Moderate return / Moderate risk
- d) High return / higher risk
- e) Super return / Maximum risk

**11. Are you satisfied with the regulations and provisions of Security Exchange Board and Nepal Stock Exchange?**

- a) Yes
- b) No

If no please give some reasons.

.....

**12. Please rank these, as per your preferences. Why our financial market could not develop properly? (1 to the best 4 to the lowest)**

- a) Political instability
- b) Small market
- c) Investment awareness
- d) Rules and regulation