CHAPTER - I

INTRODUCTION

1.1 Introductory Framework of the Study

Overall development of the country is possible, if each and every sector of the country be developed properly. For the same Capital market plays a vital role for the development of every county. Till the report writing there is establishment of full-fledged democracy in Nepal and if we utilize this opportunity in the country, this will be the millstone for the development of country.

Capital market is the market insinuate for long term securities issued by the government or Private Corporation. Capital market typically involves financial assets such as stocks, bonds etc. that have life span of greater than one year. Capital market helps the economy of the country to rise up. But Nepal's capital market is very lean in providing a variety of investment alternatives to the investors. Among possible various investment alternatives like common stocks, preferred stocks, government bonds, corporate bonds, right shaves, option, warrant and convertible etc, only very small number of alternatives are available for Nepalese investors.

Equity financing is inevitable sources, which may not be profitable is fully depending on it. Thus, debt financing is another economical or cheapest source of long term financing. Funds required for mounting business as well as swelling long term business might be financed cheaply and easily by issuing corporate bond/debenture securities.

A debt instrument is a long term contract under which a borrower agrees to make payment of interest and principal on specific dates to the holders of the instrument. Debenture securities are the important types of financial instruments of the capital market of the nation. Debenture is the securities

which provide fixed income to their holders and involves lower risk than the securities that yield variable income. If the company is going to be liquidated, first priorities are given to the debt holders. Debt holders get fixed interest before the stock holders get dividends. Generally, risk seeker investor invests to the equity share and risk averter investor wants to invest in debenture. Debt securities are of many types such as secured or unsecured, perpetual or redeemable, convertible or nonconvertible.

Nepalese capital market as well as debt market has not reached its maturity stage. There is not proper exercise of debt securities till now and its history is also not very long. For the development of and growth of Nepalese debenture market, development of government debt securities market as well as corporate bond or debenture securities market is necessary.

Corporate debenture is a debenture issued by a private firm business enterprise whether owned by private investors or by a government. Corporate debentures have high default risk. Unsecured debentures of a corporation are known as debentures. Investors look to the earning power of the corporation and then security. Debenture holders are protected by the restriction imposed in the indenture. Debenture issue is more suitable for profit oriented institutions' for taking leverage effect benefit. Debenture is a tool of maximizing share holders wealth. Debt is economical sources of long term financing.

Nepal does not have a long history of corporate bond market. Only few (i.e. eighteen) corporate bond/debenture have been issued prior or after the enactment of Securities Exchange Act 1983, till now. Corporate bond/debenture securities issued by private organizations in the Nepalese capital markets are shown with their characteristic features as follows:

For long term financing debenture is very much economical sources. The corporate bond/debenture market in Nepal is very lean. Very few companies

have issued bond in the market. First time in the Nepalese history, Bottlers Nepal had issued 18% debenture of Rs. 5 million (with par value Rs. 1,000) in the FY 1986/87. It was slightly over subscribed (i.e. Rs. 5.13 million) and was redeemed at maturity.

Secondly, Jyoti Spinning Mills Ltd. had issued 14% bond of Rs. 20 milling (with par value Rs. 1,000) in the FY 1992/93. It was managed by NIDC.

The primary issue of debt securities disappeared for more than a decade. Then thirdly, Shree Ram Sugar Mills Ltd. has issued the debenture of "14% convertible and redeemable debenture" in the FY 1997/98. The Mill's issued debentures worth Rs. 93 million (with par value Rs. 1,000) and managed by NIDC and charge 0.50% of total collected amount as flotation cost. This debenture was heavily undersubscribed (i.e. 17.13 million) and there was no conversion ratio (Shree Ram Sugar Mills Ltd., Debenture Prospectus, 1997).

Himalayan Bank Ltd. had issued Rs. 360 million "8.5% Himalayan Bank Ltd. Debenture -2066" (with par value Rs. 1,000 and semi – annual interest payment) in the FY 2057/58. The bank decided to distribute debentures through the private placement with the amount of Rs.260 million and through the issue-managed company of Rs. 100 million issues was managed by the Nepal Merchant Banking and Finance Limited with charged of 0.54% of total amount. It was heavily oversubscribed (i.e. 141.7 million). Its issue was managed by NMB (Himalayan Bank Ltd., Debenture Prospectus, 2002).

Nearly one and a half year after issuance of HBL bond, another big Nepali bank, Nepal Investment Bank Ltd. (NIBL) has issued Rs. 300 million "Nepal Investment Bank Bond 2010" (with 7.5% coupon interest paid semi – annually) in the FY 2003/04. Out of 300,000 units of issue (with par value Rs. 1,000), 100,000 were issued to the general public and 200,000 units were privately placed. The interest rate offered by NIBL was one percent lower than

that in HBL's bond (where it was 8.5% with semi-annual payment arrangement); it had good chance of being oversubscribed. Its issue manager was AFCL (Nepal Investment Bank Ltd., Debenture Prospectus, 2005).

Everest Bank Ltd. had issued debenture of Rs. 300 million (with 6% coupon interest paid semi-annually) in the FY 2004/05. The par value of debenture was Rs. 1,000 with maturity period of seven years (i.e. redeemable after 7 years). Out of 300,000 units of issue 50,000 units were issued to the general public and 250, 000 units were privately placed. EBL bond issue date was 2062/01/07. Its issue manager was CIT (Everest Bank Ltd., Debenture Prospectus, 2005).

Bank of Kathmandu Ltd. had issued Rs. 200 million "Bank of Kathmandu bond- 2069" (with 6% coupon interest paid semi annually) in the FY 2005/06. Out of 200,000 units of issue, 50000 units were issued to the general public and 150,000 units were privately placed. The par value of debenture was Rs. 1,000, with maturity period of seven years. It issue manager was NMB (Bank of Kathmandu Ltd., Debenture Prospectus, 2005).

Again Nepal Investment Bank Ltd. has issued "Nepal Investment Bank Bond – 2070" (with 6% coupon interest rate paid semi-annually) in the FY 2005/06. Out of 250,000 units of issue, 80,000 units are issued to the general public and 170,000 units are privately placed. The par value of debenture is Rs. 1,000, with maturity period of 7 years. Its issue manager is AFCL (Nepal Investment Bank Ltd., Debenture Prospectus, 2006).

Nepal Industrial and Commercial Bank Limited have issued Rs. 200 million "NIC Bond-2070" (with 6% coupon interest paid semi – annually) in the FY 2005/06. Out of 200,000 units of issue (with par value Rs. 1,000), 50,000 units are issued to the general public and 150,000 units are privately placed. Its issue

manager is AFCL (Nepal Industrial and Commercial Bank Ltd., Debenture Prospectus, 2006).

Nepal SBI Bank Ltd. has issued Rs. 200 million "6% Nepal SBI Bank Debenture – 2070" (with maturity period of 7 years and semi – annual coupon payment) in the FY 2005/06. Out of 200,000 units of issue, 50,000 units are issued to the general public and 150,000 units are privately placed. Its issue manager is CIT (Nepal SBI Bank Ltd., Debenture Prospectus, 2006).

Again after three years, Nepal Investment Bank Ltd. (NIBL) has issued Rs. 250 million "6.25% Nepal Investment Bank -2071" (with maturity period of 7 years and semiannual coupon payment) in the FY 2007/08. Out of 250, 000 units of issue, 50,000 units are issued to the general public and 200,000 units are privately placed. Its issue manager is ACFL (Nepal Investment Bank Ltd., Debenture Prospectus, 2007).

Similarly, Kumari Bank Limited (KBL) has issued Rs. 400 million "8% Kumari Bank Limited Bond – 2070" (with maturity period of 5 years and semi-annual coupon payment) in the FY 2007/08. Out of 250,000 units of issue, 50,000 units are issued to the general public and 200,000 units are privately placed. Its issue manager is NMB (Kumari Bank Ltd., Debenture Prospectus, 2008).

After 7 years, again Himalayan Bank Ltd. (HBL) has issued "8% Himalayan Bank Bond -2072" with par value Rs. 1,000 and semi – annual interest payment of Rs. 500 million in the FY 2008/09, with 7 years maturity periods. 100,000 units were privately placed and 400,000 units were issued to the general public out of 500,000 units of issue. Its issue was managed by ACDB (Himalayan Bank Ltd., Debenture Prospectus, 2008).

After issuing of debenture three times, again Nepal Investment Bank Ltd. has issued Rs. 250 million "8% Nepal Investment Bank Bond-2072" (with maturity period of 7 years and semi-annual coupon payment) in the FY 2008/09. Out of 250,000 units of issue, 50,000 units are issued to the general public and 200,000 units are privately placed. Its issue manager is ACDB (Nepal Investment Bank Ltd., Debenture Prospectus, 2008).

After the issuing of four times debenture by NIBL, one of the most leading commercial bank of Nepal called Nabil Bank Limited (NBL) has issued Rs. 300 million "8.5% Nabil Bank Bond -2075" (with the highest maturity period of 10 years from commercial bank, semi-annual coupon payment) in the FY 2008/09. Out of 300,000 units of issue, 60,000 units are issued to the general public and 240,000 units are privately placed. Its issue manager is NIDC, (Nabil Bank Limited, Debenture Prospectus, 2008).

After the issuing of bond by Nabil Bank Limited, another commercial bank of Nepal called Siddhartha Bank Limited (SBL) has also issued Rs. 400 million "8% Siddhartha Bank Limited Bond-2072" (with maturity period of 7 years and semi-annual coupon payment) in the FY 2008/09. Out of 400,000 units of issue, 80,000 units are issued to the general public and 320,000 units are privately placed. Its issue manager is ACDB (Siddhartha Bank Limited, Debenture Prospectus, 2008).

Finally till the report writing, Laxmi Bank Ltd. (LBL) has issued Rs. 350 million "8.5% Laxmi Bank Limited Bond – 2072" (with maturity period of 7 years and semi-annual coupon payment) in the FY 2008/09. Out of 350,000 units of issue, 50,000 units are issued to the general public and 300,000 units are privately placed. Its issue manager is ACDB (Laxmi Bank Limited, Debenture Prospectus, 2008).

For the development of corporate bond/debenture market in Nepal, Nepal stock Exchange Ltd. (NEPSE), Security Board of Nepal (SEBON), Nepal Rastra Bank (NRB), Commercial Banks, Finance Companies, Private Organizations, Government, Brokers, Investors and concerned bodies etc. had made greater effort. Development and growth of corporate debenture securities market is essential for the rapid economic growth of country like Nepal. For the growth of corporate bond market of any country requires: systematic development in industrial sector, development in share market, positive attitude of general as well as institutional investors, adequate rules and regulation mechanism, and adequate infrastructure facilities etc. But, the accelerating pace of growth and development of Nepalese corporate bond/debenture securities market has faced many problems. Thus, these problems should be better recognized and competitive strength of Nepalese corporate bond market should be developed to cope with the existing problems and forecasted challenges.

This means, more of such bond issues can be expressed in the future, particularly from the banks to meet their higher capital requirement under Nepal Rastra Bank directives (Bhattarai, 2005:193-194).

1.2. Focus of the Study

The study focused on the issues of bonds in the past decades and also the recent issues such as bond issued by Nepal Electricity Authority, Kumari Bank Limited, Nabil Bank Limited etc. However, higher focus has been by this study on Nepalese corporate bond/debenture market generated from private companies such as Shree Ram Sugar Mills Ltd, Jyoti Spinning Mills Ltd, Bottlers Nepal, Himalayan Bank Ltd, Nepal Investment Bank Ltd etc and the problems of debenture/bond in Nepalese contest.

1.3 Statement of the Problem

It has been found there is increasing concern about debenture market of Nepal among the researcher, concerned experts, investors as well as the corporate

bodies and corporation. Now days, it has been seen that organization are interested to issue corporate bond/debenture securities and investors to invest on corporate bond/debenture securities too. Debentures are less risky security of investment with fixed rate of return. They are less risky security because there are very few chances of losing principal and interest even in liquidation of company. They means of maximizing value of firm. Shortage of the fund for the process of industrial expansion and growth can be received from debenture issue. In spite of having so many opportunities Nepalese bond market is not being able to grow rapidly. Debentures securities are firstly issued by the capital raising companies through primary capital market later on these securities are negotiable in secondary capital market. Capital market provides investors good investment opportunity with fair return and instant liquidity with minimum risk of loss. On the one hand corporate bodies are suffering by financial crisis, on the other investors with surplus money cannot find the appropriate investing scheme. And the other they are unable to bring product innovation, introducing new technologies, and employing management and technologically expert due to lack of funds. Only some organizations are able to utilize this fund by issuing debenture, but there is not proper exercise of debenture in Nepalese Capital market.

Developed countries invest huge amount in research and development activities, many research works regarding to the debt market are conducted. In Nepalese context, there are very few research works about the debt securities and almost absent of research works on corporate bond/debenture market.

Now a day's debenture is in growing trend. In the past debenture securities issued were under subscribed, but thereafter they are oversubscribing. Debenture markets have some prospect of growth even if the whole economic growth is in downturn due to political instability.

There is very high risk to invest in shares, but low risk to invest in debentures. Many companies are going to be liquidated due to the political instability in the country. And in such situation the debenture holder are very safe than share holder. But investment in share is higher than in debenture. As we know, investment strategies also depend on the investment environment. But in Nepal, such investment strategies are not practiced yet. In this way, it is seen that public concern towards debenture market is growing but there are various problem found by organization and people concerned with it. This hinders the growth of debenture market. Inadequate legal provisions, limited supply of quality bonds, poor knowledge about securities etc. might be the obstacles in the development of debenture market. Thus, the researcher felt need of research on topic issues and prospects of developing corporate bond/debenture markets in Nepal. The researcher had made his great effort and attention in identification of issues/problems restricting Nepalese corporate bond market and its future growth prospect.

Beside these, some specific problems are as follow:

- What is the trend of corporate bond in Nepal?
- Why the companies are not issuing bonds instead of taking loan in Nepal?
- What is the position of corporate debenture market in the structure of Nepalese securities market?
- What are the prospects of developing corporate bond market in Nepal?
- Why the investors are not interested to invest in debenture securities?
- What are the key factors responsible for the hindrance of corporate bond market growth in Nepal?

1.4 Objective of the Study

The broader objective of the study is to examine the status of the corporate debt market in Nepal. Following are the specific objectives of the study:

- To examine valuation, duration and use of corporate debt securities in Nepal.

- To assess the existing mechanism of corporate debt market in Nepal.
- To analyze the problems that affect development of corporate bond market.
- To explore the future prospects of corporate debenture market in Nepal.
- To provide constructive ideas, and policy recommendations to the concerned authority.

1.5 Significance of the Study

To some extent this study gives information about debt market. The study is beneficial for all the persons who are directly or indirectly related to the Nepalese debt market, as well as it is hoped that it may be a matter of reference for new coming researchers, academicians, teachers, students or persons practicing in the fields of finance. It is hoped that, the finding of the study will be significant to different stakeholders such as researchers, students, teachers, financial institutions, and the investors.

The study is significant as it gives insight on the present status of corporate bond market and its trends, which in turns provides useful information to the corporation, students, researchers, scholars, who want to investigate into the corporate bond/debenture in Nepal. Furthermore this study will be beneficial to the investors for investing into the corporate bond. This study tries to explain the theoretical concept and also identify the major problems faced by corporate bond/debenture market and analyze its future prospects. So it is concerned with the problems and prospects of developing corporate bond/debenture markets in Nepal. Hence, the researcher is confident that it is helpful for the policy reforms of corporate bond market of Nepal.

1.6 Limitations of the Study

Every study has its limitation. As the study is being carried out for the partial fulfillment of the requirement for the degree of Masters of Business studies, it poses a number of limitations of its own kind. Basically, shortage of time,

budget, reliability of statistical tools used and lack of research experience are the main limitations.

- The study mainly covers period from FY 1998/1999 to 2008/09 for secondary Data and primary data were collected and analysed for the year 2010.
- The study focuses only on corporate bond/debenture market of Nepal.
- The study is mainly focused in debenture issuing companies, investors, some private companies, related parties within the Katmandu valley.
- The study is concerned only on existing securities acts, legal rules and regulations relating to the topic.

1.7 Organization of the Study

In order to achieve the specified objective, the research has been organized into five chapters each of which will be devoted to some aspects of the study of the corporate debt security market in Nepal. The chapters one to five consist of introduction, review of literature, research methodology, presentation and analysis of the data and summary and conclusions.

Chapter I: Introduction

This chapter is concerned with introduction of the main topic of the study like general background, statement of the problems, objective of the study and organization of the study and other introductory framework.

Chapter II: Review of Literature

This chapter deals with the review of available relevant studies. It includes the conceptual review of the related books, journals, articles and the published and unpublished research works, thesis as well as security act.

Chapter III: Research Methodology

This chapter describes research methodology employed in this study i.e. research carried out in this size and shape. It will contain research design,

population, and sample size, data collection procedure and tools used for analysis.

Chapter IV: Data Presentation and Analysis

This chapter is the major part of the whole study in which all collected relevant data are analyzed and interpreted by the help of different financial & statistical tools. In this chapter we explained the major findings of the study.

Chapter V: Summary, Conclusion and Recommendation

This chapter will sum up the results obtained through the overall analysis of the whole work and give some valuable recommendation and suggestion and conclude the project.

Besides these, bibliography and appendixes have been enclosed at the end of the study. Similarly, acknowledgement, tables of contents, list of tables, list of figure and abbreviations are put in front part of the study.

CHAPTER - II

REVIEW OF LITERATURE

2.1 Debt Securities Market Conceptual Framework

The market is a number of people Buyer and Sellers who have some need or want, have resources and are also willing to participate in the transaction (Koirala, 2065:5) marketable financial instruments that below on their owners the right to make specific claims on particular asses called securities. An individual security provides evidence of either creditor ship or ownership depending on whether it is a bond or a stock, respectively (Francis, 1988:10). A debt instrument is as long term contract under which a borrower agrees to make payment of interest and principal on specific dates to the holders of the instrument. Thus, security markets are mechanisms created to facilitate the exchange of financial assets. The securities market includes both money and capital market.

Capital market consists of markets where the intermediate and long term security of individuals, Business firms and governmental units are issued and traded each other's (Scholl & Haley, 1991:21) where as long term debt securities are traded in capital market, capital market bring together buyers and sellers of securities. i.e. security capital market are mechanisms created to facilitate the exchange of financial added (Sharpe etal; 1995:7).

Security markets can be divided into primary and secondary market on the basis of security traded in primary markets; new securities are traded whereas after the securities have been issued, they are traded among investors in the secondary markets. The success of the issue depends upon the public response. The secondary market is the only way to turn security in to cash.

Debt securities market is an essential part of capital market, where trading of debt securities are held. Similarly the equity securities, both primary and

secondary market exist for the debt securities. But bond trading differs from stock trading. Debt securities market can be divided into corporate debt market and government debt market.

Corporate Debt Securities Market

Corporate debt Securities market is an essential part of capital market, where privately placed or corporation debt securities are traded. Corporate debt securities are the traded. Corporate debt securities are the means by which private firms borrow fund directly from the public. These bonds are similar in structure to treasury issues they typically pay semi-annual coupons over their lives and return the face value to the bond holder at maturity. It differs most importantly from treasury bonds in degree of risk. The corporation can raise fund either by issuing equity share or debenture for long term capital requirement.

A corporate bond is a security representing a long–term promise to pay a certain sum of money at a certain time over the course of the loan with the fixed rate of interest payable to the holder of the bond. In other words, corporate bonds are similar to other kinds of fixed–income securities in that they promise to make specified payments at specified times and provide legal remedies in the event of default. The term "corporate bond" is usually applied to longer term debt instruments, generally with a maturity date falling at least 12 months after their issue date (the term "commercial paper" being sometimes used for instruments with a shorter maturity). Sometimes, the term "corporate bond" is used to include all bonds except those issued by governments in their own currencies, although, strictly speaking, it only applies to those issued by corporations. Restrictions are often placed on the activities of the issuing corporation to provide the additional protection for bondholders.

Corporate bonds are the means by which private firms borrow money directly from the public. These bonds are similar in structure to Treasury issues–they

typically pay semiannual coupons over their lives and return the face value to the bondholder at maturity. They differ most importantly from Treasury bond in degree of risk. Default risk is a real consideration in the purchase of corporate bond.

If the company goes bankrupt, the bondholders will not receive all the payments they have been promised. The actual payments on these bonds are uncertain, for they depend to some degree on the ultimate financial status of the firm. Bond default risk, usually called credit risk, is measured by Moody's Investor Services, Standard and Poor's Corporation, Duff and Phelps, and Fitch Investors Service, all of which provide financial information on firms as well as quality ratings of large corporate and municipal bond issues. Each firm assigns letter grades to the bonds of corporations to reflect their assessment of the safety of the bond issue.

The holders of a company's long–term bond, of course, are creditors. Generally they cannot exercise control over the company and do not have a voice in management. If the company violates any of the provisions of the bond contract, then these holders may be able to exert some influence on the discretion of the company. Holders of the long–term bond do not participate in the residual earnings of the company; instead, their return if fixed. In liquidation, the claim of bond holders is before that of preferred and common stockholders. Depending on the nature of the debt instrument, however, there may be differences in the priority of claim among the various creditors of a company.

Corporate bonds come in several different forms. The basic classification include collateralized (secured) or uncollateralized (unsecured), senior or (subordinated) junior, callable or non-callable, and convertible bonds.

Most corporate bonds are traded in the over–the–counter (OTC) market, so it has little transparency. One reason the bond markets are so big is that the

number of bond issues far exceeds the number of stock issues. There are two reasons for this. First, a corporation would typically have only one common stock issue outstanding. However, a single large corporation could easily have a dozen or more note and bond issue outstanding.

Corporate bond has high default risk. The market where bonds or debt-securities are traded known as debt market. Corporate bonds/debenture provides capital to the company and the investors get the status of lenders through the debt market. Business firms issue many types of debt; however, only large firms issue bonds. Smaller firms deal directly with lenders such as bank and insurance companies. Firms can obtain long–term debt financing privately or through public offerings. The main difference between public–issue and private placed debt is that the latter is directly placed with a lender and not offered to the public. Private sector securities help diffuse stresses on the banking system by matching long–term investments with long–term capital. There is thus a strong public interest in a viable bond market for private sector issuers.

To be successful, private bond market not only need a disclosure system, a credit–rating system, and bankruptcy laws but also authorities should also avoid possible crowding out and statutory restrictions that hinder the development of corporate bond market.

Firms can obtain long term debt financing privately of through public offering. Privately debt includes several types of debt that consist of direct long term loans from banks and institutions while public offering debt includes issuance of bonds and debentures. Corporate debenture is a security representing long term promise to pay a certain sum of money at a certain time over the course of the loan with the fixed rate of interest payable to the holder of the bond (Hampton, 2001:27).

"A corporate bond is certificate indicating that a corporation has borrowed a certain amount of money from an institution or an individual and promises to repay it in the future under clearly defined terms. Most debentures are issued with maturity of 10 to 30 years and with par of face value of 1000. The coupon interest rate on bond represents the percentage of the bond par value that will be paid annually, typically in two equal semiannual installments." (J, Fred Gittman Lawrence 2000) Most corporate bonds are traded in the over the counter (OTC) market, so it has little transparency. One reason the bond market are so big is that number of bond issues far exceeds the number of stock issue. There are two reasons for this. First, a corporation would typically have only one common stock issue outstanding.

According to Van Horne, "The holders of a company's long-term debt, of course, are creditors. Generally they cannot exercise control over the company and do not have a voice in management. It the company violates any of the provisions of the debt contract, and then these holders may be able to exert some influence on the discretion of the company. Holders of the long-term debt do not participate in the residual earning of the company; instead, their return if fixed. In liquidation, the claim of debt holders is before that of preferred and common stockholders. Depending on the nature of the debt instrument however, there may be differences in the priority of claim among the various creditors of a company."

Corporate debenture market development can be achieved from most notably a disclosure system, a credit rating system, and bankruptcy laws, authorities avoiding possible crowding out and statutory restrictions.

2.2. Types of Bond Market

We can classify bond market in different basis. These are:

a. **On the basis of Life Span**

On the basis of maturity periods, we can categories bond market into two parts.

Money Market

A money market is a market for instruments and a means of lending (or investing) and borrowing funds for relatively short periods, typically regarded as from one day to one year. It is a market for short-term securities issued on a negotiable basis. The short-term securities are actively traded in a secondary market. The prices and yields of these securities are closely related to those of the newly issued instruments. Due to short-term maturity characteristics, money market securities fluctuate every little in price when interest rates change. These securities sell before maturity at very close to their purchase money market instruments such as government treasury bills, negotiated certificate of deposit, banker's acceptance, commercial papers, short term bank loans, Euro dollars etc. are the traded in the money market.

Capital Market

It is a market for long term securities issued under various terms and conditions. In this market, trading is conducted on the long term marketable government securities, corporate bonds, and common stock, municipal bonds, and mortgage bonds, Government securities pay low interest rate and they are not so much profitable as capital market investment vehicle. Other market instruments provide substantially a higher rate of return. Even then, government securities are used in capital market as they ensure considerable liquidity and safety for financial institutions. Thus, banks and financial institutions are the principle buyers of these securities. Corporate bond is another important tool used in capital market. Non-bank financial institution such as insurance companies, pension funds, and individuals are the buyers of corporate bond because of its tax deduction feature on interest paid. However, at present, tax deduction is not provided. Municipal bonds issued by the state and local government also provided additional outlet for capital market. These are tax exempt bonds attractive to the lender like banks, insurance companies and individual under high income tax brackets. Mortgages are in fact the largest element in capital market in term of amount outstanding.

b. On the basis of Bond Transaction

On the basis of bond trading, bond market can be classified into following types:

Primary Market

The market that offers the security to the public first time is known as primary market. It is initial public offering market. In primary market issuers inform and request public to buy securities. Specifically, in primary market sales of new securities and cash raised from it goes to the issuer. But, trading in other market does not contribute anything to the issuing company.

Secondary Debt Market and (OTC) Markets

The market on which trading of once issued securities are performed is known as secondary market. The secondary markets comprise the organized securities exchanges and the over the counter (OTC) markets. The majority of all capital market transactions occur in the secondary markets. The proceeds from sales of securities in the secondary markets do not go to the original issuer but to the owners (sellers) of the securities.

The function of secondary markets is to provide liquidity for securities purchased in the primary markets. Once investors have purchased securities in the primary markets, they need a place to sell those securities. Without the liquidity of the secondary market, firms would have difficulty raising funds for productive purposes in the primary markets. The performed at secondary market the issuer never gets cash. Over the counter (OTC) market is one of the important segments of the secondary market. The over the counter market is a way of trading securities that involves no organized exchanges. The broker dealers who engage in the OTC are linked by a net work of telephones and computers terminals through which they deal directly with one another and with customers. Thus, a process that takes place over communication lines that span thousands of miles and allows investors to select between competing

markets makers arrives at prices. This type of practice is not prevalent in Nepal. Initially these markets are also important to promote the bond market of Nepal.

Third Market

This is the combination of the over the counter market and organized stock exchange. The market refers to the trading of any securities that are listed on organized stock exchange in over the counter market. It is notable that trading hours in the third market is not fixed like organized stock exchange. The third market is made up of securities dealers making markets in anywhere one two a few hundred securities. Thus, third markets are markets that are in directing competitive with the specialist that make markets on the organized exchange.

Forth Market

The forth market refers to those institutional investors and wealthy investors who buy and sell securities directly from each other. Thus, forth market participants completely bypass normal dealer services. Forth market essentially a communication network among institution investors that trade large blocks individual or a few persons who communicate the buy and sell desires of their market organizer may collect a small commission or a flat annual fee from helping to arrange these large transactions.

C. Other Bond Market

International Bond Market

Any bond sold outside the country of the borrower is called an international bond, but it is necessary to distinguish further between two types of international bonds i.e., Euro bonds and foreign bonds. The term international bonds is often used to describe several types of bonds with a variety of characteristics relating to issuer or buyer domicile, the location of the primary trading market, or currency denomination.

Foreign Bonds

Foreign bond is such bond where denominated currency is other than that of the country in which is issued. Moreover, the foreign bond market refers to bonds issued and denominated in the currency of a country other than the one in which the issuer is primarily located. For example, if Nepalese corporation issues bond with face value in US dollar, then such bond will be foreign bond.

Borrowers sometimes raise long-term debt capital in the domestic capital market of a foreign country is known as foreign bonds. In issuing foreign bonds, the issuer must abide by the rules and regulation imposed by the government of the country in which the bonds are issue. One of the main advantages of purchasing foreign bonds is the opportunity to diversify internationally the default risk of a bond portfolio while not having to be concerned about foreign exchange fluctuations.

Euro Bonds

Eurobond is such bond which is offered outside he country of the borrow and outside the country in whose currency the securities are denominated. For example, bond issued by Indian corporation that is denominated in US dollars and sold in Nepal is refunded as a Eurobond. As the Eurobond market is neither regulated nor taxed, it offers substantial advantage for many issuers and buyers of bonds.

Primary Debt Market

Primary debt market is initial public offering market. The market that offers the securities to the public first time to is known as primary market. In Primary market issues inform and request public to buy debt securities specifically in primary market new debt securities are sold, and cash raised from it goes to the issues. But trading in other market doesn't contribute anything to the issuing company.

2.3 Characteristics of Debt Securities

Debt securities don't have the same contractual features (Brigham & Houston, 2001). Although all bonds have some common features which are as follows:

- **Par Value**

The par value is the stated face value of the bond; it is set as multiple of 10 generally in practice it is set at $1000. The par value generally represents the amount of money the firm borrows and promise to repay at some future maturity date.

- **Coupon Rate**

Coupon is the specified number of follows of interest paid each period, generally each six months. This rate is fixed at the time of land issued and remains constant during the maturity of bond. The coupon payment is must be paid by the issues whether the issues earns profit or suffer from issues.

- **Maturity Date**

Debt securities are issued for a specified period of time, it has a fixed maturity date the maturity of debt indicates the length of time until the company redeems the par value of debt holders & terminates that debts.

- **Call Provision**

The cell provision generally states that the company most pays the bond holders an amount greater that the par value if they are called the additional sum is termed as a call provision.

- **Convertibility**

At the option of debits holders, debt also has the feature of convertibility into equity shaves.

- **Registration**

Debt can be either registered or be rent bonds for interest and or principle payment. The issues maintains records on the ownership of registered bonds,

who the holder is assumed to be the owns of bears bonds. The transfer of securities will be possible only after registering the name of the new holders and canceling the name of the original holders.

- **Trustee**

Trustee is an agent of a bond issues who handless the administrative aspects of a loan and ensures that the borrower complies the terms of the bond indenture (Rabindra Bhattarai, 2009).

The bond trustees is require maintaining separate accounts, monitoring bend do current requirements and provide monthly statement. A bond trustee must have adequate stuff and system to efficiently perform its duties.

- **Indenture**

It is a legal contract between an issues of bonds and the bond holders stating the terms and time period for repayment, amount of the interest paid, if the bond is convertible and if so, at what price or what ratio and the amount of money that is to be repaid. More ever this is also referred to as a deed of trust.

The indenture establishes the long term relationship between the lender and the borrower of the long term date. The indenture contains the bond issuance terms. The bond indenture can be documents of several hundred pages, that discuss a large number of factors important to the contacting parties such as the form of the bond and the instruments,

- A complete description for the properties pledged
- The authorized amount of the bond issue
- Detailed prospective clauses, or covenants
- A minimum current ratio requirements
- Provisions for redemption or call privileges

- **Sinking fund**

A sinking fund is a provision that facilities the orderly retirement of a bend issue (Copeland: p 962). A sinking fund is money taken Form Corporation earning that is used to redeem bonds periodically, before maturity a specified in the indenture (http:www.investing.bonds.com) it can be used the required number of bonds on the open market.

The corporation can make a cash payment to the trustee, which is turns calls the bonds for redemption at the sinking fund cell price the bond themselves are called on lottery basis by their serial numbers. The second option available to the issuing firm is to purchase bonds in the open market and do deliver a given numbers of bonds to trustee (Van Horne, 2001: 551).

- **Collateral**

The type of Collateral is important for bonds that have probability of default. The investors must be cautious about the assets that are pledge as collateral in the event of default of regular payment of interest and principle valuation is collateral lead to several type of bonds (Cheney and Moses, 1997:332).

2.4. Debt Market Instrument

Document used to raise the loan for short-term as well as long term are called debt market instrument. Long term debt instrument, consider the various kinds (Van Horne, 2002) some of them are:

Bond

A bond is long term contract under which an issuer promises to make payment of interest and principle on specific dates to the holder of the bond. It is also called secured debenture.

Income Bond

Income bonds pay interest only when the firm has sufficient income to cover the interest payments. Thus these securities can not bankrupt a company, but

from an investor's viewpoint they are riskier than regular bonds. According to J. Fred Weston and Thomas E. Copland "Income bonds, historically, have been issued because a firm has been in financial difficulties and its history suggests that it may be unable to meet in the future payment of income bond interest obligation is similar with payment of preferred stock dividend which does not welcome liquidation due to default in payment of interest issuing income bond is beneficial because interest is deductible while computing after tax income."

Debenture

A debenture is an unsecured bond. No lien has been provided on specific property. Therefore, debenture holders are termed as general creditor of the company. Whose claim is protected by property not otherwise pledged? The use of debenture depends on the nature of the firm's assets and its general credit strength. A firm whose credit position is exceptionally strong can issue debenture; it simply does not need specific security. But if the credit position of a company may be so weak that it has no alternative to use of debenture all its property may already be encumbered.

Subordinated Debentures

Subordinated debenture represents debt that ranks behind debt senior to these debentures with respect to claim on assets. In the event of liquidation or reorganization, holder of subordinate debentures cannot be paid until all senior debt, as named in the debentures indenture has been paid (Weston and Brigham, 1996:811). The existence of subordinated debenture may work to the advantage of senior holders, because senior holders are able to assume the claims of subordinated debenture holders. Because of the nature of the claim, a straight subordinated debenture issue has to provide a yield higher than a regular debenture issue in order to be attractive to investors.

Secured Bonds

Bonds that have specific assets pledged as collateral are secured bonds. Mortgage bond is an example of secured bonds.

Unsecured Bonds

Bonds without specific collateral are unsecured except for the general credit worthiness of the issuer. Debentures or subordinated are example of this type of security.

Term Loan

A term loan is a contract under which a borrower agrees to make a series of interest and principle payments on specific dates to the lender. Term loans usually are negotiated directly between the borrowing firm and a financial institution generally bank, an insurance company or a pension fund.

Floating Rate Notes

Floating rate note is an important means of raising fund at the time of fluctuating interest rate. Therefore, it is used to decrease the risk associated in the change in the market interest rate. The interest rate is adjusted periodically with the change in the market interest rate.

Junk Bond

Junk bonds are high yield bonds issued by companies that are considered highly speculative because of risk of default. Due to their higher risk level, most investors should avoid junk bonds.

Junk bond has a relatively high risk of default. Junk bonds are riskier than other types of bonds thus pay a high interest rate.

Immunization

The introducing concept of duration led to the development of the technique of bond portfolio management known as immunization (Sharpe et.al, 2002.P.429)

Immunization is accomplished simply by calculating the duration of the promised outflows and then investing in a portfolio of bonds that has an identical duration. In doing so, this technique take advantage of the observation that the duration of a portfolio of bonds is equal to the weighted average of the duration of the individual bonds in the portfolio (Sharpe et.al, 2002:429).

The main problems with immunization that can cause it to work less than perfectly are; default and call risk, multiple nonparallel shifts in a no horizontal yield curve, rebalancing and many candidates.

Immunization strategies were introduced to eliminate the interest rate risk in a portfolio of bonds. The discussion revealed that duration was not only (i) an insightful measure of the time structure of a bond's cash flow and (ii) a measure of a bond's interest rate risk; it was also (iii) useful in the development of strategies for managing the interest rate risk in a portfolio of bonds.

2.5. Terms Related to Corporate Debenture Markets

a) Interest Rate

Interest is the price pay to the lenders for the use of their money. It is calculated as a percentage of the amount borrowed from a lenders view point, interest is the excess money that is received over the amount that was loaned. But borrowers are prepared to pay interest so they can make purchases that they could afford if they had to pay for them immediately (The World Book Encyclopedia, 1996: 278). Interest is the cost of using money over time. Interest expenses or interest revenue equal the interest rates times the carrying value of the liability or receivable at the beginning of the period. Interest rate features are stated in percentage terms of the par values of the related obligation. The contract value is directly related to interest rates. So contract will increase when interest rate decreases and vice versa (Shim et.al, 1989:243).

The most common type of interest is simple, compounded and discount interest. The interest depends on the relationship between supply and demand. If the demand for the loan increases, interest rate rise up and fall if the demand fall loan decreases. Supply and demand, in turn, are affected by several factors such as government policy, inflation, economics activities, the length of loan and the degree of risk (The World Book Encyclopedia, 1996:278-279).

Different theories of interest rates are developed. They are expectation theory, the liquidity preference theory and market segmentation theory. The expectation theory maintains that long term yields are a function of the anticipated short term rates that will prevail during the terms of the long term security (Chenny and Moses, 1992:379). In a free economy, interest rate will adjust until the total amount of capital demanded by producers equals by amount that owners of wealth are willing to supply.

b) Inflation

Inflation refers to persistent rise on the general level of over a certain period to the continues growth of demand very much in excess supply of goods and services. Inflation reduces the purchasing power of consumer and as a persistence and appreciable raise in the general prices (Shapiro, 1995:409). A state in which value of money is falling i.e. prices are raising (Crowther, 1958:197). The real interest rate has been obtained by subtracting the inflation rate from the one year nominal interest rate and nominal interest rates are highly correlated with inflation (Kaen, 1995:160). In times of changing prices, the nominal returns on an investment may be a pole indicator of the real return, real rate obtain by the investor. This is because part of the addition dollars received from the investment may be needed to recoup the investor's purchasing power due to the inflation. That has occurred over the investment period. As a result, adjustments to the nominal return are needed to remove the effect of inflation in order to determine the real return (Bailey at el 1995:367) and inflation rate is denoted by q_t .

$$q_t = \frac{CPI_{(t+1)} - CPI_t}{CPI_t} \times 100$$

Where,

q_t = Rate of inflation at time t

CPI_t = Consumer price index at time t

$CPI_{(t-1)}$ = Consumer price index at time (t-1)

And, the annualized inflation rate = (1+ per month q)[12]

To provide the full compensate for the investors, borrows has to adjust the inflation rates with nominal rates (Sharpe et el 1999). Adjusted, then normal rate of return, are can be defined:

r = rr+q

Where,

rr = real rate of return

r = nominal rate of return

q = rate of inflation

Borrower, necessary to consider the inflation rate while determine the interest rate of debt securities.

Immunization

The introduction of the concept of duration led to the development of the technique of bond portfolio management known as immunization. Immunization is the strategy for protecting a bond portfolio against the risk of rising interest rates. Theoretically, this is possible because of the twin effects of rising rates. Immunization will provide a compound rate of return over the immunized period that equals the YTM, regardless of the fluctuations in market interest rates during this period.

Investors only need to immunize to lock in a desired rate of return when future market interest rates are expected to change. Investors' desires to immunize (or

lock in) an interest rate increase as market interest rates approach what are perceived to be peak levels. Bond investors who expect market interest rates to fall in the future will want to buy bonds at peak interest rates for two reasons. First, bonds will enjoy capital gains if their market interest rates decline. Second, locking in a high YTM is most rewarding to investors at a time when market rates are high.

Even when corporate bonds are included in the portfolio, immunization does not attempt to reduce any risk other than interest rate risk. Immunization is said to exist if the total value of a portfolio of bonds at the end of some specified planning horizon is equal to the value of the portfolio based on the YTMs that existed when it was purchased.

Immunization is accomplished simply by calculating the duration of the promised outflows and then investing in a portfolio of bonds that has an identical duration. In doing so, this technique takes advantage of the observation that the duration of a portfolio of bonds is equal to the weighted average of the durations of the individual bonds in the portfolio.

What does immunization accomplish? According to the theory, if yields rise, then the portfolio's losses owing to the selling of the three–year bonds at a discount after two years will be exactly offset by the gains from reinvesting the maturing one–year bonds (and first–year coupons on the three–year bonds) at the higher rate. Alternatively, if yields fall, then the loss from being able to reinvest the maturing one–year bonds (and first–year coupons on the three–year bonds) at a lower rate will be exactly offset by being able to sell the three–year bonds after two years at a premium. Thus, the portfolio is immunized from the effect of any movements in interest rates in the future.

The main problems with immunization that can cause it to work less than perfectly are; default and call risk, multiple nonparallel shifts in a no horizontal yield curve, rebalancing, and many candidates.

Immunization strategies were introduced to eliminate the interest rate risk in a portfolio of bonds. The discussion revealed that duration was not only (i) an insightful measure of the time structure of a bond's cash flows and (ii) a measure of a bond's interest rate risk; it was also (iii) useful in the development of strategies for managing the interest rate risk in a portfolio of bonds.

Investment Bankers/Under Writers of Securities

There are two means by which companies sold securities to the public: a traditional underwriting and a shelf registration. The agent responsible for finding buyers for brand new securities is called the Investment Bankers or Underwriters. The name "Investment Bankers" is unfortunate because these people are not investors and they are not bankers. Essentially, investment bankers purchases primary issues from security issues such as companies and government, and then arrange to immediately resell these securities to the investing public. An investment banker is a firm that serves as a middle person between financial market and demander of capital. The investment banker specializes on underwriting and selling new securities and advising corporate clients.

First, the members of the issuing firm and the investment banker hold pre-underwriting contract at which they discuss the amount of capital to be raised, the type of security to be issued and the term of agreement. When the investment bankers. A security issue may be completely underwritten by an investment banker and the other members of the syndicate. if it is, the issuing corporations receive the public offering prices less a stated percentage spread. The underwriters in turn sell the securities at the public offering price (or less) and may buy some of the securities themselves. Underwriters who provide this sort of firm commitment bear all the risk. The risk to the underwriter is that the issue may not attract buyers at a positive differential. The commission received by the investment banker in this case is the difference or spread between the

price they pay for security and price at which securities are resold to public. Investment bankers charge fees commonly referred to as flotation costs, for designing underwriting and selling securities. The cost of common stock issues is higher than bond issues. Additional expenses, which are not included in the underwriters' fees, are incurred by the firm. These costs include filling fees, legal fees and tax levies associated with the offering. Organization has to incur some amount for their issuance. Organization can be made it by private placement to reduce the issuance cost (Security issue sold to only a few investors, thus eliminating the need to register the security issue with the Securities and Exchange Commission). Efficient functioning of financial market requires a number of financial institutions. One of these institutions in investment bankers firm, acts as middleman in the distribution of new securities to the public. Its principle function is to buy securities from company and then resell them to investors.

2.6 Linkage between Private Sector and Government Bond Market

A well functioning government bond market often is the forerunner of private sector bond market. And provides institutional and operational infrastructure for the private sector market. The rate of government bench mark issues, the experience of the dealer community and the investor base for security purchase and trading all are valuable features of securities markets that could be drawn upon is his development of an effective private securities market. The government bond market observes as a means of educating authorities, financial and non financial institutions and wide portion of the populace about depth market operations. This will create a knowledge base about bonds that will be valuable when developing the private sectors bond markets.

a) Government as Benchmark Issuer

The government is by the most likely issuer of the depth securities that would serve as bench marks. The bench mark yield curve is the basis bench mark for pricing other government or non government bond issues of comparable

maturities across the yield curve on the primary market as well as the secondary market. The bench mark is the important tool for the price discovery in the other fixed income securities market, including the private sector depth market. Without that bench mark, it is difficult to price fixed income securities, including private sector depth securities in a rational manner.

b) Dealer Community and Investor base for Government and Private Sector Bonds

An efficient government bond market encourages the development of highly skilled fixed income securities intermediaries. Government role is especially important for market makers and inter dealer brokers. These inter intermediaries, in turn can support the development of private bond markets can provide the necessary experiences to deal with private sector bond market because it is more liquid then the private sector bond market. And involves more issuance and trading both of which also provide a strong profit base. Dealer need these skills and profit to support private sectors bond transactions which are more risky and less liquid then government bond transaction.

Government securities also provide dealer with mechanism to hedge their private sector securities market exposures. This could done through repurchase agreements that are typically best on government securities; through government securities themselves that are lower risk and more liquid then private sector depth securities or through interest rates derivatives that are often best on government securities.

2.7 Buying and Selling Rules of Securities

Buying securities with view of generating capital profit is very important investing decision. In bear market, securities prices fall down. So that it should buy securities. A Bull market refers to that market where securities prices maximum occurs. It should sell securities in the bull market.

There is a also another alternative approach regarding buying and selling of securities, considering expected and required rate of return.

- When expected rate of return is greater then required rate of return, securities are under prices. Hence buying decision of securities is preferred.
- If expected rate of return is less then required rate of return securities are over prices. Hence it should sell.
- When expected rate of return equal to required rate of return there is appropriate pricing of securities, hence no trading of securities is proffered.

Table 2.1

Buying and Selling Rules of Securities

S.N.	Condition	Pricing	Decision
1.	Required rate of return > Expected rate of return	Overpriced	Sell
2.	Required rate of return < Expected rate of return	Under priced	Buy
3.	Required rate of return = Expected rate of return	Exactly priced	No trading

2.8. Bond Valuation

If the company raised money by issuing the bond then it is called corporate bond. If government issues it, it is called Government bond.

When a corporate issuer attempts to sell a bond to the public there is always a bond contract this contract specified all of its promises that the issue remake to induce to the investors to lend money. The bond market is the market that brings together borrowers and suppliers of long terms fund through growing instruments known as bonds and notes. The initial maturities of bond are greater than one year, and they are sometimes forty year or longer. The bond market is largely and institutional market, relatively few individual invest

directly in bonds. Measure investors are insurance company, pension funds and mutual funds.

2.9 Valuation of Bonds

Valuation uses the time value of money concept to determine the value of the bonds. The value, or worth, of any bond is equal to the present value of all future cash flows (interest and par value) over the relevant time period. Higher the cash flows, the greater the bond's value; also, the lower the required return, the greater the bond's value. the bond value (V_b) can be calculated by using following formula.

$$V_b = \sum_{t=1}^{n} \frac{CF_t}{(1+k)^t}$$

Where,

CF_t = Expected cash at the end of period t

K = Discount rate applicable to the cash flows

n = Expected life of bond

According to Kiran Thapa, there are four types of bonds: (a) Redeemable bond (b) Perpetual bond (irredeemable bond) (c) Zero coupon bond (d) Callable bond.

a. Redeemable Bond

It has finite maturity period. Firm will pay annual fixed amount of interest and after the maturity principal will be repaid. The value of a bond (V_b) is the present value of its interest payments plus the present value of its par value or face value. When a bond or debenture has a finite maturity, the formula can be used to determine the value of a bond (V_b).

$$V_b = \sum_{t=1}^{n} \frac{I}{(1+K_b)^t} + \frac{M}{(1+K_b)^n}$$

Where,

K_b = The appropriate interest rate on the bond

n = Number of years before the bond matures

t = Time period

I = Rupees of interest paid each year

M = Face value of the bond.

b. Perpetual Bond

Perpetual bond has usually infinite period. The perpetual bond pays a specified amount of interest every year forever and never returns the principal. Therefore the value of perpetual bond (V_b) is calculated by finding the present value of infinite series of interest payments.

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

Where,

I = Rupees of interest paid each year

K_b = The appropriate interest rate on the bond

c. Zero Coupon Bond

A zero coupon bond is a bond that does not make interim interest payment and is sold with a large discount. Zero coupon bonds pay no interest but are offered at a substantial discount below their par values and hence provide capital appreciation rather than interest income. The advantages to the issuer are that no cash outlays are required until maturity, and these bonds often have a lower required rate of return than coupon bonds. The value of a zero coupon bond can be computed as follows:

$$\text{Price } (P_0) = \frac{M}{(1+YTM)^t}$$

Where,

YTM = Yield to maturity

M = Face value

d. Callable Bond

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

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

Where,

m = Number of periods to call bond

P_c = Call price

2.10 Bond Returns Measures

i) Coupon Yield or Coupon Rate or Nominal Yield

The coupon yield is simply the coupon payment as percentage of the face value. It remains constant over the life of bond.

$$\text{Coupon Yield} = \frac{\text{Coupon Bond (C)}}{\text{Face Value of Bond (m)}}$$

ii) Current Yield

The current yield describes the yield on a bond bared on the coupon rate and the current market price of bond not in its face value or per value.

Mathematically it can be expressed as,

$$I_c = \frac{C}{P_o}$$

Where,

I_c =Current or coupon yield

c =Annual dollar coupon

P_o =Current market price

This return measure is only a partial indication of the return. A bond currently selling at its face value will have a yield to maturity equal to the coupon rate. At any other price, however, the current yield is different from the yield to maturity.

iii) Yield to Maturity

Yield to maturity is the interest rate that travels the Present value of bond's payment to the current market price of bond. Other things being same, the higher the yield to maturity on issues the more attractive to the investor.

In computing the yield to maturity, several important assumptions are made.

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

Yield to Maturity can be calculated by

(i) Trial and Error Method or Interpolation Method

YTM can be calculated by using a rate that makes the value of a bond equal to the price. Mathematically it can be expressed as,

The market price of debt,

$$P_0 = \sum_{t=1}^{n} \frac{\text{Interest}}{(1+\text{YTM})^t} + \frac{\text{Maturity Value}}{(1+\text{YTM})^n}$$

(ii) Approximation Formula Method

Approximate YTM can be calculated as:

$$\text{AYTM} = \frac{I + \frac{F-P}{N}}{\frac{F+2P}{3}} \times 100$$

Where,

F=Face value of bond

P=Price of bond

N=Number of years of bond life

I =Interest payment per year

Yield to Maturity for Callable Bonds

The rate of return that an investor would earn if he bought callable bond and its current market price and held it until the call date given that the bond was called on the call date. YTC is also known as yield to first call.

Bonds issued having a call feature allows the issuer to redeem the bonds prior to maturity. Thus, the issuer can take advantage of lower yields by calling outstanding bonds and refinancing at lower rates.

To reflect the impact of a possible call on the yield, the yield to first call should be calculated in addition to the yield to maturity. Using semiannual compounding, it can be expressed as:

$$V_0 = \frac{C}{2}\left\{\frac{I - \frac{I}{\left(1+\frac{i_{call}}{2}\right)^{2T}}}{\frac{i_{call}}{2}}\right\} + \frac{\text{call price}}{\left(1+\frac{i_{call}}{2}\right)^{2T}}$$

Where,

V_o	=Intrinsic value of the bond
C	=Annual dollar coupon
i_{call}	=Yield to first call
T	=Length of time to first call date, in years
Call price	=Price that issuer will pay at first call date

The probability of a call increases during periods of declining yields, especially when the yield to maturity declines below the coupon yield.

Holding Period Return

A holding period or single period return is simply the total return an investor would on during the period of holding securities (Bhattarai, 2005:87). Investors are often concerned about bond returns over a particular holding period. The period return equals income earned over a period (including capital gain or

losses) as a percentage of the bond price at the start of the period. The holding period return can be calculated for any holding period (Body et al, 1999:422). For bonds with coupons, the HPR can be calculated can be as (Cheney and Moses, 10th: 357),

$$HPR_t = \frac{P_{(t+1)} - P_t + I_{(t+1)}}{P_t}$$

Where,

HPR_t =Holding period return for period 't'

P_t =the beginning or purchase price of the bond

P_{t+1} =the ending or selling price of the bond

I_{t+1} =the coupon or interest received for period 't'

This equation assumes that interest will be received at the end of holding period't'. This assumption is correct for bonds because they are sold with accrued interest due to the seller.

Yield Curve

The phrase yield curve is for the term structure of interest rate. The relationship between yield and maturity is described by means of a yield curve. The term of maturity is in horizontal position (time) and the average yield to maturity is in a vertical position (Singh, 1991:232). To determine the shape of the yield curve, three theories were developed (Francis, 1986:339). As the liquidity premium theory asserts that, on average, the yield from long term bonds should be a little higher than the yields from short terms bonds. The theory maintained that investor pay a price premium (resulting in lower yields) on short term maturities to avoid the higher interest rate risk prevalent in the longer maturities. Due to the higher interest rates for a longer period of time and the yield curve would be upward sloping. And the segmentation theory suggests that the term structure depends on the supply demand conditions. The determination of term structure is view as the outcome of the supply and demand two segmented market of demand and supply, the market for long and

for shorts. Such segment of the yield curve is determined independently by the supply and demand conditions peculiar to that maturity segment. Similarly the expectation theory asserts those long term yields are the average of the short term yield. This implies that if all investors expect rates to rise, the yield curve will slope upward; if they expect rates to remain unchanged, the yield curve will be horizontal; if they expect rate to fall, the curve will slope downward (www.bloombery.com).

Yield curve, a visual representation of the term structure of interest rate (Madura, 2000:511). The slope of yield curves can vary among the countries. While the United States typically has an upward sloping yield curve, in other countries are commonly inverted, implying a lower annualized yield on long term debt (www.bloombery.com).

2.11. Bond Duration

Bond duration is the Macaulay duration, which was created by Fredrick Macaulay in 1938. It has been commonly used since the 1970's. Bond duration is the average amount a time required by a security to receive the interest and the principle. The duration therefore, calculates the weighted average of the cash flows (interest and principle) payments of the bond, discounted to the present time.

Bonds duration is the convenient way to summarize information about bonds volatility or price sensitivity to changes to change in market interest rate and estimate what affect such interest rates movement would have on the bonds price.

According to Cheney and Moses, “Duration is a function of term, coupon maturity value and yield to maturity. Bonds with “low” coupons and “long” term will have duration greater than bonds with “high coupons” and “short” terms. Also as yield to maturity increases, duration will increase”. Duration led

to the development of technique of bond portfolio management known as immunization. Specifically; this technique allegedly allows a bond portfolio manager to be relatively certain of being able to meet a given promised stream of cash outflows. Thus one the portfolio has been formed, it is 'immunized' from any adverse effects associated with future changes in interest rates. A bond's duration is a convenient way to summarize information about a bond's volatility or price sensitivity to changes in market interest rates and estimate what affect such interest rates movements would have on the bond's price.

Macaulay's duration (MD) can be defined mathematically as follows:

$$\text{D or MD} = \frac{\sum_{t=1}^{T} PV(C_t)\, x\, t}{TPV} = \frac{\text{Total of (Present Value}_t \text{ x time)}}{\text{Total Present Value}}$$

Where,

PV (C_t) = Present value of the cash flow at time t

t = Time (year)

TPV = Total present value

2.12 Investment Banker

A financial institution needed for the efficient functions of a financial market is an investment banking firm. The firm acts as a mediator in the distribution of new secretes to the public and creates a primary market. Therefore the people a institution finding investors for the public (IPOs) of the securities sold in the primary market are called investors bankers are also called under writers. They purchase new issues from security issues and arrange for their resale to the investing public.

First, the members of the issuing firm and the investment banker hold are pre under writing conferences, at which they discuss the amount of capital to be raised, the security to be issued, and the terms of agreements. When the

investigations are competed, an underwriting agreement is drawn up by the investment banker (Weston and Copeland, 1992:893).

Investment banker advises their clients, handles the administrative task, under write the issue, and distribute the securities as follows:

- Advisory functions
  - Advising the potential security issuer.
  - Suggesting various ways to raise needed funds.
  - Advising about mergers, acquisitions and refinancing operation.
- Administrative functions
  - Filling of the registrations statement for the issue approval in accordance with law.
  - Producing prospectus after the issue approval by security board (SEBO) Nepal and then distributing to the potential investors.
- Under writing functions
  - To purchase securities from issuers and resale them to the public.
  - The resale must be neither too high nor too low.
  - Under writing functions also include private placement where the investment banker act as intermediary in bringing together the issuer and investors.
- Distribution function
  - One of the major functions for the investment banker is marketing the new issue of securities.
  - Investment banker is a specialist with a staff and organization to distribute securities and therefore, the capacity to perform the physical distribution function more efficiently and more economically then can be Individual Corporation (Weston and Copeland, 1992:892).

2.13 Cost of Capital

The cost of capital is the minimum rate of return, which a firm or a project must on in order to maintain the market value of the firm. It is the minimum

acceptable rate of return i.e. cut off point or huddle rate for the investment and financial decision. The analysis of cost of capital is very important. It minimizes the cost of capital in order to maximize the value of the firm. It is also very essential for evaluating and selecting capital projects. "Cost of capital is recognized rate of different names such as required rate of return, hurdle rate, average cost of fund etc. The average return required by the firms, investors determines how much most be paid to attract funds. It is the firm the average cost of firms, which is more commonly termed the cost of capital". (J.fred Weston and et al). There are different of sources of capital such as:

2.13.1Cost of Debt Capital

Interest payable on debt capital is known as the cost of debt. Corporate bond/debenture securities may be issued at par, or at discount, or at premium. Company should incur some expenditure for issuing such as preparation prospectus, advertising, and brokerage cost etc. Cost of debt increases due to flotation cost.

Mathematically, cost of debt can be calculated as follows:

$$\text{Cost of debt } (K_d) = \frac{I}{NP}$$

Where,

k_d = Cost of debt before tax

I = Interest

NP = Net processed amount actually available

Tax saves interest expenditure of issuer. So that cost of debt after tax may be:

$$\text{Cost of debt after tax } (k_{dt}) = k_d (1-t)$$

Where,

t = Tax rate

2.14 Historical Development of Corporate Bond/Debenture Securities Market in Nepal

Nepal's capital market is very lean in providing investment alternatives to the investors. Among possible various investment alternatives like common stocks, government bond, corporate bond, preference share, right, option, warrants, convertible etc, very few are available for Nepali investors. It can be said that the present capital market is almost monopolized by the equity shares. For those investors, who are risk seeker and want to invest in the variable income securities, the present capital market offers sufficient alternatives but for those investors who are risk averse and want to invest in the fixed income securities, there are very few avenues available (Bhattarai, 2005:192).

"Securities Marketing Center" (SMC) was established in 1976 to develop corporate securities market in Nepal. Before the establishment of SMC, there were no institutional arrangements to undertake and to manage the new issue of securities. Initial public offering had to be made on as per the provision of companies Act. 1963, was not adequate and relevant. The Act had not ever included preference share as corporate security. Only companies Act.1994 recognized it as a corporate security.

SMC started secondary trading of securities in 1981, which was restricted to government bonds till 1983, the concept of well-structured secondary market had not involved in Nepal. No separate Act existed to regulate the trading of securities. The securities exchange Act. 1983 was enacted in 1983. The Act restricted the exchange of unlisted securities. SMC was renamed as Securities Exchange Center (SEC) in 1984. SEC was the only one institution concerned in managing and operating primary and secondary markets of long-term government and corporate securities.

A need to develop different institutional mechanisms relating to securities market was strongly felt to avoid potential conflict of interest between the

services provided. The first amendment of the securities exchange Act. 1983 in 1993 paved the way for the structuring of securities market in Nepal, which led to the establishment of Securities Board of Nepal (SEBON) in 1993. With a mandate to regulate and develop the securities markets, SEBON started to register securities and grant approval for issuing securities to the public in 1993. The first amendment in the Act also led to conversion of SEC into Nepal Stock Exchange Ltd. (NEPSE) in 1993 with the objective of operating and managing secondary transactions of securities. The initial efforts led to the opening of a full-fledged stock exchange in January 13, 1994.

The second amendment in securities exchange Act.1983 was made in 1997. This amendment made provision for registering securities businesspersons in SEBON. As per the provision of the second amendment, SEBON provided licenses to the securities businesspersons in 1997. The amendment made mandatory provisions for the listed companies to submit annual and semi-annual reports to SEBON. This amendment also required securities businesspersons to submit annual reports incorporating the securities transactions carried out by them to SEBON.

In the context of establishing proper identification of the investors for the development of fair and transparent securities markets, SEBON has made amendment in its Securities Registration and Issue Approval Guidelines, 2000 in 2005 and add new provision which requires the investors to submit along with the application for the buying of securities in the public offering, the photocopy of their citizenship certificate or the identification with photograph, issued by Nepal Government attested by themselves.

Presently, there are twenty-four stockbrokers, seven issue managers, two issue managers and securities dealers, one stock exchange and one hundred twenty-five listed companies in the Nepalese securities market.

Bond is the other instrument providing fixed income to the investors and involves lower risk than the securities that yield variable income. Also the bond market in Nepal is very lean. Very few companies have issued bond in the market. Just seven private business organizations have issued bond or debenture till 2006. Though, Nepalese government is more forward in exercising debt instrument, only countable number of corporate sector are found exercising debt instrument.

Nepal does not have a long history of corporate debt securities market. Only few (i.e. eight) corporate debt securities have been issued prior or after the enactment of Securities Exchange Act 1983, till now. Corporate bond/debenture securities issued by private organizations in the Nepalese capital markets are shown with their characteristic features as follows:

First time in the Nepalese history, Bottlers Nepal had issued 18% debenture of Rs. 5 million (with par value Rs. 1,000) in the FY 1986/87. It was slightly over subscribed (i.e. Rs. 5.13 million) and was redeemed at maturity.

Secondly, Jyoti Spinning Mills Ltd. had issued 14% bond of Rs. 20 milling (with par value Rs. 1,000) in the FY 1992/93. It was managed by INDC.

The primary issue of debt securities disappeared for more than a decade. Then thirdly, Shree Ram Sugar Mills Ltd. and issued the debenture as "14% convertible and redeemable debenture" in the FY 1997/98. The Mill's issued debentures worth Rs. 93 million (with par value Rs. 1,000) and managed by NICD and charge 0.50% of total collected amount as flotation cost. This debenture was heavily undersubscribed (i.e. 17.13 million) and there was no conversion ratio (Shree Ram Sugar Mill's Ltd., Debenture Prospectus, 1997).

Himalayan Bank Ltd. had issued Rs. 360 million "8.5% Himalayan Bank Ltd. Debenture -2066" (with par value Rs. 1,000 and semi – annual interest

payment) in the FY 2057/58. The bank decided to distribute debentures through the private placement with the amount of Rs.260 million and through the issue-managed company of Rs. 100 million issues was managed by the Nepal Merchant Banking and Finance Limited with charged of 0.54% of total amount. It was heavily oversubscribed (i.e. 141.7 million). Its issue was managed by NMB (Himalayan Bank Ltd., Debenture Prospectus, 2002).

Nearly one and a half year after HBL bond, another big Nepali bank, Nepal Investment Bank Ltd. (NIBL) has issued Rs. 300 million "Nepal Investment Bank Bond 2010" (with 7.5% coupon interest paid semi – annually) in the FY 2003/04. Out of 300,000 units of issue (with par value Rs. 1,000), 100,000 were issued to the general public and 200,000 units were privately placed. Though the interest rate offered by NIBL was one percent lower than that in HBL's bond (where it was 8.5% with semi-annual payment arrangement), it had good chance of being oversubscribed. Its issue manager was AFCL (Nepal Investment Bank Ltd., Debenture Prospectus, 2005).

Everest Bank Ltd. had issued debenture of Rs. 300 million (with 6% coupon interest paid semi-annually) in the FY 2004/05. The par value of debenture was Rs. 1,000 with maturity period of seven years (i.e. redeemable after 7 years). Out of 300,000 units of issue 50,000 units were issued to the general public and 250, 000 units were privately placed. EBL bond issue date was 2062/01/07. Its issue manager was CIT (Everest Bank Ltd., Debenture Prospectus, 2005).

Bank of Kathmandu Ltd. had issued Rs. 200 million "Bank of Kathmandu bond- 2069" (with 6% coupon interest paid semi annually) in the FY 2005/06. Out of 200,000 units of issue, 50000 units were issued to the general public and 150,000 units were privately placed. The par value of debenture was Rs. 1,000, with maturity period of seven years. It issue manager was NMB (Bank of Kathmandu Ltd., Debenture Prospectus, 2005).

Again Nepal Investment Bank Ltd. has issued "Nepal Investment Bank Bond – 2070" (with 6% coupon interest rate paid semi-annually) in the FY 2005/06. Out of 250,000 units of issue, 80,000 units are issued to the general public and 170,000 units are privately placed. The par value of debenture is Rs. 1,000, with maturity period of 7 years. Its issue manager is AFCL (Nepal Investment Bank Ltd., Debenture Prospectus, 2006).

Nepal Industrial and Commercial Bank Limited have issued Rs. 200 million "NIC Bond-2070" (with 6% coupon interest paid semi – annually) in the FY 2005/06. Out of 200,000 units of issue (with par value Rs. 1,000), 50,000 units are issued to the general public and 150,000 units are privately placed. Its issue manager is AFCL (Nepal Industrial and Commercial Bank Ltd., Debenture Prospectus, 2006).

Nepal SBI Bank Ltd. has issued Rs. 200 million "6% Nepal SBI Bank Debenture – 2070" (with maturity period of 7 years and semi – annual coupon payment) in the FY 2005/06. Out of 200,000 units of issue, 50,000 units are issued to the general public and 150,000 units are privately placed. Its issue manager is CIT (Nepal SBI Bank Ltd., Debenture Prospectus, 2006).

Again after three years, Nepal Investment Bank Ltd. (NIBL) has issued Rs. 250 million "6.25% Nepal Investment Bank -2071" (with maturity period of 7 years and semiannual coupon payment) in the FY 2007/08. Out of 250, 000 units of issue, 50,000 units are issued to the general public and 200,000 units are privately placed. Its issue manager is ACFL (Nepal Investment Bank Ltd., Debenture Prospectus, 2007).

Similarly, Kumari Bank Limited (KBL) has issued Rs. 400 million "8% Kumari Bank Limited Bond – 2070" (with maturity period of 5 years and semi-annual coupon payment) in the FY 2007/08. Out of 250,000 units of issue, 50,000 units are issued to the general public and 200,000 units are

privately placed. Its issue manager is NMB (Kumari Bank Ltd., Debenture Prospectus, 2008).

After 7 years, again Himalayan Bank Ltd. (HBL) has issued "8% Himalayan Bank Bond -2072" with par value Rs. 1,000 and semi – annual interest payment of Rs. 500 million in the FY 2008/09, with 7 years maturity periods. 100,000 units were privately placed and 400,000 units were issued to the general public out of 500,000 units of issue. Its issue was managed by ACDB (Himalayan Bank Ltd., Debenture Prospectus, 2008).

After issuing of debenture three times, again Nepal Investment Bank Ltd. has issued Rs. 250 million "8% Nepal Investment Bank Bond-2072" (with maturity period of 7 years and semi-annual coupon payment) in the FY 2008/09. Out of 250,000 units of issue, 50,000 units are issued to the general public and 200,000 units are privately placed. Its issue manager is ACDB (Nepal Investment Bank Ltd., Debenture Prospectus, 2008).

After this issuing of four times debenture by NIBL, one of the most leading commercial bank of Nepal called Nabil Bank Limited (NBL) has issued Rs. 300 million "8.5% Nabil Bank Bond -2075" (with the highest maturity period of 10 years from commercial bank, semi-annual coupon payment) in the FY 2008/09. Out of 300,000 units of issue, 60,000 units are issued to the general public and 240,000 units are privately placed. Its issue manager is NIDC, (Nabil Bank Limited, Debenture Prospectus, 2008).

After the issuing of bond by Nabil Bank Limited, another commercial bank of Nepal called Siddhartha Bank Limited (SBL) has also issued Rs. 400 million "8% Siddhartha Bank Limited Bond-2072" (with maturity period of 7 years and semi-annual coupon payment) in the FY 2008/09. Out of 400,000 units of issue, 80,000 units are issued to the general public and 320,000 units are privately placed. Its issue manager is ACDB (Siddhartha Bank Limited, Debenture Prospectus, 2008).

Finally till the report writing, Laxmi Bank Ltd. (LBL) has issued Rs. 250 million "8.5% Laxmi Bank Limited Bon – 2072" (with maturity period of 7 years and semi-annual coupon payment) in the FY 2008/09. Out of 350,000 units of issue, 50,000 units are issued to the general public and 300,000 units are privately placed. Its issue manager is ACDB (Laxmi Bank Limited, Debenture Prospectus, 2008).

This means, more of such bond issues can be expected in the future, particularly from the banks to meet their higher capital requirement under Nepal Rastra Bank directives (Bhattarai, 2005, 193-194).

2.15 An Overview of Journal Review

Bhattrai (2004), in his article on "Debenture are Welcome" revealed that bond market in Nepal is very lean. Very few company have issued bond in the market. However, since last few years, some positive signals can be seen in the Nepalese capital market. Through the government bonds are not available in the stock exchange floor; corporate bonds are being made available. According to him, due predicted that more of corporate bonds will be expected to issue in the future, particularly from the banks to make their higher capital requirement under NRB directives.

Elton, Grover, Agarawal and Nann in their article "Explaining the rate spread on corporate bonds" represent the spread between rates on corporate and government bonds. These articles examine and explain the differences in the rates offered on the corporate bonds and those offered on government bonds. They examine whether there is the risk premium in corporate bond spreads and if so why it exists. This article should following reasons for the rate spreads on corporate bonds:

i) Expected Default Loss

Some corporate would default and investors required a high promised payment to compensate the expected loss.

ii) Tax Premium

Interest payment on corporate are tax at the stated level whereas interest payment on government are not and.

iii) Risk Premium

The return on corporate bond is riskier then the return on the government, and investors should require of premium for the higher risk.

Mikel Kviback in his article “Issues in local bond market development (i.e. Nepal survey)" in 2005 concluded that there is still no position to be pleased due to development of Nepalese financial or capital market. Very few debenture or bond market are in operation as well as very few corporate bonds are in market by corporation till now. Government market is much developed then corporate bond market but price are out of market principle. Further mode, the writer specified that weak supply and demand for the corporate or debenture constrained to develop the corporate debenture or bond market. The number of potential blue chip corporate bond debenture issues and size of the collective investors’ base are not enough to create and institutionalized market and very few financial instruments are available in the market for investors to invest.

Roy Batchelor and Katiuscia Manzoni (2006) have studied on “The Dynamics of Bond Yield Spreads around Rating Revision Dates.” They have examined the effect of rating revisions on sterling Eurobond yields using a panel model with conditional heteroskedasticity that controls for event-induced changes in the variance of spreads. Positive rating revisions are fully anticipated by the time the upgrade occurs. Negative revisions are only partially anticipated, and spreads on downgraded bonds rise for some time after the downgrade have been announced. All ratings announcements are accompanied by a temporary fall in yield volatility. They have attributed this to the resolution of uncertainty about the true rating of the bond. Ratings may provide a mean for conveying

relevant inside information to bondholders without providing full information to the entire marketplace. Supporting these arguments was the revealed preference of bond issuers and purchasers to pay for rating services.

Their data relate to all sterling Eurobond ratings revisions made by Standard & Poor's (S&P) from January 1992 through December 1999. From a total of 477 bonds traded in this period, 313 Eurobonds were not re-rated and 164 experienced a rating revision, of which 123 were downgrades and 41 were upgrades. The largest individual category was the highest rated AAA group (about 30% of all Eurobonds), and they are the most stable with only about 10% downgraded one class to AA+ between 1992 and 1999. A further 30% of bonds are rated AA+ to AA–, and about 40% are A+ and below. For these groups, the incidence of ratings changes is about 45%. Most changes are one class up or down, and only in 35 cases do ratings change by more than one class. Eight bonds were re-rated within 60 days from a previous revision.

The first hypothesis they have tested was whether Eurobond yields react differently to positive and negative rating revisions, a consistent finding of the U.S. studies surveyed earlier. The second hypothesis they have tested was related to the effect of the ratings change on volatility. Third, they have tested for significant differences in the effect the rating event have on spread and volatility across classes of bonds.

In their article they have analyzed the effects of rating change announcements on the abnormal yield and volatility of daily returns on sterling-denominated Eurobonds. The question of the effect of rating changes on bond and stock prices in the United States have been well studied in the literature. Specifically, ratings events percolate through to yields in an asymmetric way. Positive rating news releases are fully anticipated by the market, but downgrades are accompanied by a significant increase in the yield spreads in the post-announcement period. The asymmetric effect of rating announcements on

spreads implies that a strategy of shorting downgraded bonds would be profitable.

The methodological contribution of their study was that it employed a panel GARCH model to the yield spread series. That helps them to identify how ratings affect volatility, and by allowing for time-varying, event-dependent, volatility changes, it gave them more confidence in the validity of their statistical inferences. The effect of any ratings announcement was to reduce volatility during and around the time the information was released. They conjectured that that calming effect occurred because the re-rating announcement resolved uncertainty about the current status of the bond.

Douglas, mark and Paul in their article “convertible debt versus straight debt" tested the market perception of convertible versus straight debt for both US firms and non US firms over the period of 1989-1994. They found that convertible debt is not perceived by the US investors differently then straight debt. This is demonstrated by finding that the estimated coefficients for the convertible debt variables are not significantly different then the coefficient for debenture debt, except for the two years for non US firms. It appeared that the market perceives convertible debt as being largely a liability not distinctly different from straight debt in its assessment of firm value.

2.16 Review of Previous Thesis

Sharma (2002), in his thesis *"Public Debt System and Practices in Nepal"* revealed that the mixed view regarding public debt used by government. In his opinion Nepal has been passing through a critical phase of in adequate financial resource while its duties and responsibilities are widening day by day. But public funds available for the administration and development are limited therefore; the government adopts the policy of borrowing of growing internally and externally. He added that the total debt service payment is increasing and external debt servicing growth rate is remarkably greater than a internal debt

services. The ratio of internal and external public debt to GDP is not so unsatisfactory. He came to the point that the percentage of interest servicing in a total servicing is greater than principle servicing. Interest servicing has occupied 58 percent approx of share out of total servicing and rest is by the principle servicing. This fact shows all or either following weakness in our debt financing economy.

Mainali (2003), had studied on *"Problem and Prospectus of Debenture Market Growth in Nepal"* this study address that many problems such as insufficient legislative provision regarding Nepalese debenture market, political instability, in sufficient information disclosure, poor price sensitivity, poor preference on debenture etc. Which are responsible for the very slow growth of corporate bond debenture market growth prospects? The study shows that there has not been good attitude toward debenture yet in Nepalese market. But he added that capital supply, tax saving, interest income, means of meeting budget deficit, growth of public debt is some positive signal which signifies the prospects of debt market growth. He also mentioned that, emphasis should be given to the development of private sectors debenture market.

Kafle (2003), had studied *"Problems and Prospects of Debt Market Growth in Nepal"*. He summarized that, capital market of Nepal is in the infant stage and debt securities market of corporate bodies is limited in existence. The government debt securities market is growing but not as expected. The heavy reliance of government in foreign debt has created huge problem in the growth of Nepalese debt securities market. He added that, investment made on impulse rather than through market study or credit ratings, in Nepalese capital market. He came to the point that Nepalese investors preferred national saving bond and development bond rather than other govt. bonds. He concluded that due to oversupply of deposits by customers; commercial banks do not issue debt securities. On the one hand, big corporate bodies could get loan easily from banks at lower cost so they didn't need to issue debt instruments, but on the

other hand small corporate firm have been facing the problem in raising the fund by issuing debt securities as well as from bank. Tedious and lengthy process of issuing the debt securities is another problem that hinders the growth of debt securities market.

Bhattarai (2003) had performed his research on *"Problems and Prospects of Debt Market Growth in Nepal"*. He concluded that, govt. debt securities market is slightly at maturity stage as compared with corporate debt securities market. Mainly the problems like –lack of public awareness, limited supply of quality bonds, investors increasing attraction towards common stock/shares and also towards the banking sector's securities, difficult process of issuing debenture, insufficiency of legal provisions and the infra-structure of capital market, dominant by credit oriented transaction, feeling of non-existence of debt market, lack of large business organizations and a narrow area of government securities market etc. are hindrances for the smooth growth of Nepalese debt securities market. However, the main factors such as; investor's attraction towards liquid assets like debt securities, desire to invest on debenture of any potential issuance, attraction towards convertible debenture, declining interest rate on deposit of commercial banks, increasing trend of amount of govt. securities and the increasing trend of issuance of corporate debentures etc. indicates the growth prospects of Nepalese debt securities market. He came to know that the interest rate of deposit on commercial bank is decreased every year. But the interest rate on debt securities is higher to some extent than bank's deposit rate. Also investor's fund can be utilized in a productive way if invested in govt. securities, which helps in the upwards growth of national economy. Furthermore, he added that if any organization is going to issue debenture Nepalese investors will invest on it. So he recommended to the govt. to bring new rules and regulations and to the Nepalese companies to use debenture as a source of financing to them.

Pandey (2006), in his research in titled *"Issues and Prospectus of Developing Corporate Debenture in Nepal"* has found that lack of investor's awareness toward debt securities and limited supply of quality bonds are major's issues of corporate debt market development in Nepal. He stated that the big issue of Nepalese corporate debenture/bond market is the more preference on banks and finance companies debentures and poor preferences on hotel/ manufacturing and trading companies' debenture by investors. The interest rate on debenture is higher than the interest rate on deposit on commercial bank, which are the higher prospects of corporate debenture market growth. The values of debentures are shall by all different companies in Nepal were under priced due to higher value than their market price. Under price debentures are always attract investors for investment and encourage holding positions to profit from price gains, which shows bright prospects a corporate debt securities market growth in Nepal. In other hand bond duration were less than their maturity period which always attract the larger number of investors because investors get their hole return before bond maturity period and less price risk. He recommended that emphasis should be given to the development of corporate sector debenture market for the development of the overall debt securities market of Nepal.

Khanal (2005) had studied on *"Debt Market Development in Nepal"*. He find that corporate debt securities market in Nepal is less developed than the non securities market component i.e. Loan from banks. Only a few corporate debt securities had been issued prior or after the enactment of securities exchange at 1983. Only less than two percent of total securities market is covered by corporate sector. He stated that the pace of development of corporate debt market is not satisfactory. Government and private sector should make various efforts to develop the debt market.

2.17 Research Gap

Research means to investigate to search again and again about phenomena under study. Very few researches have been made on topic "problem and

prospects of corporate bond market in Nepal". Most of the research was conducted regarding in the system and procedure of public debt, problem and prospects of government debt etc. The previous researchers with the topic of "Problem and prospects of debt market growth" has covered the all the area of debt market, which seems very fast whereas this research has covered only the area of debt security market. The researcher has also try to point out the determinate of corporate debt securities market along with the major impediment to the debt securities market growth. Most of the previous researches have explained the situation of corporate debt securities while this research is trying to find out the solution to remove the impediments regarding debt securities market growth. So, this research covers corporate debt securities market and an attempts has been made to overtake research gap remained in previous research.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Research Design

Research is a plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variance. It refers to entire process which gives us an appropriate way to reach the research goal. It is framework of a goal research employed for the investigation of the required result. Research design stands in obtaining of information, the availability of skill of the research staff and/or agencies, a detailed explanation of the way in which selected means of obtaining information will be organized and the reasoning leading to the selection, and the time and cost of the research.

This research study attempts to analyze the “problems and prospects of corporate debenture market in Nepal”. Nepal." This research study attempts to analyze the issues and prospects of corporate debenture market in Nepal. It provides the framework for the study guidelines, “for the study guidelines, for the collection and analysis of data. Thus, to fulfill the objectives of the study, both primary as well as secondary data are used. Furthermore, various research design approaches has been adopted to examine the problems such as: descriptive research design, analytical research design, quantitative research design etc. A descriptive approach has been mainly focused on prevailing the current position and various problems associates with Nepalese corporate bond market. Quantitative approach mainly focused on various models and statistical tool such as valuation model, duration model, time series analysis and chi-square test for testing hypothesis are applied to interpret and come to conclusion. Similarly analytical approach has been used mainly to analyze trend and ownership pattern of corporate bond market and other related variables of corporate debt market.

3.2 Population and Samples

This research is conducted to analyze and interpreted the problems and prospects of Nepalese corporate debenture market. So, it is restricted within the Nepalese corporate debenture market and its peripheries. These studies analyze and interpreted is based on primary as well as secondary data. The primary data and information have been collected through the opinions of respondents. For this respondents are classified into listed companies group, individuals group, brokers group and experts group respectively. There are 159 Nepalese companies and 23 securities business persons (brokers) listed in the NEPSE by the end of FY 2007/08. And these are regarded as size of population for listed companies group and brokers group respectively. Likewise all the investors of the bond are taken as individual group population and all the person who have knowledge of securities market such as staff of NRB / SEBON and NEPSE, market makers, security market researchers, expert of financial sector are considered as size of population of export group.

Thirty listed companies, ten issue managers/brokers, forty individual investors and twenty experts are taken as sample for the opinion survey. These selected thirty listed companies are representative of banks, development banks, finance companies, hotels manufacturing and processing companies, trading companies and others which is shown on following table 3.1.

Table 3.1
Number of Listed Companies Selected for the Survey

S.N.	Listed Companies	Total Population (N)	Targeted Sample No.(n)	Sample %
1	Commercial Banks	31	10	32.25
2	Development Banks	67	4	5.97
3	Finance Companies	61	4	6.56
4	Insurance Companies	17	3	17.65
5	Hotels	4	1	25.0
6	Manufacturing and Processing Co.	18	2	11.1
7	Trading Companies	4	1	25.00
8	Other Companies	5	0	0.00
Totals		159	25	15.72

Source: Current Macroeconomic Situation, Research Department of NRB

For secondary data, Nepalese corporate bond are issued from 1986 A.D. Therefore, to analyze the trends and ownerships pattern of Nepalese corporate debenture market, these all year from 1986 A.D. to 2009 A.D. are taken as population. And out of them, year from 2002 to 2009 are taken as sample. Similarly, there are eighteen companies issue corporate bond at the end of 2009. To analyze the ownership pattern key characteristics, duration and valuation of Nepalese corporate bond, all these eighteen companies are taken as population and all these companies are taken as sample for the study.

3.3 Source of Data Used

The data is the fact, information, views etc. which are collected systematically and transferred into some recording system. So that it can be later examined and analyzed in order to reach to conclusion of research work. This research study is based on both primary and secondary data. The necessary primary data are collected through questionnaire. The main sources of primary data are as follows:

- Listed companies
- Issue managers/brokers
- Individual investors
- Other experts

To examine the position, trend and ownership pattern of corporate debenture market, key characteristics, investors, duration and valuation of corporate bond, secondary data are used. The main sources of secondary data are as follows:

- Quarterly Economic Bulletin published by Nepal Rastra Bank, 2008/09.
- Rastra Rin Khabar patra published by public Debt department of Nepal Rastra Bank.
- Economic Survey published by ministry of finance, Government of Nepal 2065/066.
- Annual report of SEBO/N and NEPSE 2007/08.

- Various Economic Reports.
- Various companies' reports submitted to SEBO/N.
- Other governmental and non-governmental publications, books, journals, previous research studies, dissertation, websites and articles.

3.4 Method of Data Analysis

The main purpose of analyzing the data is to change it from as unprocessed form to an understandable presentation. The analysis of data consists of organizing, tabulating and performing statistical analysis and drawing inferences. Various possible statistical and financial tools are used where necessary in each case in order to obtain the best result and to classify, to tabulate and to analyze primary data. Empirical results have been estimated in this study by using data several hypotheses are also formulated during the course of study. The models and test statistic that are applied in this study are as follows:

3.4.1 Time Series Analysis

Time series analysis has been used to examine the trend of government and corporate bond. The forecasted amount of government bonds and corporate debenture is calculated for next three years, by the help of following equation:

$$Y = a + bx$$

Where,

Y = total forecasted value

a = minimum value

b = change rate per period

x = difference between actual time and assumed time

3.4.2 Valuation Model

As long as a bond is not expected to go into default, the expected return from a bond comprises of annual interest payments plus the price to be covered at maturity. Thus, value of bond is present value of cash flow generated by the

bond until its maturity, i.e. present value of all the interest payments by the bond plus present value of principal amount repaid to its holders after its maturity. This study used the valuation model as described by the Brigham and Houston (2001). The specific model as:

V_b= I (PVIFA $K_{\%}$, n years) + M (PVIF $K_{\%}$, n years)

Where,

V_b= Intrinsic value of a bond

K = the appropriate interest rate on the bond

n = Maturity period

I = Rupees of interest paid each year

M = Face value of the bond

This specific model is used to find out whether the Nepalese corporate bond are over priced or under priced.

3.4.3 Macaulay Duration

A bond's duration is defined as weighted average numbers of years until the cash flows occur, with the relative present value of each cash flow used as the weight. Duration is directly related to term and inversely related to coupon and yield to maturity. Main objective to use this model is to calculate the duration of Nepalese corporate debt securities. Macaulay's duration (MD) helps to analyze the actual maturity period for bondholders described by Frederick Macaulay (1938) as shown below:

$$MD = \frac{(1+y)}{y} - \frac{(1+y)+T(c-y)}{C[(1+y)^T - 1]+y}$$

Where,

MD = Macaulay duration

y = Yield-to-maturity

T = Term-to-maturity

C = Coupon rate of bond

This specific model is used for calculating the duration of Nepalese Corporate bond.

3.4.4 Statistical Tools Applied

In the process of estimating above models, various statistical tools have been used, e.g., simple arithmetic mean, weighted mean, median, etc. A brief explanation of statistical tools employed in this model is as follows:

Simple Arithmetic Mean

Simple arithmetic mean is the sum of the values of all the elements in the sample and divided by the number of elements in the sample.

Mathematically,

$$\bar{X} = \frac{\sum X}{n}$$

Where,

$\bar{X}$ = Simple arithmetic mean

$\sum X$ = Sum of sample items

n = No. of sample items

Weighted Mean

Sometimes, we might come across the situations where the relative importance of all the item of the distribution is not same. If some items in a distribution are more important than other, proper weight is to be given to various items-the weight attached to each item being proportional to the importance of item in the distribution. Here, weighted mean is calculated to determine the rank assigned by respondents during the field survey.

3.4.5 Hypothesis

Testing of hypothesis is one of the most important aspects of research. Hypothesis is the assumption that is made about the population parameter and then its validity is tested. The act of verification involves testing the validity of such assumption, which when undertake based on sample evidence, is called

testing of hypothesis. It can also be considered as suggested solution of the research problems. Its main function is to suggest new experiments and observation. With the available data, decision makers apply the hypothesis testing and give the decision accordingly.

Here, Chi-square value is compared in order to test whether there is significant difference between expected and observed opinion regarding various matters relating to Nepalese debt securities matter. It may not be proved absolutely but in practice, it is accepted if it has with stood a critical testing. The statistical hypothesis is tested at 1%, 5% and 10% level of significance. In testing of hypothesis, Chi- square has been tested. Expected frequencies are calculated by applying the following formula:

$$\text{Expected Frequencies} = \frac{\text{Row Total} \times \text{Column Total}}{\text{Grand Total}}$$

$$E = \frac{RT \times CT}{GT}$$

Where,

RT = Row Total

CT = Column Total

GT = Grand Total

The quantity of $\chi 2$ describes the magnitude of the discrepancy between theory and observations. It is defined as,

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

Where,

O = Observed Frequency

E = Expected Frequency

$\chi 2$ = Chi-square

A quantitative statement about the population parameter, which may be true or false, is called a hypothesis. In order to make proper decision about the

qualitative statement of the population, testing of hypothesis technique is used. But, testing of hypothesis is carried out by using sample information. According to Rumen and Balline, "A hypothesis is a statement capable of being tested and verified or rejected". After setting the hypothesis, it is necessary to test the consistency of such statistical statements. For this purpose, an experiment is conducted by using sample information and the hypothesis is rejected if the results obtained are doubtful under this hypothesis. But, if the results are not doubtful, the hypothesis is accepted. The procedure of drawing such conclusion based on sample information is known as testing of hypothesis. It has tested following few hypotheses:

Research Hypothesis

Null Hypothesis (H_o)

i. There is no significant difference between observed and expected frequencies regarding to the choice of securities.
ii. There is no significant difference between observed and expected opinions regarding to the reason for the slow growth of corporate debenture market.
iii. There is no significant difference between observed and expected frequencies regarding to the few practices of corporate debentures.

Alternative Hypothesis (H_1):

i. There is significant difference between observed and expected frequencies regarding to the choice of securities.
ii. There is significant difference between observed and expected frequencies regarding to the sufficiency of present legal provisions related to the debt securities market.
iii. There is significant difference between observed and expected frequencies regarding to the sufficiency of present legal provisions related to the debt securities market.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

4.1 Nepalese Corporate Debt Market

It includes position of bond market in the structure of Nepalese securities market, the trend and ownership pattern of Nepalese corporate bond market and the key characteristics, duration and valuation of Nepalese corporate bond market.

4.1.1 Current Status of Bond Market in Nepal

Ordinary shares largely dominate the current capital market of Nepal. Bonds are largely inactive and occupy lesser portion of the total capital market. As of mid July 2009 bond issue holds mere 13.8 percent of total issue in the capital market whereas equity constitutes 84.5 percent and rest is preferred stock, (SEBON, 2009)). Further, of the listed bonds, 81 percent are government issued development bonds and only 19 percent are corporate bonds (NEPSE, 2010).

After the establishment of SEBON in 1993, equity market grew rapidly. In mid July 1994, sixteen companies issued shares for the total amount of Rs.244.4 million (SEBON, 2009)). Total par value of listed shares in the same year was Rs.2,182 million which had a market capitalization of Rs.13,872 million . As of April 13,2010, one hundred sixty nine companies have been listed with the par value of Rs.74,266 million and the market capitalization value reached to Rs. 344450.8 million.

Primary issue of government bonds started since 1964, but such bonds were never listed in stock Exchange for transaction over the past many years. Secondary transaction for such bonds were done through market makers outside the purview of capital markets. It was only in mid July 2005 development bonds were listed in NEPSE for secondary transaction. As of mid

March 2010, sixteen different development bonds have been listed with total par value of Rs.22,400 million.

Table 4.1 Presents the status of government bonds and treasury bill. Out of total government bonds, development bonds occupy only 26.1 percent , treasury bills occupy 69.5 percent , and citizen saving bonds and special bonds occupy less than 5 percent. As per the existing regulations relating to public debt, only development bonds are required to be listed in NEPSE for secondary transactions. Other bonds namely special bonds trade through market makers licensed by NRB. Reports regarding price and volume of citizen savings bonds and special bonds traded through market makers are not required to disclose to the other market participants.

Table 4.1

Government Bonds and Treasury Bills as of MID APRIL 2010

(Rs. in million)

SN	Bonds	Amount	Percent	Ownership of NRB
1	Treasury bills	82,373.9	69.5	26,400.6
2	Development bonds	30,978.5	26.1	305.7
3	Citizen savings bonds	5,033.6	4.2	2,159.5
4	Special bonds	184.4	0.2	-
	Total	118,570.4	100	28,865.8

Source: SEBON Journal, June 2010, volume IV

Table 4.1 presents ownership structure of government securities as of mid April 2010. Commercial banks and NRB are holding the major portion of bonds, i.e., 77.9 percent, public at large holding only 2.4 percent.

Table 4.2

Ownership Structure of Government Securities as of mid April 2010

(Rs. in million)

S. N.	Ownership	Development bonds	National savings bonds	Treasury bills	Special bonds	Citizen savings bonds	Total	Percent
1	NRB (Including sec.mkt.)	305.7	-	26,400.6	-	2,159.5	28,865.7	24.3
2	Commercial Banks	11,626.3	-	51,821.4	157.6	-	63,605.3	53.6
3	Development Banks	462.8	-	-	-	-	462.8	0.4
4	Finance Companies	910.6	-	1,352.4	-	95.1	2,358.1	2.0
5	Employee's Provident Fund	6,765.2	-	-	-	-	6,765.2	5.7
6	Citizen Investment Trust	1,057.9	-	-	-	-	1,057.9	0.9
7	Nepal Telecom	1,060.6	-	-	-	-	1,060.6	0.9
8	Retirement Fund and other	2,702.8	-	-	-	-	2,702.8	2.3
9	Insurance Companies	5,520.0	-	2,799.5	-	-	8,319.5	7.0
10	Public	108.0	-	-	-	2,779.1	2,887.1	2.4
11	Other	458.8	-	-	26.8	-	485.6	0.4
	Total	30,978.5	-	82,373.9	184.4	5,033.6	118,570.4	100

SEBON Journal, June 2010, volume IV

In the corporate bond market, Sri Ram Sugar Mills Ltd. Issued bonds to the public in the year 1997 for the total amount of RS. 93 million. Issue was merely 18.42 percent subscribed (SEBON, 2009). It was only in the year 2002 the first successful public offer of bonds was made by Himalayan Bank Ltd. For Rs. 360 million.

Table 4.3 presents status of corporate bonds issue and listing. During June, 2002 to October, 2008 Rs.5735 million worth of corporate bonds were issued in the market and Rs. 5,335 million worth of corporate bonds were listed in NEPSE.

Table 4.3

Corporate bonds issue and listing

(Rs. in million)

S.N.	Name of Debenture	Issue Date	Interest Rate Percent	Listed Securities in '000'	Listed Amount
1	Himalayan Bank Rinpatra	2002/06/18	8.5	360	360
2	NIBL,Bond 2010	2003/11/03	7.5	300	300
3	Everest Bank Rinpatra 2012	2005/04/20	6	300	300
4	BOK Rinpatra 2013	2005/09/22	6	200	200
5	NIBL,Bond 2013	2006/06/09	6	250	250
6	NIC-BOND 2013	2006/06/12	6	200	200
7	Nepal SBI Bank Bond 2014	2006/07/04	6	200	200
8	NIBL,Bond 2014	2007/06/12	6.5	225	225
9	NEA rinpatra 2013	2008/02/14	8	1500	1500
10	KBL Bond 2013	2008/05/15	8	400	400
11	Himalayan Bank Rinpatra 2015	2008/06/22	8	500	500
12	NIBL,Bond 2015	2008/06/26	8	250	250
13	Nabil Bank Ltd. Bond 2018	2008/07/13	8.5	300	300
14	Siddharatha Bank Rinpatra 2015*	2008/10/05	8.5	400	-
15	Laxmi Bank Rinpatra 2015	2008/10/12	8.5	350	350
	Total			5,735	5,335

SEBON Journal, June 2010, volume IV

From table 4.3 it can be noticed that the interest rate on the different issue of bonds, ranging between 6 and 8.5 percent , which is quite lower than the contemporary loan interest rate that of financial institutions.

4.1.1 Position of Bond Market in the Structure of Nepalese Securities Market

Securities market helps the private sector to contribute on economic development through more efficient reallocation of Capital. Private sector securities also help to diffuse stresses on the banking system by matching long-term investment with long term capital. Securities market is the backbone of financial market in both developed and developing countries.

Securities market has some basic elements; a number of issuers with financing needs, investors with need to place saving or other liquid fund in securities, intermediaries that bring together investors and issuer, an infrastructure that provides a conductive environment for securities and settlement of transactions. It consists of equity market and bond market. Equity market includes ordinary share right share and preference share, while bond market includes government bond market and corporate bond market. The structure of Nepalese securities market from FY 1998/99 to FY 2007/08 is presented in Appendix 5.

Appendix 5 shows that total outstanding amount of Nepalese securities market. It was Rs. 56210.59 million in the fiscal year 1998/99 and reached to Rs. 97840.7 million in FY 2002/03. Then it increase to Rs. 147798.2 million in FY 2007/08. It shows that total outstanding amount of Nepalese securities market is increasing trend, while taking the bond securities in fiscal year 1998/99, it was Rs 49669.7 million, which represent 88.36 percent of total outstanding amount. It reached to Rs 86793.7 million in FY 2002/03 and Rs 116249.1 million in FY 2007/08, which represent 86.36 and 78.65 percent respectively. Equity market was Rs. 6487.4 million in FY 1998/99, Rs 11898 million in FY

2002/03 and Rs. 29465 million in FY 2007/08. It represents 11.54 percent in 1998/99, 12.16 percent in 2002/03 and 19.94 percent in 2007/08 of total outstanding amount. It indicates that bond market has covered highest proportion in the structure of Nepalese securities market. Bond market has been increasing in terms of total outstanding securities amount but it has been decreasing in terms of percentage on total outstanding securities market.

Nepalese corporate debenture markets are highly dominated by government bond market. Nepal doesn't have a long history of corporate debt securities market and only few corporate debt securities have been issued prior or after the enactment of securities exchange act 1983, till now. Corporate bond market represents only 0.37 percent of total outstanding amount in fiscal year 2002/03, 1.53 percent of total outstanding amount in fiscal year 2005/06 and reached to 3.39 percent of total outstanding amount in fiscal year 2008/09. This shows the some positive signal in the history of corporate debenture market.

So above table shows that corporate debenture market is still unpopular in Nepal. The population of corporate bodies which can sell debenture in the market is very small. Listed companies shows that a significant number of them belong to banking, insurance and finance companies which can mobilize public money in their own ways and hence need not issue debenture to raise debt funds. Similarly out of remaining listed companies, most of them are not in position to raise funds from the market due to unsatisfactory performance in terms of profit and turnover. And the small size of financial requirements of organization also discourages the use of bond because of high flotation cost associated with their issues.

4.2 Corporate Debenture Market in Nepal

Nepal has not a long history of securities market. Similarly it hasn't long history of corporate debt securities market and only few corporate debt securities have been issued prior or after the enactment of Securities Exchange

Act 1983, till now. So, it can be said that corporate debenture is in the creeping stage of development. It is clear that present capital market is almost monopolized by the equity shares although only few investment alternatives are available in Nepalese capital markets. Securities help the private sectors to contribute on economic development through more efficient reallocation of capital. For the development of capital market, each and every sector of securities markets needs to be developed. So, for the overall development of the capital market, development of corporate debenture market is also necessary.

Very few corporate bodies have issued corporate debenture for the purpose of raising long-term fund. M/S Bottlers Nepal Ltd. had made first effort to practice corporate debenture, from manufacturing company. Table 4.2 shows that it had issued 18% debenture of Rs. 5 million with par value of Rs. 1,000 in the FY 1986/87 and it was slightly over subscribed (i. e. Rs.5.13 million) and was already redeemed.

Then, M/S Jyoti Spinning Mills Ltd. issued corporate debenture in Nepalese capital market history. Table 4.2 shows that it had issued 14% debenture of Rs. 20 million with par value of Rs. 1,000 in the FY 1992/93 and its issue was managed by NIDC.

Likewise, M/S Shree Ram Sugar Mills Ltd. (SRSML) was the third company in the case of issuing debenture in the Nepalese history. It had issued 14% convertible debenture of Rs. 93 million with par value of Rs. 1,000 in the FY 1997/98 (Appendix: 5). Table 4.2 shows that its debenture had been converted after four years. Only 17,130 units out of total debenture were applied. The under subscription rate was 0.18 times. These means 75,870 units issue were not subscribed. This shows those debentures were heavily under subscribed. The issue manager was NIDC. This shows that all three pioneer issuer of debenture were manufacturing companies.

Table 4.4

Amount of Debenture Issued by the Corporate Bodies

S.N	Issuer	Issued Date	Coupon Interest Rate	Amount (Million NPR)	Issue Manager	Maturity period	Subscription
1	Bottlers Nepal Ltd	1986	-	5	-	Mature	1.026
2	Jyoti Spinning Mills Ltd	1992	-	20	NIDC	Mature	0
3	Shreeram Sugar Mills Ltd.	20/11/1997	14	93	NCML	Mature	18.42
4	Himalayan Bank Ltd	18/06/2002	8.5	360	NMB	Mature	0
5	Nepal Investment Bank Ltd.	3/11/2003	7.5	300	AFC	7	102.3
6	Everest Bank Ltd.		6	300	CIT	7	100
7	Bank Of Kathmandu	22/09/2005	6	200	NMB	7	133.3
8	Nepal Investment Bank Ltd.	9/6/2006	6	250	AFC	7	100
9	Nepal Industrial & Commercial Bank Ltd.	12/6/2006	6	200	AFC	7	100
10	Nepal SBI Bank Ltd.	4/7/2006	6	200	CIT	7	101.2
11	Nepal Investment Bank Ltd.	12/6/2007	6.25	250	AFC	7	100
12	Nepal Electricity Authority	14/02/2008	7.75	1500	NMB		1.11
13	Kumari bank Limited	15/05/2008	8	400	NMB	5	1.01
14	Himalayan Bank Ltd	22/06/2008	8	500	ACE	7	1
15	Nepal Investment Bank Ltd.	26/06/2008	8	250	ACE	7	1
16	Nabil Bank Limited	13/07/2008	8.5	300	NCML	7	1
17	Siddhartha Bank Limited	5/10/2008	8	400	ACE	7	0
16	Laxmi Bank Limited	12/10/2008	8.5	350	NMB	7	0

Source: Gautum and Thapa, Capital Structure Management pp. 175

After issuing corporate debenture by three manufacturing companies as mentioned in the above paragraphs, some banking sector has issued redeemable debenture which were heavily oversubscribed. In this matter, Himalayan Bank Ltd. (HBL) was the first bank to issue corporate bond from the banking sector in the Nepalese history but fourth company out of total companies. Table 4.4 shows that it had issued "8.5% Himalayan Bank Bond–2066" with par value Rs. 1,000 and semi-annual interest payment of Rs. 360 million in the FY 2001/02, with 7 years maturity periods. 260,000 units were privately placed and 100,000 units were issued to the general public out of 360,000 units of issue. Table 4.4 shows that total no. of debentures issued was 360,000 units whereas total no. of debentures applied was 401,700 units. It was oversubscribed by 41,700 units and over subscribe rate was 1.12 times. The over subscription rate 1.12 times shows that investors are attracted towards corporate debt securities. Its issue was managed by NMB.

It can be inferred that oversubscription of HBL debentures and very low subscription of SRSML debentures shows that investors prefer to invest in corporate debt securities of banking sectors than that of manufacturing sectors.

Nepal Investment Bank Ltd. (NIBL) has added another step of ladder in the field of corporate debentures by issuing corporate debentures after nearly one and a half year after issuing of HBL debentures. Appendix:5 shows that it had issued "7.5% Nepal Investment Bank Ltd. Bond–2067" with par value Rs. 1,000 and interest paid semi-annually of Rs. 300 million in the FY 2003/04, with maturity period of 7 years. Similarly, this bank also issued 100,000 units to the general public and 200,000 units were privately placed out of 300,000 units of issue. The interest rate offered by NIBL1 was one percent lower than that in HBL's debenture (where it was 8.5% with semi-annual payment arrangement). NIBL1 bond was issued and managed by AFCL. Table 4.4 shows that total no. of debentures issued was 300,000 units and total no. of debentures applied was 300,000 units because of after full subscription, debenture issuance was stopped.

Everest Bank Ltd. (EBL) had issued debenture of Rs. 300 million with 6% coupon interest paid semi-annually in the FY 2004/05. Appendix:5 shows that the par value was Rs. 1,000 with maturity period of 7 years. Out of 300,000 units of issue, 50,000 units were issued to the general public and 250,000 units were privately placed. Table 4.4 shows that EBL bond was issued and managed by CIT. Total no. of debenture issued was 300,000 units and no. of debenture applied was 513,000 units. It was oversubscribed by 213,000 units. The over subscription rate 1.71 times shows that it was heavily subscribed.

This indicates that investors' interests are growing or positive towards corporate debt securities of banking sector. Another conclusion drawn from this trend of oversubscription of debenture is that investors are interested towards the securities of better performing companies.

Likewise, Bank of Kathmandu Ltd. (BOK) had issued " Bank of Kathmandu bond, 2069" of Rs. 200 million with 6% coupon interest paid semi-annually in the FY 2004/05.Table 4.4 shows that the par value of debenture was Rs. 1,000, with maturity period of seven years (i.e. redeemable after 7 years). 50,000 were issued to the general public and 150,000 units were privately placed out of 200,000 units of issue. Table 4.4 shows that total no. of bonds issued was 200,000 units and no. of bonds applied was 266,620 units. This shows that it was oversubscribed by 66,620 units. Its over subscription rate was 1.33 times. The bond was issued and managed by NMB. High subscription rate of this bond issue indicates that Nepalese corporate debt securities market has been growing day by day.

After issuing of debenture by EBL and BOKL, again for the second time, Nepal Investment Bank Ltd. (NIBL2) has issued "Nepal Investment Bank Bond-2070" with 6% coupon interest rate paid semi-annually in the FY 2005/06. NIB bond-2070 was issued on 2063/02/26. Appendix:5 shows that the par value of debenture was Rs. 1,000, with maturity period of 7 years. Out

of 250,000 units of issue, 80,000 were issued to the general public and 170,000 units were privately placed. Table 4.4 shows that the bond is issued and managed by AFCL. Total no. of debenture issued is 250,000 units and no. of debenture applied is 256,825 units. It is over subscribe by 6,825 units. The over subscription rate was 1.03 times.

Then after Nepal Industrial and Commercial Bank Limited has issued Rs. 200 million "NIC Bond–2070" with 6% coupon interest paid semi-annually in the FY 2005/06 and the par value was Rs. 1,000. Appendix: 5 shows that out of 200,000 units of issue, 50,000 units were issued to the general public and 150,000 units were privately placed. The bond has 7 years maturity periods (i.e. redeemable after 7 years). Table 4.4 shows that the bond was issued and managed by AFCL. Total no. of debenture issued was 200,000 units and no. of debenture applied was 200,000 units. This shows that after full subscription, debenture issuance has been stopped.

Finally, Appendix: 5 shows that Nepal SBI Bank Ltd. has issued Rs. 200 million "6% Nepal SBI Bank Debenture-2070" with maturity period of 7 years and semi-annual coupon payment in the FY 2005/06. The par value was Rs.1, 000. Out of 200,000 units of issue, 50,000 units were issued to the general public and 150,000 units were privately placed. Table 4.4 indicates that its issue manager was CIT. Total no. of bonds issued were 200,000 units and no. of bonds applied were 232,400 units. It was oversubscribed by 32,400 units. The over subscription rate was 101.2 percentage.

Again after three years, Nepal Investment Bank Ltd. (NIBL) has issued Rs. 250 million "6.25% Nepal Investment Bank -2071" (with maturity period of 7 years and semiannual coupon payment) in the FY 2007/08. Out of 250, 000 units of issue, 50,000 units are issued to the general public and 200,000 units are privately placed. Its issue manager is ACFL (Nepal Investment Bank Ltd., Debenture Prospectus, 2007).

Similarly, Kumari Bank Limited (KBL) has issued Rs. 400 million "8% Kumari Bank Limited Bond – 2070" (with maturity period of 5 years and semi-annual coupon payment) in the FY 2007/08. Out of 250,000 units of issue, 50,000 units are issued to the general public and 200,000 units are privately placed. Its issue manager is NMB (Kumari Bank Ltd., Debenture Prospectus, 2008).

After 7 years, again Himalayan Bank Ltd. (HBL) has issued "8% Himalayan Bank Bond -2072" with par value Rs. 1,000 and semi – annual interest payment of Rs. 500 million in the FY 2008/09, with 7 years maturity periods. 100,000 units were privately placed and 400,000 units were issued to the general public out of 500,000 units of issue. Its issue was managed by ACDB (Himalayan Bank Ltd., Debenture Prospectus, 2008).

After issuing of debenture three times, again Nepal Investment Bank Ltd. has issued Rs. 250 million "8% Nepal Investment Bank Bond-2072" (with maturity period of 7 years and semi-annual coupon payment) in the FY 2008/09. Out of 250,000 units of issue, 50,000 units are issued to the general public and 200,000 units are privately placed. Its issue manager is ACDB (Nepal Investment Bank Ltd., Debenture Prospectus, 2008).

After the issuing of four times debenture by NIBL, one of the most leading commercial bank of Nepal called Nabil Bank Limited (NBL) has issued Rs. 300 million "8.5% Nabil Bank Bond -2075" (with the highest maturity period of 10 years from commercial bank, semi-annual coupon payment) in the FY 2008/09. Out of 300,000 units of issue, 60,000 units are issued to the general public and 240,000 units are privately placed. Its issue manager is NIDC, (Nabil Bank Limited, Debenture Prospectus, 2008).

After the issuing of bond by Nabil Bank Limited, another commercial bank of Nepal called Siddhartha Bank Limited (SBL) has also issued Rs. 400 million "8% Siddhartha Bank Limited Bond-2072" (with maturity period of 7 years

and semi-annual coupon payment) in the FY 2008/09. Out of 400,000 units of issue, 80,000 units are issued to the general public and 320,000 units are privately placed. Its issue manager is ACDB (Siddhartha Bank Limited, Debenture Prospectus, 2008).

Finally till the report writing, Laxmi Bank Ltd. (LBL) has issued Rs. 250 million "8.5% Laxmi Bank Limited Bond – 2072" (with maturity period of 7 years and semi-annual coupon payment) in the FY 2008/09. Out of 350,000 units of issue, 50,000 units are issued to the general public and 300,000 units are privately placed. Its issue manager is ACDB (Laxmi Bank Limited, Debenture Prospectus, 2008).

The frequently high over subscription trends of corporate bonds issued by banking sector. This trend attracts issuing companies towards debenture markets and also provides various investment alternatives for the investors. Though one year gap is seen after HBL bond issue, continuous issuing of debenture securities is seen thereafter. Four Nepalese banks have issued corporate bond in the same FY 2005/06 but found heavily oversubscribed and/or slightly oversubscribed. This means, more of such bond issues can be expected in the future, particularly from the banks to meet their higher capital requirement under Nepal Rastra Bank directives. It can be said that investors have full trust on the banking sectors too after government bonds.

4.3. Trend of Nepalese Corporate Bonds

In Nepalese capital market history very few corporate bodies have issued corporate bond for the purpose of raising long term bond. So it can be said that Nepalese corporate bond market is in initial stage. Till 2009, only sixteen companies have issued corporate bonds and out of them 4 companies' corporate debenture i.e. (SRSM, JSM, BNP and HBL Ltd.) are matured. About two decades ago Bottlers Nepal, has made first effort of issue of bond from the manufacturing sector. This had issued 18 percent bond of Rs 5 million in fiscal year 1986/87. It was over subscribed and redeemed at maturity. Table 4.15

shows trend of total outstanding amount of Nepalese corporate bond during 7 years period from 2002 to 2008.

Table 4.5
Corporate Bonds Issued by the Nepalese Corporate Bodies from 2002 to 2008

(Rs in Million)

Fiscal Year	Total Outstanding Amount of Nepalese Corporate Bonds	Growth Rate * (in Percentage)
2002/03	360	-
2003/04	360	0
2004/05	660	83.33
2005/06	960	45.45
2006/07	1810	88.54
2007/08	2060	13.81
2008/09	5010	143.20

Source: Annual report SEBO/N 2008/09

*Note: * Growth rate is calculated by taking previous year as base year.*

Figure 4.1

Trend Line of Nepalese Corporate Bonds

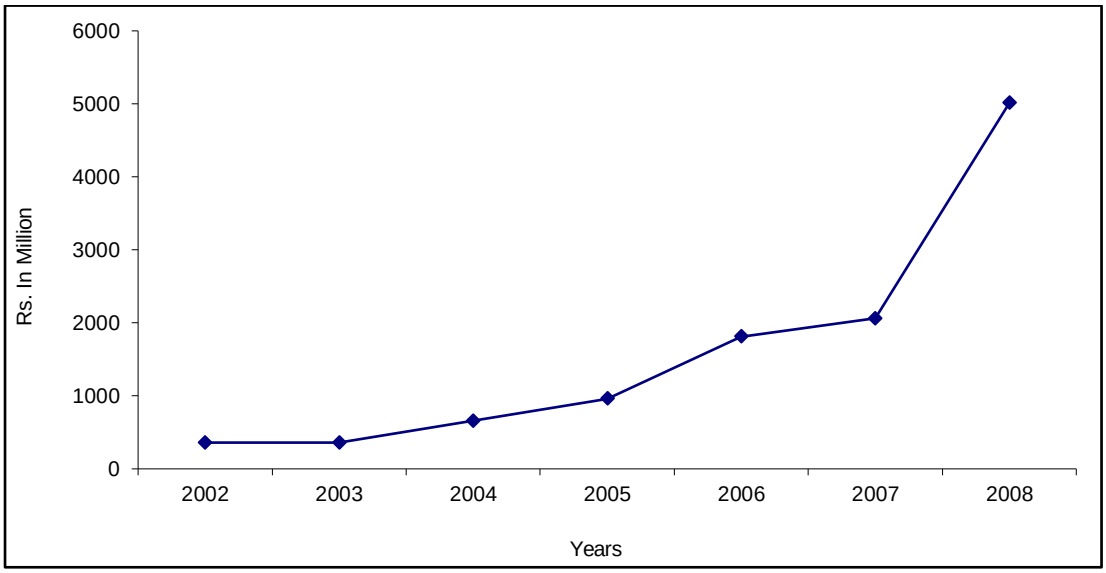

Table 4.5 shows substantial increment occurred in the outstanding amount of Nepalese corporate bonds during the period of 2002 to 2008. It is in increasing

trend as shown in figure 4.1. Growth rate column shows the fluctuating trend of total outstanding amount of corporate bonds. The maximum growth rate of corporate bond is 143.20 percent in the year 2008 and minimum growth rate is 13.81 percent in the year 2007. The forecasted outstanding amount of Nepalese corporate bonds from 2009 to 2011 is shown in table 4.6.

Table 4.6

Forecasted Outstanding Amount of Nepalese Corporate Bonds

From 2009 to 2011

(Rs. in million)

Year	Forecasted Amount of Nepalese Corporate Bonds
2009	4245.7
2010	4906.36
2011	5567.06

4.3.1. Duration of Nepalese Corporate Bonds

A bond's duration is the weighted average number of years until the cash flows occur, with the relative present values of each cash flow used as the weights. This is simply a weighted average of the lengths of time prior to the payments, using the relative present values of the payment as weights. It reflects life or average term of bond. Duration is directly related to term and inversely related to coupon and yield to maturity. This study has been based on the model developed by F.R. Macaulay (1938) for calculating the weighted average time of Nepalese corporate debt securities.

$$MD = \frac{(1+Y)}{Y} - \frac{(1+Y)+T(C-Y)}{C[(1+Y)^{T}-1]+Y}$$

Where,

MD = Macaulay Duration

Y = Market Interest Rate (YTM)

T = Term to Maturity

C = Coupon Interest Rate

The duration of Nepalese corporate debt securities is presented in Table 4.7

Table 4.7

Duration of Nepalese Corporate Debt Securities

S.N.	Issuer	Face Value	Issued Date	Coupon Interest Rate	Maturity Period	Market Interest Rate	Duration in year
1	Bottlers Nepal Ltd	1000	1986	-	Already Matured	-	-
2	Joti Spinning Mills Ltd	1000	1992	-	Already Matured	-	-
3	Shreeram Sugar Mills Ltd.	1000	20/11/1997	14	Already Matured	-	-
4	Himalayan Bank Ltd	1000	18/06/2002	8.5	Already Matured	-	-
5	Nepal Investment Bank Ltd.	1000	3/11/2003	7.5	7	4.8	5.688734
6	Everest Bank Ltd.	1000		6	7	4.5	5.876013
7	Bank Of Kathmandu	1000	22/09/2005	6	7	4.5	5.876013
8	Nepal Investment Bank Ltd.	1000	9/6/2006	6	7	8	5.736112
9	Nepal Industrial & Commercial Bank Ltd.	1000	12/6/2006	6	7	8	5.736112
10	Nepal SBI Bank Ltd.	1000	4/7/2006	6	7	8	5.736112
11	Nepal Investment Bank Ltd.	1000	12/6/2007	6.25	7	6.4	5.769106
12	Nepal Electricity Authority	1000	14/02/2008	7.75		7.7	-
13	Kumari bank Limited	1000	15/05/2008	8	5	7.7	4.223244
14	Himalayan Bank Ltd	1000	22/06/2008	8	7	7.7	5.506619
15	Nepal Investment Bank Ltd.	1000	26/06/2008	8	7	7.7	5.506619
16	Nabil Bank Limited	1000	13/07/2008	8.5	7	7.7	5.45387
17	Siddhartha Bank Limited	1000	5/10/2008	8	7	7.7	5.506619
16	Laxmi Bank Limited	1000	12/10/2008	8.5	7	7.7	5.45387

Source: Annex

The result presented in the Table 4.7 shows that all the fourteen Nepalese corporate debt securities have less actual term-to-maturity than their book-term-to-maturity. Since, the debenture issued by four companies (BNM, SRSM, JSM and HBL) are already matured so these debenture are not included for the analysis. Here NIBL duration 5.68 years is less than its maturity period 7 years. Similarly NIBL, market interest rate is less than coupon interest rate. Similarly, duration of other debentures (bonds) of EBL, BOKL, NIBL2, NICBL, NSBIBL, NEC, KBL, LBL etc are also less than their maturity periods. As well their coupon rates are also higher than their market interest rate. This shows that when market interest rate is less than the coupon rate, the duration is less than its maturity period. The investors may not wait for whole return until the maturity period. The investor receives income prior to the maturity date as described by Alexander, et.al., (2002).

Similarly, duration and price volatility are closely related. Duration is directly related to price volatility because debentures (bonds) with longer duration will experience more price volatility if interest rate changes. Bonds with long duration have more price risk than that of short-duration. Therefore, Nepalese corporate debt securities have less price risk because of less duration than their term-to-maturity i.e., 5.69 years less than 7 years for NIBL1, 5.87 years less than 7 years for EBL, 5.73 years less than 7 years for BOKL, 5.76 years less than 7 years for NIBL2 and so on. Besides, Table 4.3 shows that there is an opposite relationship between bonds coupon rate and bonds duration. For instance, duration of NIBL is 5.69 years when coupon interest rate is 7.5%, duration of EBL1 is 5.87 years with 6.00% coupon interest rate, and duration of BOK is 5.87 years with 6% coupon interest rate, and duration of LBL of 5.45 years with 8% coupon interest rate and so on. It means that lesser the coupon interest rate, the higher the duration of bonds. This shows that duration is inversely related to coupon interest rate.

4.3.2 Valuation of Nepalese Corporate Bonds

Bonds, like any other financial assets, can be valued by estimating the total present value of these flows by using an appropriate discount rate (i.e. market interest rate). This approach is generally much easier to apply to fixed types of securities. This study used the valuation model [Vb=I (PVIFA k,n)+M(PVIF k,n)] developed by Brigham and Houston (2001) for valuation of Nepalese corporate bonds. Valuation of bond depends on its contractual features as described above. Above mention model is used for a standard coupon bearing bond issued by corporate bodies. The cash flows consist of interest payments during the life of the bond, plus the amount borrowed (Rs 1,000 par value) when the bond matures. This study assumes that market interest rate (YTM) remains constant during the maturity period of debentures.

As noted earlier the holder of bond receives a fixed annual interest payment for a certain number of years and a fixed principal repayment (equal to par value) at the time of maturity.

Hence, the present value of these debentures is presented in the Table 4.8

Table 4.8

Valuation of Corporate Debt Securities

S.N.	Issuer	Par Value	Coupon Interest Rate	Maturity Period	Market Interest Rate	Coupon Interest Rate	Market value
1	Bottlers Nepal Ltd	1000	**Issued Date**	Already Matured	-	-	
2	Jyoti Spinning Mills Ltd	1000	1986	Already Matured	-	-	
3	Shreeram Sugar Mills Ltd. Debenture	1000	1992	Already Matured	-	14	
4	Himalayan Bank Ltd	1000	20/11/1997	Already Matured	-	8.5	
5	Nepal Investment Bank Ltd.	1000	18/06/2002	7	4.8	7.5	2253.06
6	Everest Bank Ltd.	1000	3/11/2003	7	4.5	6	2043.70
7	Bank Of Kathmandu	1000		7	4.5	6	2043.70
8	Nepal Investment Bank Ltd.	1000	22/09/2005	7	8	6	1310.15
9	Nepal Industrial & Commercial Bank Ltd.	1000	9/6/2006	7	8	6	1310.15
10	Nepal SBI Bank Ltd.	1000	12/6/2006	7	8	6	1310.15
11	Nepal Investment Bank Ltd.	1000	4/7/2006	7	6.4	6.25	1599.86
12	Nepal Electricity Authority	1000	12/6/2007	-	7.7	7.75	-
13	Kumari bank Limited	1000	14/02/2008	5	7.7	8	1696.93
14	Himalayan Bank Ltd	1000	15/05/2008	7	7.7	8	1604.65
15	Nepal Investment Bank Ltd.	1000	22/06/2008	7	7.7	8	1604.65
16	Nabil Bank Limited	1000	26/06/2008	7	7.7	8.5	1668.11
17	Siddhartha Bank Limited	1000	13/07/2008	7	7.7	8	1604.65
16	Laxmi Bank Limited	1000	5/10/2008	7	7.7	8.5	

Source: Annex

Table 4.8 shows that NIBL1 debenture value (i.e., Rs.2253.06) is greater than all other debentures value. Debentures of NIBL1, EBL, BOKL, NIBL2, NICBL, NSBIBL, KBL, LBL etc were under priced due to the higher market value than their par value. As stated by previous studies, when the market interest rate is equal to the coupon rate the value of bond is equal to its par value. Similarly, when the market interest rate is greater than the coupon rate, the value of bond is less than its par value while the market interest rate is less than the coupon rate; the value of a bond is more than its par value. This last concept was strongly supported by Nepalese corporate debt securities. As shown in the table, for NIBL market interest rate (i.e., 4.8%) is less than the coupon interest rate (i.e., 7.5%), the present value of NIBL (i.e., Rs.2253.06) is more than its par value (i.e., Rs.1000). Similarly, for EBL market interest rate (i.e., 4.5%) is less than the coupon rate (i.e., 6.0%), the present value of EBL (i.e., Rs.2043.70) is more than its par value (i.e., Rs.1000). In the similar manner, coupon rate of BOKL, NIBL2, NICBL, NSBIBL, KBL and LBL etc are greater than market interest rate, and due to that their present values are greater than their par values.

The basic concepts of valuation discussed above provide the foundation for investment decisions. A security's investment determines its prices and value. The professional investors follow the more scientific procedure of forming estimates of a security's value before they make a decision to buy or sell the security. Buying-selling decisive rules as, described by Francis (1986), examined this study for Nepalese Corporate debt securities as in the following way:

If a security's market price is below its value, it is under priced and should be bought and held in order to profit from price gains thinking that profit should occur in the future. Similarly, if a security's market price equals its value, the price is in equilibrium and is not expected to change. If the security's market price is above the security's value, the security is overpriced; security should be sold in

order to avoid losses. When its prices fall down to the level of its value, then it may be sold short in order to make profit from the expected price decline. As corporate debt securities issued by above mentioned companies coupon rate are greater than market interest rate, their debt securities present value are more than their par values. This shows that the above mentioned debentures are under priced. So, such under priced debenture should be bought in order to made profit in the future from price gain.

4.4 Analysis of Opinion Survey

It includes background of opinion survey and respondents opinion on major aspects of Nepalese bond market.

4.4.1 Background of Opinion Survey

This survey deals with the respondents opinions with respect to major aspects of corporate bond market in Nepal. This study mainly based on questionnaire survey of the opinions of 100 respondents. Out of them, 25 respondents belong to listed companies, 9 respondents belong to issue managers/brokers, 48 respondents belong to individual investors and 18 respondents belong to experts group in related field. The respondents are classified into four groups (Listed companies, issue managers/ brokers, individuals' investors and experts) has been made to analyze the differences in their opinions with respect to aspects of Nepalese bond market.

The questionnaire and details of respondents about ranking question (Q.N.4) are presented in appendix 4.

In order to appraise whether the differentiation in the opinions of the listed companies, issue manage brokers, individual investors and experts as to the major aspects of Nepalese bond market is significant, chi-square values are computed

and the results are presented. Similarly, the response to each choice in ranking question (Q.No.4) where choices are to be ranked is weighted by the value of the rank assigned to it by the respondents. And weighted arithmetic mean is calculated. With the help of this average weighted arithmetic mean is calculated to find the overall rank for each choice of the listed companies, issue manager/brokers, individual investors and experts.

4.4.2 Analysis of Respondents Opinion on Nepalese Bond Market

1. Choice of Securities for Raising Long-term-fund

Respondents were asked the choice of securities for raising long-term fund by using four options common stock, preferred stock, Bonds and others. Out of 100 respondents, 57 respondents gave their opinion that Nepalese investors prefer to invest on common stock, 28 of them gave their opinion in favor of Bond, 12 respondents gave their priority to others (Mutual fund and Bank loan) and only 3 respondents choose preference share.

Furthermore, each group's response for choice of securities for raising long term fund, the majority of respondents from each group gave their first priority to common stock.

2. Most Desirable Bond in Nepalese Bond Market

Respondents were asked the question about the most desirable bond in Nepalese Bond Market by using different options i.e. government bond more than one year, government bond less than one year, corporate bond more than one year and corporate bond less than one year. After analyzing respondents opinion, it shows that out of 100 respondents 43 of them gave their opinion on government bond more than one year, 29 of them gave their preference on corporate bond more than one year, 21 respondents gave their priority on government bond less than one

year and only 7 respondents gave their opinion in favor on corporate bond less than one year.

Furthermore, majority of respondent from listed companies, individual's investors and experts gave their first preference to government bond more than one year and majority of respondents from issue managers/brokers gave their priority to corporate bond more than one year.

3. Choice of different Sectors' Corporate Bond

Mainly the Nepalese corporate debenture market has Banking sector, manufacturing sector, Hotel sector and trading company sectors debentures are available are the option available to respondents for giving their preference on the choice of various sector's bond. Out of 100 respondents 46 of them gave their opinion that banking sector's bond is most preferable for investment, 25 of them gave their opinion in favor of manufacturing sector's bond, 21 of them choose hotel sector's bond and 8 of them choose trading company's bond. It shows that majority of respondents from listed companies, issue managers/brokers and individual investors gave first preference to banking sector but majority of experts choose manufacturing sector's bond at first.

4. Reasons for Slow Growth on Bond Market in Nepal.

In their overall ranks for the major reasons for slow growth of bond market in Nepal, majority of the respondents gave their first priority to option 'b' (lack of investor's awareness), second priority to 'a' (Insufficient supply of quality bonds), third priority to option 'c' (lack of proper legal provision) and finally fourth priority to option'd' (lack of capital gain opportunity). Respondent's opinion on reasons for slow growth of bond market in Nepal is presented in table 4.7

Table 4.9

Respondents Opinion on Main Reasons for Slow Growth of Bond Market in Nepal

Options	Respondent Group				Total
	L.C.	I.M/B	Ind. Investors	Experts	
Insufficient supply of Bond	7	1	9	4	21
Lack of investors awareness	10	4	17	7	38
Lack of proper legal provision	6	2	9	4	21
Lack of capital gain opportunity	2	2	13	3	20
Total	25	9	48	18	100

Source: Appendix

After analyzing the data received by all respondents on reasons for slow growth of bond market in Nepal, Table 4.7 shows that out of total 100 respondents, 38 respondents gave their opinion lack of investor's awareness, equally 21 respondents gave their opinion that the lack of proper legal provision and the insufficient supply of bond is main reason and rest 15 respondents gave their opinion that the lack of capital gain opportunity is main reason.

5. Reasons for Using Bank Loan Instead of Issuing Bond by Nepalese Organization

Respondents were asked the question that why does the Nepalese organization refer bank loan instead of issuing bond. out of 100 respondents, 36 of them gave first priority to option 'a' (Bank loan is easily available) 33 respondents gave their priority to option 'c' (cost of bond is more than cost of bank loan), 20 of them choose option 'd' (There is risk that bond may not be purchase in the market) and rest 11 respondents agreed that option 'b' (Issuing bond is difficult process) is main reason for using bank loan instead of issuing bond by Nepalese organization.

Furthermore, each group's response on reasons for using bank loan instead of issuing bond is analyzed. The majority of respondents from listed companies, issue managers brokers and experts gave their first priority that due to the cost of bond is more than cost of bank loan, Nepalese organization refer bank load instead of issuing bond. But majority of individual investors gave their first priority to bank loan instead of issuing bond because of bank load is easily available.

6. Priority for Different Types of Bond

Respondents were asked the question that as an investor, which type of bond you prefer for investment by giving three different options; straight bond, convertible bond and attached with warrant. Out of 100 respondents, 56 of them gave their first priority to convertible bond, 29 respondents gave their opinion in favor of attached with warrant and rest 15 respondents choose straight bond as first priority for investment. Furthermore, majority of respondents from each group gave first preference to convertible bond rather than straight bond and attached with warrant bond.

7. Suitable Type of Trading of Bond in Nepal

Respondents were asked the question that which types of trading is more suitable in Nepal, in case of bond by using four options; primary trading, secondary trading, trading of listed and non-listed securities in OTC market and trading between buyer and seller directly. Out of 100 respondents, 39 of them gave their first priority to secondary trading, 29 respondents gave their opinion in favor of primary market, 21 respondents choose trading between buyer and seller directly and 11 of them gave their priority in trading of listed and non-listed securities in over the counter market. In addition, while analyzing each group's responses, majority of respondents from issue managers/brokers and individual investors gave first priority to option 'b' (secondary trading), listed companies gave first

priority to option 'a' (primary trading) and experts gave first priority to option 'b' (secondary trading).

8. Factor that Plays Vital Role to Attract Investors toward Purchasing Corporate Bond

To study the respondents opinion on factor which plays vital role to attract investors toward purchasing corporate bond? We asked this question by using four different options. Then we know that out of 100 respondents, 47 of them gave their priority to option 'c' (fixed income), 28 respondents choose option 'a' (declining interest rate of bank deposits), 20 of them select option 'd' (portfolio with less risk and rest 5 respondents gave their preference to option 'b' (lack of investment alternative). Furthermore, while analyzing each group response, majority of respondents from each group gave their first priority on fixed income which plays vital role to attract investors towards purchasing corporate bond.

9. Systematic Management of Nepalese Corporate Bond Market

One of the questions, asked to the respondent is whether the corporate bond market is systematic or not. In this regard, out of 100 respondents 64 of them gave their opinion in favor of option 'b' that the corporate bond market is not systematic and 36 of them gave their opinion in favor of option 'a' that it is systematic. Furthermore, after analyzing each group responses, majority of respondents from each group also gave their opinion on Nepalese corporate bond market is not systematic.

10. Sufficiency of Present Rule Regarding the Nepalese Corporate Bond Market for Growth of Nepalese Bond Market

A question asked to all respondents that the present rule and regulation regarding the Nepalese corporate bond market are sufficient or not for growth of Nepalese corporate bond market. After analyzing respondent’s opinion, it shows that out of 100 respondents, 71 respondents were satisfied with the sufficiency of present rule

and regulation of Nepalese bond market for growth of Nepalese bond market and 29 of them were not satisfied. The majority of respondents from each group also not satisfied with the sufficiency of present role and regulation of Nepalese bond market for growth of Nepalese and bond markets.

4.2.3 Test of Hypothesis

Testing of Hypothesis in Q.No.1

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw the choice of securities for raising long term fund by Nepalese investors.

Table 4.10

Hypothesis Test regarding to the Choice of Securities for Raising Long-Term Fund

Options	Respondent Group				Total
	L.C.	IM/B	Ind. Investors	Experts	
Common stock	14	6	30	7	57
Preferred stock	1	-	1	1	3
Bond	10	2	10	6	28
Other	-	1	7	4	12
Total	25	9	48	18	100

Source: Field Survey 2010

Hypothesis Setting

Null Hypothesis (H): There is no significant difference between observed and expected frequencies regarding to the choice of securities for raising long-term fund.

Alternative Hypothesis (H_1): There is significant difference between observed and expected frequencies regarding to the choice of securities for raising long-term fund.

Fixing the level of significance at 5%

Test static: Under H_0, the test static is

$$\chi^2 = \sum \frac{(0-E)^2}{E}$$

Calculation of expected frequencies (E):

Expected frequency (E) of $R_1 C_1 = \frac{Row\ total \times Column\ total}{Grand\ total}$

$$= \frac{57 \times 25}{100} = 14.25$$

Similarly,

	R_2C_1=0.75	R_3C_1=7	R_4C_1=3
$R_1 C_1$ =5.13	$R_2 C_2$=0.27	R_3C_2=2.52	R_4C_2=1.08
R_1C_3=27.36	R_2C_3=1.44	R_3C_3=13.44	R_4C_3=5.76
R_1C_4=10.26	R_2C_4=0.54	R_3C_4=5.04	R_4C_4=2.16

Calculation of Y^2

Observed frequencies (o)		**Expected frequencies (E)**		**(O-E)**	$\frac{(0-E)^2}{E}$
14		14.25		-0.25	0.004
6		5.13		0.87	0.1475
30		27.36		2.64	0.2547
7	10	10.26	13.26	-3.26	0.8015
1		0.75			
-		0.27			
1		1.44			
1		0.54			
10	12	7	9.52	2.48	0.6461
2		2.52			
10		13.44		-3.44	0.8805
6	7	5.04	9.12	-2.12	0.4928
-		3			

1		1.08			
7		5.76			
4	11	2.16	7.29	3.71	1.8881
Total					5.1152

Calculate value of χ^2 is 5.1152

Degree of freedom (d.f) =(R-1) (C-2)-8[since 8 d.f. loss due to pooling]

= (4-1) (4-1)-8 =1

Tabulated value of χ^2 at 5% level of significance for 1 d.f. is 3.841

Decision : Sine calculated value of χ^2 is greater the tabulated value of χ^2 (i.e., 5.1152 >3.841), the alternative hypothesis is accepted which means there is significant difference between observed and expected frequencies regarding the choice securities for raising long-term fund.

Testing Hypothesis in Q.No.2

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw the most desirable type of bond is Nepalese bond market.

Table 4.11

Hypothesis Test Regarding to the Most Desirable type of Bond.

Options	Respondent Group				Total
	L.C.	I.M/B	Ind. investors	Experts	
Govt. bond less than one year	7	2	9	3	21
Govt. bond more than one year	9	3	24	7	43
Govt. bond less than one year	2	1	2	2	7
Govt. bond more than one year	7	3	13	6	29
Total	25	9	48	18	100

Source: Field Survey 2010

Hypothesis Setting:

Null hypothesis (H_o): There is no significant difference between observed and expected opinion regarding to the most desirable type of bond in Nepalese bond market.

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding to the most desirable type of bond in Nepalese bond market

Fixing the level of significance at 5%

Test statistic: Under Ho, the test statistic is:

$$\chi^2 = \sum \frac{(0-E)^2}{E}$$

Calculation of expected frequencies (E):

Expected frequency (E) of $R_1 C_1$ = $\frac{Row\ total \times Column\ total}{Grand\ total}$

$$= \frac{21 \times 25}{100} = 5.25$$

Similarly,

	$_1$= 10.75	R_3C_1=1.75	R_4C_1=7.25
$R_1 C_1$ =1.89	$R_2 C_2$=3.87	R_3C_2=0.63	R_4C_2=2.61
R_1C_3=10.08	R_2C_3=20.64	R_3C_3=3.36	R_4C_3=13.92
R_1C_4=3.78	R_2C_4=7.74	R_3C_4=1.26	R_4C_4=5.22

Calculation of χ^2

Observed frequencies (o)		**Expected frequencies (E)**		**(O-E)**	$\frac{(0-E)^2}{E}$
7	9	5.25	7.14	1.86	0.4845
2		1.89			
9	12	10.08	13.86	-1.86	0.2496

3		3.78			
9	12	10.75	14.62	-2.62	0.4695
3		3.87			
24		20.64		3.36	0.5470
7	14	7.74	14.74	-0.74	0.0372
2		1.75			
1		0.63			
2		3.36			
2		1.26			
7	10	7.25	9.86	0.14	0.002
3		2.61			
13		13.19		-0.19	0.0027
6		5.22		0.78	0.1166
Total					1.9091

Calculate value of χ^2 is 1.9091

Degree of freedom (d.f) =(R-1)10-2)-8[since 8 d.f. loss due to pooling]

= (4-1)(3-1)-8 =19

Tabulated value of y χ^2 at 5% level of significance for 1 d.f. is 3.841

Decision : Sine calculated value of χ^2 is less than tabulated value of χ^2 (i.e. 1.9091<3.841) so, null hypothesis is accepted which means there is no significant difference between observed opinion and expected opinion of respondents regarding to the most desirable type of bond in Nepalese bond market.

Testing Hypothesis in Q.No.3

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw the choice of different sector's bond

Table 4.12

Hypothesis Test Regarding to the Choice of Different Sector's Bond

	Respondent Groups	

Options	L.C.	I.M/B	Ind. Investors	Experts	Total
Banking sector	10	6	24	6	46
Manufacturing Sector	5	1	11	5	22
Hotel Sector	7	2	8	4	21
Trading Sector	3	-	5	3	11
Total	25	9	48	18	100

Source: Field Survey 2010

Hypothesis Setting:

Null hypothesis (H_o): There is no significant difference between observed and expected opinion regarding to the choice of different sector's bond.

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding to the choice of different sector's bond.

Fixing the level of significance at 5%

Test statistic: Under Ho, the test statistic is

$$\chi^2 = \sum \frac{(0-E)^2}{E}$$

Calculation of expected frequencies (E):

Expected frequency (E) of $R_1 C_1 = \frac{Row\ total \times Column\ total}{Grand\ total}$

$$= \frac{46 \times 25}{100} = 11.50$$

Similarly,

	R_2C_1= 5.5	R_3C_1=5.25	R_4C_1=2.75
$R_1 C_1$ =4.14	$R_2 C_2$=1.98	R_3C_2=1.89	R_4C_2=0.98
R_1C_3=22.08	R_2C_3=10.56	R_3C_3=10.08	R_4C_3=5.28
R_1C_4=8.28	R_2C_4=3.96	R_3C_4=3.78	R_4C_4=1.98

Calculation of χ^2

Observed frequencies (o)		**Expected frequencies (E)**		**(O-E)**	$\frac{(0-E)^2}{E}$
10	16	11.50	15.64	0.36	0.0083
6		4.14			
24		22.08		1.92	0.1669
6		8.28		-2.28	0.6278
5	6	5.5	7.48	-1.48	0.2928
1		1.98			
11	16	10.56	14.52	1.48	0.1509
5		3.96			
7	9	5.25	7.14	1.86	0.4845
2		1.89			
8	15	10.08	17.6	-2.6	0.3841
4		3.78			
3		2.75			
-		0.99			
5	8	5.28	7.26	0.74	0.0754
3		1.98			
Total					2.1907

Calculate value of χ^2 is 4.3043

Degree of freedom (d.f) =(R-1)(C-2)-8[since 8 d.f. loss due to pooling]

= (4-1)(4-1)-8 =1

Tabulated value of χ^2at 5% level of significance for 1 d.f. is 3.841

Decision: Sine calculated value of χ^2 is greater than tabulated value of χ^2 (i.e. 2.1907<3.841) so, Null hypothesis is accepted which means there is no significant difference between observed and expected opinion regarding to the choice of different sector's bond.

Testing Hypothesis in Q.No.4

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw the main reason that play significant role for slow growth of bond market in Nepal.

Table 4.13

Hypothesis Test Regarding to the Main Reason for Slow Growth of Bond Market

Options	Respondent Group				Total
	L.C.	I.M/B	Ind. Investors	Experts	
Insufficient supply of quality bond	6	2	10	3	21
Lack of investor's awareness	11	4	16	7	38
Lack of proper legal provision	5	2	10	4	21
Lack of capital gain opportunity	3	1	12	4	20
Total	25	9	48	18	100

Source: Appendix-11

Hypothesis Setting

Null hypothesis (H_o): There is no significant difference between observed and expected opinion regarding to the main reason for slow growth of bond market

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding to the main reason for slow growth of bond market.

Fixing the level of significance at 5%

Test statistic: Under Ho, the test statistic is

$$\chi^2 = \sum \frac{(0-E)^2}{E}$$

\Calculation of expected frequencies (E):

Expected frequency (E) of $R_1 C_1 = \frac{Row\ total \times Column\ total}{Grand\ total}$

$$= \frac{21 \times 25}{100} = 5.25$$

Similarly,

	R_2C_1= 9.50	R_3C_1=5.25	R_4C_1=5
$R_1 C_1$ =1.89	$R_2 C_2$=3.42	R_3C_2=1.89	R_4C_2=1.8
R_1C_3=10.08	R_2C_3=18.24	R_3C_3=10.08	R_4C_3=9.6
R_1C_4=3.78	R_2C_4=6.84	R_3C_4=3.78	R_4C_4=3.6

Calculation of χ^2

Observed frequencies (o)		**Expected frequencies (E)**		**(O-E)**	$\frac{(0-E)^2}{E}$
6	8	5.25	7.14	0.86	0.1036
2		1.89			
10	13	10.08	13.86	-0.86	0.0534
3		3.78			
11	15	9.50	12.92	2.08	0.3349
4		3.42			
16		18.24		-2.24	0.2751
7		6.84		0.16	0.0037
5	7	5.25	7.14	-0.14	0.0027
2		1.89			
10	10	10.08		-0.08	0.0006
4		3.78			

3	8	5	10.58	-2.58	0.6291
1		1.8			
12	16	9.6	13.2	2.8	0.5939
4		3.6			
Total					1.997

Calculate value of χ^2 is 2.2391

Degree of freedom (d.f) =(R-1)(C-2)-7[since 7 d.f. loss due to pooling]

= (4-1)(4-1)-7 =2

Tabulated value of χ^2 at 5% level of significance for 2 d.f. is 5.991

Decision : Since calculated value of χ^2 is greater than tabulated value of χ^2 (i.e. 1.997<5.991) so, null hypothesis is accepted which means there is not significant difference between observed and expected opinion regarding to the main reason for slow growth of bond market.

Testing Hypothesis in Q.No.5

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw the reason regarding the use of bank loan instead of issuing bond.

Table 4.14

Hypothesis Test Regarding to the use of Bank Loan Instead of Issuing Bond

Options	Respondent Group				Total
	L.C.	I.M/B	Ind. Investors	Experts	
Bank loan is easily available	4	4	22	6	36
Issuing bond is difficult process	4	1	5	1	11
Cost of bond is more than cost of bank loan	12	3	11	7	33
There is risk that bond may not be purchase in the market	5	1	10	4	20
Total	25	9	48	18	100

Source: Field Survey 2010

Hypothesis Setting:

Null hypothesis (H_o): There is no significant difference between observed and expected opinion regarding to the use of bank loan instead of issuing bond.

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding to the use of bank loan instead of issuing bond.

Fixing the level of significance at 5%

Test statistic: Under Ho, the test statistic is

$$\chi^2 = \sum \frac{(0-E)^2}{E}$$

Calculation of expected frequencies (E):

$$\text{Expected frequency (E) of } R_1 C_1 = \frac{\text{Row total} \times \text{Column total}}{\text{Grand total}}$$

$$= \frac{36 \times 25}{100} = 9$$

Similarly,

$R_2C_1 = 2.75$ $R_3C_1 = 8.25$ $R_4C_1 = 5$

$R_1C_1 = 3.24$ $R_2C_2 = 0.99$ $R_3C_2 = 2.97$ $R_4C_2 = 1.8$

$R_1C_3 = 17.28$ $R_2C_3 = 5.28$ $R_3C_3 = 15.84$ $R_4C_3 = 9.6$

$R_1C_4 = 6.48$ $R_2C_4 = 1.98$ $R_3C_4 = 5.94$ $R_4C_4 = 3.6$

Calculation of χ^2

Observed frequencies (o)		**Expected frequencies (E)**		**(O-E)**	$\frac{(0-E)^2}{E}$
4	8	9	12.24	-4.24	1.4688
4		3.24			
22		17.28		4.72	1.2893
6		6.48		-0.48	0.0356
4	10	2.75	9.02	0.98	0.1065
1		0.99			
5		5.28			

1	16	1.98	13.2	2.80	0.5939
12		8.25			
3		2.97			
11		15.84		-4.84	1.4789
7		5.94		1.06	0.1892
5	6	5	6.80	0.8	0.0941
1		1.80			
10	14	9.60	13.2	0.8	0.0485
4		3.60			
Total					5.3048

Calculate value of χ^2 is 5.348

Degree of freedom (d.f) =(R-1) C-2)-7[since 7 d.f. loss due to pooling]

= (4-1) 4-1)-7 =2

Tabulated value of χ^2 at 5% level of significance for 2 d.f. is 5.991

Decision : Since calculated value of χ^2 is greater than tabulated value of χ^2 (i.e. 5.3048<5.991) so, Null Hypothesis is accepted which means there is no significant difference between observed and expected opinion regarding to the use of bank loan instead of issuing bond.

Testing Hypothesis in Q.No.6

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw the most suitable type of bond for investment.

Table 4.15

Hypothesis Test Regarding to the Suitable Type of Bond for Investment

Options	Respondent Group				Total
	L.C.	I.M/B	Ind. investors	Experts	
Straight Bond	4	2	6	3	15

Convertible Bond	14	3	32	7	56
Attached with warrant	7	4	10	8	29
Total	25	9	48	18	100

Source: Field Survey 2010

Hypothesis Setting

Null hypothesis (H_0): There is no significant difference between observed and expected opinion regarding the choice of suitable type of bond for investment

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding the choice of suitable type of bond for investment.

Fixing the level of significance at 5%

Test statistic : under Ho, the test statistic is

$$\chi^2 = \sum \frac{(0-E)^2}{E}$$

Calculation of expected frequencies (E):

Expected frequency (E) of $R_1 C_1 = \frac{Row\ total \times Column\ total}{Grand\ total}$

$$= \frac{15 \times 25}{100} = 3.75$$

Similarly,

$R_2C_1 = 14$ $R_3C_1 = 7.25$

$R_1 C_1 = 1.35$ $R_2 C_2 = 5.04$ $R_3C_2 = 2.61$

$R_1C_3 = 7.20$ $R_2C_3 = 26.88$ $R_3C_3 = 13.92$

$R_1C_4 = 2.70$ $R_2C_4 = 10.08$ $R_3C_4 = 5.22$

Calculation of χ^2

Observed frequencies (O)		**Expected frequencies (E)**		**(O-E)**	$\frac{(0-E)^2}{E}$
4		3.78			

2	6	1.35	5.13	0.87	0.1475
6	9	7.2	9.90	-0.90	0.0818
3		2.70			
14	17	14		-2.04	0.2186
3		5.04	19.04		
32		26.88		5.12	0.9752
7		10.08		-3.08	0.9411
7	11	7.25	9.86	1.14	0.1318
4		2.61			
10		13.92		-3.92	1.1039
8		5.22		2.78	1.4805
Total					5.0804

Calculated value of χ^2 is 5.0804

Degree of freedom (d.f) =(R-1)(C-2)-7[since 4 d.f. loss due to pooling]

= (31)(4-1)-4 =2

Tabulated value of χ^2 at 5% level of significance for 2 d.f. is 5.991

Decision: Since calculated value of $\chi$is less than tabulated value of χ(i.e. 5.0804<5.991) so, null hypothesis is accepted which means there is no significant difference between observed and expected opinion regarding the choice of suitable type of bond for investment.

Testing Hypothesis in Q.No.7

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw the most suitable type of trading system, in case of bond.

Table 4.16

Hypothesis Test Regarding to the Suitable Type of Trading System, in Case of Bond

Options	**Respondent Group**				**Total**
	L.C.	**I.M/B**	**Ind. Investors**	**Experts**	

Primary trading	10	3	9	7	29
Secondary trading	6	5	21	7	39
Trading of Listed and non listed securities in OTC Market	3	-	5	3	11
Trading between buyer and seller directly	6	1	13	1	21
Total	25	9	48	18	100

Source: Field Survey, 2010

Hypothesis setting:

Null hypothesis (H_0): There is no significant difference between observed and expected opinion regarding the choice of suitable type of trading system, in case of bond.

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding the choice of suitable type of trading system, in case of bond.

Fixing the level of significance at 5%

Test statistic: under Ho, the test statistic is

$$y^2 = \sum \frac{(0-E)^2}{E}$$

Calculation of expected frequencies (E):

$$\text{Expected frequency (E) of } R_1 C_1 = \frac{Row\ total \times Column\ total}{Grand\ total}$$

$$= \frac{29 \times 25}{100} = 7.25$$

Similarly,

R_2C_1= 9.75 R_3C_1=2.75 R_4C_1=5.25

$R_1 C_1$ =2.61 $R_2 C_2$=3.51 R_3C_2=0.99 R_4C_2=1.89

R_1C_3=13.92 R_2C_3=18.72 R_3C_3=5.28 R_4C_3=10.8

R_1C_4=5.22 R_2C_4=7.02 R_3C_4=1.98 R_4C_4=3.78

Calculation of χ^2

Observed frequencies (O)		Expected frequencies (E)		(O-E)	$\frac{(0-E)^2}{E}$
10	13	7.25	9.86	3.14	0.9999
3		2.61			
9		13.92		-4.92	1.7390
7		5.22		1.78	0.6070
6	11	9.75	13.26	-2.26	0.3852
5		3.51			
21		18.72		2.28	0.2777
7		7.02			
3	10	2.72	10.76	-0.76	0.0054
-		0.99			
5	8	5.28	7.26	0.74	0.0754
3		1.98			
6	7	5.25	7.14	-0.14	0.0027
1		1.89			
13	14	10.08	13.86	0.14	0.0014
1		3.78			
Total					4.0937

Calculated Value of χ^2 is 4.0937

Degree of freedom (d.f) =(R-1)(C-2)-7[since 7 d.f. loss due to pooling]

= (4-1)(4-1)-7 =2

Tabulated value of y^2 at 5% level of significance for 2 d. f. is 5.991

Decision χ: Since calculated value of χ is less than tabulated value of χ (i.e. 4.0937<5.991) so, null hypothesis is accepted which means there is no significant difference between observed and expected opinion regarding to the choice of suitable type of trading system, in case of bond.

Testing Hypothesis in Q No. 8

In 100 random samples of respondents, it contains the following distribution, which was noted on the basis of related fields. The test is to draw the factor. That plays vital role to attract investors toward purchase corporate bond.

Table 4.17

Hypothesis Test Regarding to the Factor that Plays Vital Role to Attract Investors toward Purchase Corporate Bond

Options	Respondent Group				Total
	L.C	I.M/B	Ind. investors	Experts	
Declining interest rate on bank deposit	8	2	14	4	28
Lack of investment alternative	2	-	3	-	5
Fixed income	8	4	24	11	47
portfolio with less risk	7	3	7	3	20
Total	25	9	48	18	100

Source: Field Survey 2010

Hypothesis Setting

Null hypothesis (Ho): There is no significant difference between observed and expected opinion regarding the factor that plays vital role to attract investors toward purchasing corporate bond.

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding the factor that plays vital role to attract investors toward purchasing corporate bond.

Fixing Level of Significance at 5%

Calculation of expected frequencies (E):

Expected frequency (E) of R_1C_1= $\frac{Row\ total \times Column\ total}{Grand\ total}$

$$= \frac{28 \times 25}{100} = 7$$

Similarly,

$R_2C_1 = 2.52$	$R_3C_1 = 13.44$	$R_4C_1 = 5.04$	
$R_1C_2 = 1.25$	$R_2C_2 = 0.45$	$R_3C_2 = 2.40$	$R_4C_2 = 0.90$
$R_1C_3 = 11.75$	$R_2C_3 = 4.23$	$R_3C_3 = 22.56$	$R_4C_3 = 8.46$
$R_1C_4 = 5$	$R_2C_4 = 1.8$	$R_3C_4 = 9.60$	$R_4C_4 = 3.60$

Calculation of χ^2

Observed frequencies (O)		**Expected frequencies (E)**		**(O-E)**	**$(O-E)^2/E$**
8	10	7	8.25	1.75	0.3712
2		1.25			
14		11.75		2.25	0.4309
4	9	5	14	-5.00	1.7857
2		2.52			
-		0.45			
3		4.23			
-		1.8			
8	12	13.44	15.84	-3.84	0.9309
4		2.40			
24		22.56		1.44	0.0919
11		9.60		0.40	0.0167
7	10	5.04	5.94	4.06	2.775
3		0.90			
7	10	8.46	12.06	-2.06	0.3519
3		3.60			
Total					6.7542

Calculated value of χ^2 is 6.7542

Degree of freedom (d.f.) = (R-1) (C - 1) -8 [Since 8 d.f. loss due to polling]

= (4-1) (4-1) -8 = 1.

Tabulated value of χ^2 at 5% level of significance for 1 d.f. is 3.341

Decision: Calculated value of χ^2 is less than tabulated value of χ^2 (i.e. 6.7542>3.841). So, Alternative hypothesis is accepted which means there significant difference between observed and expected opinion is regarding the factor that plays vital role to attract investors toward purchasing corporate bond.

Testing Hypothesis in Q. No. 9

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw opinion that Nepalese government bond market is systematic or not.

Table 4.18

Hypothesis Test Regarding to the Systematize of Nepalese Corporate Bond Market

Options	Respondent Group				Total
	L.C	I. M/B	Ind. investors	Exports	
Yes	7	3	18	8	36
No	18	6	30	10	64
Total	25	9	48	18	100

Source: Field Survey 2010

Hypothesis Setting

Null hypothesis (H_0): There is no significant difference between observed and expected opinion regarding to the opinion that Nepalese government bond market is systematic.

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding to the opinion that Nepalese government bond market is systematic.

Fixing the level of significance of 5%

Test statistic: Under H_0, the test statistic is $X^2 = \chi^2 = \Sigma \frac{(0-E)^2}{E}$

Calculation of expected frequencies (E):

Expected frequency (E) of $R_1 C_1 = \frac{Row\ total \times Column\ total}{Grand\ total}$

$= \frac{26 \times 25}{100} = 9$

Similarly,

$R_2C_1 = 16$

$R_1C_2 = 3.24$ $R_2C_1 = 5.76$

$R_1C_3 = 17.28$ $R_2C_2 = 30.72$

$R_1C_4 = 6.48$ $R_2C_3 = 11.52$

Calculation of χ^2

Observed frequencies (0)		**Expected frequencies (E)**		**(O-E)**	**$(O-E)^2/E$**
7	10	9	12.24	-2.24	0.4099
3		3.24			
18		17.28		0.72	0.030
8		6.48		1.52	0.3565
18		16		2	0.25
6		5.76		0.24	0.01
30		30.72		-0.72	0.0169
10		11.52		-1.52	0.2001
Total					1.2734

Calculate value of χ^2 is 1.2734

Degree of freedom (d.f) = (R-1) (C-1)-1 [Since 1 d.f. loss due to polling]

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

= 2

Tabulated value of χ^2 at 5% level of significance for 2 d. f. is 5.991

Decision: Since calculated value of χ^2 is less than tabulated value of χ^2 (i.e. 1.2734<5.991). So, null hypothesis is accepted which means there is no significant

difference between observed and expected opinion regarding to the opinion that Nepalese government bond market is systematic.

Testing Hypothesis in Q. No. 10

In 100 random samples of respondents, it contains the following distribution which was noted on the basis of related fields. The test is to draw the sufficiency of present rule and regulation regarding the Nepalese bond market.

Table 4.19

Hypothesis Test Regarding the Sufficiency of Present Rule and Regulation Regarding the Nepalese Bond Market

Options	Respondent Group				Total
	L.C.	I.M/B	Ind. Investors	Exports	
Yes	5	1	17	6	29
No	20	8	31	12	71
Total	25	9	48	18	100

Source: Field Survey, 2010

Hypothesis Setting

Null hypothesis (H_0): There is no significant difference between observed and expected opinion regarding the sufficiency of present rule and regulation regarding the Nepalese bond market.

Alternative hypothesis (H_1): There is significant difference between observed and expected opinion regarding the sufficiency of present rule and regulation regarding the Nepalese bond market.

Fixing the level of significance at 5%

Test statistic; Under H_0, the test statistic is $\chi^2 = \Sigma \frac{(0-E)^2}{E}$

Calculation of expected frequencies (E):

Expected frequency (E) of $R_1 C_1 = \frac{Row\ total \times Column\ total}{Grand\ total}$

$= \frac{26 \times 25}{100} = 9$

Similarly,

$R_1C_2 = 17.75$ $R_1C_2 = 2.61$ $R_2C_1 = 6.39$

$R_1C_3 = 13.92$ $R_2C_2 = 34.08$

$R_1C_4 = 5.22$ $R_2C_3 = 12.78$

Calculation of γ^2

Observed frequencies (O)		**Expected frequencies (E)**		**(O-E)**	**$(O-E)^2/E$**
5	6	7.25	9.86	-3.86	1.5111
1		2.61			
17		13.92		3.08	0.6815
6		5.22		0.78	0.1166
20		17.75		2.25	0.2852
8		6.39		1.61	0.4056
31		34.08		-3.08	0.2784
12		12.78		-0.78	0.0476
Total					3.326

Calculated value of χ^2 is 3.326

Degree of freedom (d.f.) = (R-1) (C-1)-1 [Since 1 d.f. loss due to pooling)

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

Tabulated value of χ^2 at 5% level of significance for 2 d.f 5.991.

Decision: Since calculated value of χ^2 is less than tabulated value of χ^2 (i.e. 3.326<5.991). So, null hypothesis is accepted with means there is no significant difference between observed and expected opinion regarding the sufficiency of present rule and regulation regarding the Nepalese bond market.

4.5 Major Findings

Major Findings from the Analysis of Secondary Data

1. The total volume of securities issued from 1998/99 to 2007 /08 shows increasing trend. The major portion of securities market is covered by Bond market, it is also in increasing trend. Out of total bond market, government bond are main dominant securities in sense of volume In FY 2007/08 it cover more than 95% of total bond market. It is issuing regularly throughout the observation period.
2. The history of government bond in Nepal started with the issuance of treasury bills in 1961. Since then the volume and kinds of government bond have been growing and the amount outstanding government bonds reached Rs. 111239.1 million in the FY 2007/08.
3. The history of corporate bond in Nepal started with the issuance of debenture by bottlers Nepal Ltd. in FY 1986/87. In 1993/94 and 1997/98 JSML and SRSML had also issued debenture. Debenture of SRSML was heavily under subscribed only 18% debentures were sold. After the unsuccessful issuance of convertible debenture of SRSML, HBL was the first bank of issue debenture of amount Rs. 260 million in the FY 2001/02. It was over subscribed by 1.12 times Till mid-July-2008, There are only fourteen companies had issued debentures. Out of them, twelve companies are relating to banking sector and they are also heavily oversubscription. It shows the significant role of banking sector to develop corporate bond market in Nepal.
4. To fulfill the financial needs of the country, GON has use different types of bonds. Out of the, T-Bills, Development bonds, special bonds, national saving bonds and citizen saving bonds are major type of bonds. Outstanding amount of T-Bills, Development bonds and citizen saving bonds are in increasing trend. But outstanding amount of National saving bonds and special bonds are in decreasing trend. By observing the trend of total

government bond market, it is increasing every year, which is good sign for bond market. If government maintain this trend in future, it will be helpful to reduce external debt and by mobilizing internal debt in productive sectors nation can get more benefit.

5. While analyzing the ownership pattern of different government bends. We found that NRB, commercial banks, financial institutions, government and private business enterprises, individual investors and others are the main holders of different government bonds. NRB is the main investor of government bonds and commercial banks is in second. Participation of financial institutions, government and private business enterprises and individual investors is comparatively low. Participation of individual investor is not satisfactory.
6. Total outstanding amount of corporate bond from 2002 to 2003 shows increasing trend. It reached to Rs. 5010 million in mid July 2008. Growth rate of corporate bond is very high. But participation of corporate bond in bond market as well as capital market is insufficient.
7. After studying the ownership pattern of Nepalese corporate bond. NIDC, financial institutions, Insurance companies, individuals investors are the main investors of Nepalese corporate bond participation of individual investors in purchasing SRSM debenture was huge (i.e. 88.30%) although participation of this group side down in purchasing HBL, EBL, and NIBL (2005/06) debentures. Most of the debenture of HBL, EBL and NIBL (2005/06) were subscribed through private placement to the limited no. of investors (most of them are institutional investors), which is main reason for lower participation of individual investors in purchasing HBL, EBL, and NIBL (2005/06) debenture in comparison to SRSM debenture, where SRSM debentures were subscribed through 100% public offering. The key investor of HBL, EBL and NIBL (2005/06) are Nepal Army Kalyan Kosh, Insurance companies and Different Awakash Kosh respectively.

8. The prime characters of Nepalese corporate bonds are Rs. 1000 par value, coupon rate is more than market interest rate, semi-annually interest payment, provision of sinking fund, long-term maturity generally 7 years etc.
9. All Nepalese corporate bonds have less duration than their maturity period. As stated by F.R Macaulay (1938), less duration always attract the large number of investors because investors get their whole return before maturity period and less price risk. Therefore, if such types of circumstances continue in future, investors may buy the corporate bond.
10. All Nepalese corporate bonds are under priced. As stated by Francis (1986), if price of security is below its value, it is under priced and should be bought and held in order to profit from price gains thinking that profit should occur in the future. It shows the bright future of Nepalese corporate bond market.

Major Findings from Primary Data Analysis

1. With respect to preference regarding to the appropriate source of financing for raising long term fund, the majority of respondents prefer the common stock. Due to poor practice of issuing other alternatives as preferred stock, bond, mutual fund, most of the investors are familiar with common stock only. So, the Nepalese capital market has dominated by common stocks market. In the view of investors, common stocks is more marketable the other securities. Lack of strength secondary market of bond, poor practice of bond instruments, lack of investor's awareness are the reasons which do not attract investors towards bond market.
2. As regards the most desirable bonds in Nepalese bond market, the majority of respondents gave their first priority to ‘long-term corporate bond’, second priority to ‘long-term corporate bond’, third priority to ‘short-term government bond' and last priority to short-term corporate bond’ it shows that Nepalese investors want to invest for a long period rather than short

period and they also want security on their investment therefore they preferred government bond rather than corporate bond.

3. With respect to preference for various sectors's bond, the majority of respondents choose banking sector's bond, Then after, manufacturing, hotel and Trading sector's bond are preferred at second, third and fourth respectively. According to respondents, Banking sectors are economically strong than other sectors at presents. Therefore, investors are interested to invest on Banking sectors bond rather than other sector's bond. It shows that in future, banking sector's bond market may be prosperous. But on the other hand, least preference on other sector's bond creates lots of problem in growth of bond market as these sectors' need more debt capital. So, all other sectors should disclose their good performance reports like positive financial information to the general public or investors in order to attract them towards their bond.
4. With respect to reason regarding slow growth of bond market in Nepal, the majority of respondents gave the first rank to lack of investors awareness. Similarly, the second rank is given to 'Insufficient supply of quality bonds', the third rank to' Lack of proper legal provision' and the fourth rank to "lack of capital gain opportunity'. This study shows that Nepalese investors have little knowledge about bond market because there is few practice of bond. Lack of quality bond supply is the main reason which hindered the properly growth of Nepalese bond market. In Nepalese capital market, share issuances are heavily over subscribed but bond issuances are not. These facts strongly support the above respondent's opinion.
5. With respect to reason regarding Nepalese organizations prefer bank loan instead of issuing bond, majority of respondents gave their opinion in favor of 'Bank loan is easily available' and major portion of them feel that 'cost of bond is more than cost of bank loan'. Beside them, risks of not purchasing

bond, difficult process of issuing bond are the reasons, which are faced by Nepalese bond market.

6. Regarding the choice of type of bond, most of the respondents choose convertible bond that after choose attached with warrant and lastly, they choose straight bond. It shows that Nepalese investors want 'Sweetener' feature in bond, such as, convertible facture, bond with warrant etc. But there is no practice of this type of bond in Nepalese bond market. Therefore, investors are not much interested towards bond market.
7. One of the questions was asked to respondents that which type of trading system is more suitable, in case of bond. In this regard, majority of respondents gave their opinion in secondary trading. According to them, most of the investors are familiar with secondary market and it gives marketability to bond. Marketability facilities attract investors toward bond for investment.
8. With respect to the factor that play vital role to attract investors to invest the corporate bond. Majority of respondents gave their preference in favor of 'fixed income' second priority to declining interest rate to ‘portfolio with less risk’ and on bank deposits' third priority fourth priority to "lack of investment alternative. Above shows that Nepalese investors want to earn regular income and they do not want to take more risk. Therefore, we can say that they are risk averter'.
9. One of the question asked to the respondents was whether the Nepalese government bond market is systematic or not, the majority of respondents agreed that Nepalese corporate bond market is not systematic “regarding this logic, they gave some reasons, these are, it is no traded according to market principle, It is trading within Kathmandu valley, rules and regulation regarding of corporate bond market frequently change.
10. With respect to sufficiency of present rule and regulation regarding the Nepalese bond market, most of the respondents are agreed that the present

rule and regulation regarding bond market are not sufficient. According to them, there are lack of investors protection act, listing provision of bond in NEPSE is insufficient, poor action against those companies who disclose wrong data, high broker's commission, poor regulation system, lack of credit-rating agencies, lack of over the counter market etc. This shows the insufficiency of present rules and regulations of Nepalese bond market for growth of Nepalese bond market.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

In order to mobilize necessary funds for the economic development of a nation capital plays key role in financial market, which can be collected by issuing tradable securities such as common stocks, debentures/bonds, preference shares and warrants as a long-term funds. The securities market is the requisite for the sound development of an economy because it only provides stable long-term capital for organizations. For the development of securities market, bond market should be well developed and well functionalized.

This study is based on primary as well as secondary sources of information. The study of existing corporate debt market of Nepal was accomplished by using secondary data for the period of FY1998/98 to FY 2008/09. The valuation and duration of corporate debt securities are analyzed by using the secondary data for the period of of FY1998/98 to FY 2008/09. In this way, survey of respondents has been accomplished by using primary data of 110 respondents. Out of 110 respondents, there are 22 from listed companies, 12 from issue managers/brokers, 58 from individual investors, and 18 from experts. These respondents of four groups gave their opinions on different aspects of Nepalese corporate debt securities market. The opinion of each respondent group also analyzed on each question, to ascertain the differences in their opinions. For this not only a variety of statistical tests are employed but testing of hypothesis at 5% level of significance by using chi-square is also employed.

This study mainly focuses on analyzing the problems and prospects of Nepalese corporate debt market. Its specific objectives are: (a) to study existing mechanism

of corporate debt market in Nepal, (b) to identify problems that obstruct the development of corporate debt market in Nepal, (c) to examine valuation and duration of Nepalese corporate debt securities and (d) to access the future prospects of corporate debt market growth and development based on the opinions of concerned parties.

From the field survey, the researcher found the factors that obstruct the growth of debt securities market. Investors unawareness, inferior interest rate structure performance of issuing bodies, insufficient legal provision, limited supply of quality debenture, political instability, insufficient infrastructure, lengthy process of issuing debenture, etc. are the major problems due to which Nepalese corporate debt securities market could not be developed properly. Therefore, there are a lot of things to be done to make the Nepalese debt market sound such as improvement of infrastructure of whole capital market & legal provisions regarding debt market, improvement of attitude of investors toward debt securities, good performance of issuing bodies, removal of policy uncertainty etc. should be improved which may help to develop debt market of Nepal.

Nepalese debentures market is still very lean, as very few companies have issued debentures in the market. Issuance of quality bonds with better characteristic features by better performing corporate houses is the demand of present corporate debenture market. Since 1986/87 to till the reporting writing, ten corporate debentures are issued but most of them are from banking sector. SRSM's debentures were heavily undersubscribed while debentures from banking sector were oversubscribed. This means it can be predicted that more of such debentures issued can be expected in the future but numbers of investors are in decreasing level. So, the special emphasize should provide to develop the corporate debentures market. For the development of corporate debt market, only oversubscription is not enough. The number of investors as well as the number of

issuing companies should increase. Recently, many factors shows that the corporate debt market has started to grow in comparison to the past.

From this study, the researcher concludes that there are some reasons such as continuously decreasing interest rate of debt securities and increasing number of finance companies, which are providing higher interest rate on deposits due to which general investors are showing poorer responses to the debenture issue

Again, the researcher found that the Nepalese general investors are so much interested on investing common stock while very few investors are interested on corporate debenture. They are less risky and provide fixed income. Likewise, companies are also attracting issuing common stock than debt securities even though debenture issue is suitable for long-term financing as well as can be less costly source of long-term financing than common stock.

This study is based on secondary as well as primary source of information. Study on the position of bond market in the structure of Nepalese securities market was accomplished by using secondary data for the period of 1998/99 to 2007/08. The trend and ownership pattern of Nepalese government bond as well as corporate bond were analyzed by using secondary data for the period of 1999 to 2008 and 2002 to 2008 respectively. The required secondary data for the government bonds were obtained mainly from the various government publications. Similarly, corporate bonds data were obtained from NEPSE, SEBO/N and other related official records.

This study also examined the key characteristics, duration and valuation of Nepalese corporate bond market by using secondary data obtained from SEBO/N and bond issuing companies. This study used various model such as time series analysis, valuation model, duration model to analyze the secondary data.

Total 100 samples were drawn from different strata for the purpose of finding problems related to the bond market by questionnaire survey. The questionnaire contains 10 different questions relating to Nepalese government and corporate bond market. Out of 100 respondents, 25 were listed companies, 9 were issue managers/brokers, 48 were individual investors and 18 were experts especially staff of NRB, SEBO/N, NEPSE, Securities market researchers. Personal interviews were also conducted to support the data collected from questionnaire.

The results of these respondents were analyzed to ascertain the difference in their responses. For this purpose, non-parametric statistical test such as chi-square test was employed and results were tested at 5% level of significance.

The researcher has found many problems relating to Nepalese bond market such as low practice of bond market, bond market is less familiar than other securities, Lack of investor's awareness, Insufficient supply of quality bonds, Bank loan is easily available than bond, Cost of bond is more than cost of bank loan, Lack of 'sweetener' features, insufficient legal provision, unsystematic government bond market etc. are the major problems due to which Nepalese bond market could not be developed properly.

5.2 Conclusion

The above finding led this study to conclude that Nepalese bond market is still at infant stage. The government bond market is slightly at mature stage in comparison to corporate bond market. So that, emphasis should be given in the development of corporate bond market and if it is done, corporate bond market will grow up very soon because there are some positive signals felt by researcher such as oversubscription of bond, increasing number of bond issuers, valuation of Nepalese corporate bonds are under-priced, durations of Nepalese corporate bonds are less than their maturity period, declining interest rate on bank deposit.

From this research study, the researcher comes to the conclusion that the major factors that hinder the smooth growth of Nepalese bond market are: Lack of investor's awareness toward bond market, Limited supply of quality bonds, Difficult process of issuing bond, Low practice of issuing bond, Lack of large business organizations, Lack of facilities (trading mechanism, infrastructure, rules and regulation etc.) Lack of 'sweetener' features (convertible, attached with warrant etc.), unsystematic government bond market.

Thus, for systematic growth and development of Nepalese bond market above mentioned issues must be coped by developing competitive strength on the one hand and capturing opportunities on the other hand.

5.3 Recommendation

The researcher found so many weaknesses in all areas and overall system of Nepalese corporate debenture market. The researcher would like to give some advices to concerned authorities i.e., corporate sector, government, issue managers/brokers, individual investors, and institutional mechanism for converting the major problems into strength and grasping the opportunities for the overall development of Nepalese corporate debenture market.

(a) To Corporate Sector

Corporate sectors are important stakeholders of corporate debt market. If they do not issue debentures, development of corporate debt securities will be impossible. The researcher gives following suggestions to corporate sector.

- To attract more investors toward corporate debt securities, corporate sectors should increase interest rate on debt securities. If interest rate on debt securities is higher than the inflation rate, the people investing on it save the purchasing power on the original investment.

- Issued debentures should be listed in NEPSE in order to provide secondary market operation. Provision of trustee should be made in debentures issue. In addition, huge portion of issued debentures should be subscribed through public offering rather than private replacement.

- Price sensitive information should be completely disclosed in order to gain reputation of corporate companies. True financial conditions and plan should be brought out.
- Public gives a lot of priorities to banking sector's debt securities. Therefore, debt market growth is possible if it is initiated by banking sector. Similarly, potentiality of debt market growth is higher if it started from top-tier private companies.

(b) To Government

Government is a policy maker and also regulator so government has main responsibilities in promoting desirable activities and restricting undesirable activities for the smooth growth of Nepalese corporate debenture market. Since development of corporate debenture security is essential for the overall growth of capital market, concerned bodies of government should do following activities for the development of corporate debenture market.

- To attract individual investors towards debt securities, the government should offer some facilities such as tax exemption on income of debt securities; repurchase facility etc. that helps to collect needed funds for corporate sectors.
- Government should make legal provisions to protect the rights of bond holders. Not only this but also lengthy process of issuing debentures as well as ineffective rules and regulation should be revised frequently according to the current situation of nation, issuers and investors for the development of corporate debenture market.

- Majority of the respondents replied that the infrastructure facility of Nepalese capital market is inadequate for the growth of corporate debenture market. The majority of respondents agree that the large flotation costs at the time of issue cannot bear by small corporate houses. So, government should provide adequate infrastructure, and make the cost of issuing debenture favorable.

- Since, there is only one stock exchange in the country, which is located in the capital and there is no other alternative, participation of the investors from outside the valley is very low. Therefore, to develop a proper debt market, it should provide the opportunity for investing by the people outside the valley, the regional stock exchange concept brought out by the government in ninth-five year plan should be implemented. Expansion of the stock exchange outside Kathmandu will help to increase the number of investors from out of the valley in securities transaction.

(c) To Investors

Investors are the person or entity who invests their money in debenture. There are two types of investors such as individual investors and institutional investors. From the field survey, it has found that majority of investors are not interested towards corporate debt securities. So, the researcher gives following suggestions to general investors.

- It is found that majority of Nepalese investors are not interested towards corporate debentures market. It can be due to lack of knowledge about corporate debentures. So, investors should invest their some times in study about corporate debenture market.
- Investors should change in their perception and attitude on corporate debenture and should invest in corporate securities after properly analyzing

risk and return on debentures. Before making investment decision, they should think rationally.

- From the field survey, majority of investors showed least interested towards manufacturing and trading companies. But all manufacturing and trading companies may not be weak. So the investors should recognize strong companies and their debentures issue should take positively. And they should take positively about their debentures issues.
- Investors should force to bond issuing company to enlist the bonds in NEPSE.

(d) To Institutional Mechanism

There has been making some directing, controlling mechanism of debt securities market, which also looks after Nepalese debentures market. There is NRB, NEPSE, ROC, SEBO/N etc. as institutional mechanism arrangement made by government. The researcher gives following suggestions to institutional mechanism to overrun existing debenture market problems.

- Security Board of Nepal (SEBO/N) should co-operate NEPSE. Procedures of reviewing debentures prospect and issue approval should be quick. SEBO/N should add additional provisions that help to protect investors' interest. SEBO/N should ensure the timely disclosure of price sensitive information. NEPSE is being the trading place of limited listed shares based on traditional method i.e. open cry system. There is a need of trading securities by computerized system i.e. online trading system. Auditing and accounting system should be strictly review and reward and punishment should be provided. Listing process of securities should be simplified. Information disclosure should be strictly enforced to listed companies.

BIBLIOGRAPHY

Acharya, P. (1968). *A Case Study on Public Debt in Nepal.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Alexander, G.J & et.al. (2002). *Fundamentals of Investment.* New Delhi: Prentice-Hall of India Pvt. Ltd.

Annual Report. (2007/08). Kathmandu: Security Board of Nepal.

Baral, K.J. (1999). *Security Market in Nepal.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Bhandari, R.R. (2008). *Problems and Prospects of corporate Debt Market in Nepal.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Bhattarai, R (2004). *Debentures are Welcome.* Kathmandu: New Business Age.

Bole, L.M. (1982). *Financial Markets and Institution.* New Delhi: Tata publication.

Brigham, E.F. & Houston J.F. (2001). *Fundamental of Financial Management*. New Delhi: Harcourt Asia Private Limited.

Cheney J.M. & Moses, E.A. (1993). *Fundamental of Investments.* New York: West Publishing Company.

DeepeshVaidya (2010), "Bond Market In Nepal", *SEBON Journal*, Volume IV, June 2010. Securities Board of Nepal.

Douglas, K.S. (1999). *Convertible Debt Versus Straight Debt*. The Journal of International Financial Management. Vol. 10, Pp. 24-41.

Elton, Grober, Agrwal & Mann. (2001). *Explaining the Rate spread on corporate Bonds:* The journal of finance. Vol. 46, No. 1, Pp. 247-277.

Fisher, D.E. & Jordan, R.J. (2000). *Security Analysis and Portfolio Management.* New Delhi: Prentice-Hall of India Pvt. Ltd.

Francis, J.C. (1988). *Management of Investment.* Singapore: McGraw-Hill Book Company.

Gitman, L.J. (1990). *Principles of Managerial Finance.* Harper Collins Publishers.

Hamptoan, J.J. (2001). *Financial Decision Making.* New Delhi: Prentice-Hall of India Pvt. Ltd.

Joshi, M.R. (1982). *Structure of public Debt in Nepal.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Kafle, D.R. (2003). *Problems and prospects of Debt Market Growth in Nepal.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Kane, A. & et.al. (2002). *Investment.* New Delhi: Tata McGraw-Hill Publishing co. Ltd.

Khanal, S.B. (2000). *Public Debt in Nepal: A Study of its Structure and Burden.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Khanal, S.R. (2009). *A Study on Corporate Bond: Prospects and Issues in Nepal.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Kohn, M. (1999). *Financial Institutions and Markets.* New Delhi: Tata McGraw-Hill Publishing Company Ltd.

Kothari, C.R. (1994). *Quantitative Techniques.* New Delhi: Vikash Publishing House Pvt. Ltd.

Link, A.N. & Woelfel, C.J (1995). *The Complete Encyclopedia of Accounting, Finance, Investing, Banking and Economics.* New Delhi: Vanity Book International.

Mainali, N.K (2003). *Problem and prospect of Debenture market Growth in Nepal*. Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Nepal Rastra Bank (2009) *Quarterly Economic Bulletin.* Kathmandu: NRB. Vol. 43, No 1 & 2.

Nepal Rastra Bank. (2007/08) *Economic Report.* Kathmandu: NRB

Nepal Rastra Bank. (April 2009). *A Hand book of Government Finance Statistics.* Kathmandu: NRB.

Nepal Rastra Bank. (Sharban, 2006). *Current Macroeconomic Situation.* Kathmandu: NRB.

NEPSE News, Market Statistics and Review. (Magh-Chaitra, 2065). Kathmandu: Listing section. Nepal Stock Exchange Ltd.

Oxford university press. (1996). *Oxford Dictionary of Finance and Banking.* United Kingdom: Oxford University Press.

Pandey, R.S. (2006). *Issues and Prospects of Developing corporate Debenture market in Nepal.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Panta, P.R. & Wolff, H.K. (2005). *Social Science Research and Thesis Writing*. Kathmandu: Buddha Academic Publishers and Distributors Pvt. Ltd.

Pinches, G.E. (1990). *Essentials of Financial Management.* Harper collins Publishers.

Poudel, S.P. (2001). *Government securities markets: Rationale and Developments in Nepal:* Nepal Rastra Bank Sammachar. *(47th Annual Publication).* Pp. 45-49.

Pradhan, S. (1992). *Basics of Financial Management.* Kathmandu: Educational Enterprise private Limited.

Puudyal, A.S. (2008). *A study on Nepalese Debt Securities Market.* Kathmandu: An Unpublished Master Degree Thesis, Submitted to Faculty of Management, T.U.

Rilly, F.K. (1986). *Investment.* Japan: Dryden Press.

Ross, S.A & et.al. (2003). *Fundamentals of Corporate Finance.* New Delhi: Tata McGraw-Hall Publishing Co. Ltd.

Schall, L.D. & Haley, C.W. (1991). *Introduction to Financial Management.* New Delhi: Tata McGraw-Hall Publishing co. Ltd.

Sharpe, W. F & et.al. (1998). *Fundamentals of Investment.* New Delhi: Prentice Hall of India Pvt. Ltd.

Thapa, K. (2004). *Investment*. Kathmandu: Asmita Books and stationary.

Thygerson, K.J. (1993). *Financial Markets and Institutions.* New York: Harper Collins Publishers.

Van Horne, J.C. (2002). *Financial Management and Policy.* New Delhi: Pearson Education.

Weston, J.F. & Copeland, T.E. (1992). *Managerial Finance*. New York: The Dryden Press.

Websites:

www.nrb.org.np

www.mof.gov.np

www.nepal stock.com

APPENDICES

Appendix – 1

Calculation of Forecasted Outstanding Amount of Nepalese Corporate Bond by using Time Series Analysis

(Rs. in million)

Year (X)	x=2 (X-2003.5)	Y= Outstanding Amount of T- Bills (in Rs.)	x^2	xy

2002	-3	360	9	-1080
2003	-2	360	4	-720
2004	-1	660	1	-660
2005	0	960	0	0
2006	1	1810	1	1810
2007	2	2060	4	4120
2008	3	5010	9	1503
Total	$\Sigma x = 0$	$\Sigma y = 11220$	$\Sigma x^2 = 28$	$\Sigma xy = 18{,}500$

Here, $y = a + b.x$ ..... (i)

x= X-mean year

Since, $\sum x = o$, $\quad a = \frac{\sum y}{n} = \frac{11220}{7} = 1602.86$

$$b = \frac{\sum xy}{\sum x^2} = \frac{18500}{28} = 660.71$$

Putting the value of a and b in equation (i), we get

$y = 1602.86 + 660.71.\ x$

The above equation is used to forecast the outstanding amount of Nepalese corporate bonds for the year 2009, 2010, and 2011.

For year 2009, x = 2009 - 2005= 4

y_{2009} = 1602.82 + 660.71 × 4

= Rs. 4245.7 million

For year 2001, x = 2010 - 2005 = 5

y_{2010} = 1602.86+ 66.71 × 5

= Rs. 4906.36million

For year 2011, x = 2011 - 2005 = 6

y_{2011} = 1602.36 +660.7× 6

= Rs. 5567.06million

Appendix – 2

Duration of Nepalese Corporate Bonds

S. N.	Issuer	Issued Date	Coupon Interest Rate	Maturity Period	Market Interest Rate	Duration in year	Payment of interest
1	Bottlers Nepal Ltd	1986	-	Already Matured	-	-	Semi-annually
2	Joti Spinning Mills Ltd	1992	-	Already Matured	-	-	Semi-annually
3	Shreeram Sugar Mills Ltd.	20/11/1997	14	Already Matured	-	-	Semi-annually
4	Himalayan Bank Ltd	18/06/2002	8.5	Already Matured	-	-	Semi-annually
5	Nepal Investment Bank Ltd.	3/11/2003	7.5	7	4.8	5.688734	Semi-annually
6	Everest Bank Ltd.		6	7	4.5	5.876013	Semi-annually
7	Bank Of Kathmandu	22/09/2005	6	7	4.5	5.876013	Semi-annually
8	Nepal Investment Bank Ltd.	9/6/2006	6	7	8	5.736112	Semi-annually
9	Nepal Industrial & Commercial Bank Ltd.	12/6/2006	6	7	8	5.736112	Semi-annually
10	Nepal SBI Bank Ltd.	4/7/2006	6	7	8	5.736112	Semi-annually
11	Nepal Investment Bank Ltd.	12/6/2007	6.25	7	6.4	5.769106	Semi-annually
12	Nepal Electricity Authority	14/02/2008	7.75		7.7	-	Semi-annually
13	Kumari bank Limited	15/05/2008	8	5	7.7	4.223244	Semi-annually
14	Himalayan Bank Ltd	22/06/2008	8	7	7.7	5.506619	Semi-annually
15	Nepal Investment Bank Ltd.	26/06/2008	8	7	7.7	5.506619	Semi-annually
16	Nabil Bank Limited	13/07/2008	8.5	7	7.7	5.45387	Semi-annually
17	Siddhartha Bank Limited	5/10/2008	8	7	7.7	5.506619	Semi-annually
16	Laxmi Bank Limited	12/10/2008	8.5	7	7.7	5.45387	Semi-annually

Source: SEBO/N

Model,

$$MD = \frac{(1+y)}{y} - \frac{(1+y)+T(c-y)}{C[(1+y)^{T}-1]+y}$$

For Nepal Investment Bank Ltd.

$$= \frac{(1+0.024)}{0.024} - \frac{(1+0.024)+14(0.0375-0.024)}{0.0375[(1+0.024)^{14}-1]+0.024}$$

= 42.67 – 31.29

= 11.37 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.37}{2} = 5.69$ *years*

For EBL debenture

$$= \frac{(1+0.0225)}{0.0225} - \frac{(1+0.0225)+14(0.03-0.0225)}{0.03[(1+0.0225)^{14}-1]+0.0225}$$

=45.44 – 33.69

= 11.75 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.75}{2} = 5.87$ *years*

For BOKL debenture

$$= \frac{(1+0.0225)}{0.0225} - \frac{(1+0.0225)+14(0.03-0.0225)}{0.03[(1+0.0225)^{14}-1]+0.0225}$$

=45.44 – 33.69

= 11.75 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.75}{2} = 5.87$ *years*

For NIBL debenture

$$= \frac{(1+0.04)}{0.04} - \frac{(1+0.04)+14(0.03-0.04)}{0.03[(1+0.04)^{14}-1]+0.04}$$

=26 – 14.53

= 11.47 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.47}{2} = 5.73\,years$

For NIC debenture

$$= \frac{(1+0.04)}{0.04} - \frac{(1+0.04)+14(0.03-0.04)}{0.03[(1+0.04)^{14}-1]+0.04}$$

=26 – 14.53

= 11.47 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.47}{2} = 5.73\,years$

For NEPAL SBI debenture

$$= \frac{(1+0.04)}{0.04} - \frac{(1+0.04)+14(0.03-0.04)}{0.03[(1+0.04)^{14}-1]+0.04}$$

=26 – 14.53

= 11.47 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.47}{2} = 5.73\,years$

For NIBL debenture

$$=\frac{(1+0.032)}{0.032}-\frac{(1+0.032)+14(0.03125-0.032)}{0.03125[(1+0.032)^{14}-1]+0.032}$$

=32.25—20.71

= 11.53 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.53}{2}=5.77\ years$

For KBL debenture

$$=\frac{(1+0.0385)}{0.0385}-\frac{(1+0.0385)+14(0.04-0.0385)}{0.04[(1+0.0385)^{10}-1]+0.0385}$$

=26.97- 18.53

= 8.44 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{8.44}{2}=4.22\ years$

For HBL debenture

$$=\frac{(1+0.0385)}{0.0385}-\frac{(1+0.0385)+14(0.04-0.0385)}{0.04[(1+0.0385)^{14}-1]+0.0385}$$

=26.97—15.96

= 11.01 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.01}{2}=5.51\ years$

For NIBL debenture

$$= \frac{(1+0.0385)}{0.0385} - \frac{(1+0.0385)+14(0.04-0.0385)}{0.04[(1+0.0385)^{14}-1]+0.0385}$$

=26.97—15.96

= 11.01 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.01}{2} = 5.51\,years$

For NABIL debenture

$$= \frac{(1+0.0385)}{0.0385} - \frac{(1+0.0385)+14(0.0425-0.0385)}{0.0425[(1+0.0385)^{14}-1]+0.0385}$$

=26.97—16.07

= 10.91 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{10.91}{2} = 5.45\,years$

For SBL debenture

$$= \frac{(1+0.0385)}{0.0385} - \frac{(1+0.0385)+14(0.04-0.0385)}{0.04[(1+0.0385)^{14}-1]+0.0385}$$

=26.97—15.96

= 11.01 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{11.01}{2} = 5.51\,years$

For LBL debenture

$$= \frac{(1+0.0385)}{0.0385} - \frac{(1+0.0385)+14(0.0425-0.0385)}{0.0425[(1+0.0385)^{14}-1]+0.0385}$$

=26.97—16.07

= 10.91 (semi-annual periods)

$\therefore$ Annual Duration = $\frac{10.91}{2} = 5.45\ years$

Appendix -3

Valuation of Nepalese corporate bonds

S.N.	Issuer	Par Value	Coupon Interest Rate	Maturity Period	Market Interest Rate	Coupon Interest Rate	Market value
1	Bottlers Nepal Ltd	1000	**Issued Date**	Already Matured	-	-	
2	Joti Spinning Mills Ltd	1000	1986	Already Matured	-	-	
3	Shreeram Sugar Mills Ltd. Debenture	1000	1992	Already Matured	-	14	
4	Himalayan Bank Ltd	1000	20/11/1997	Already Matured	-	8.5	
5	Nepal Investment Bank Ltd.	1000	18/06/2002	7	4.8	7.5	2253.06
6	Everest Bank Ltd.	1000	3/11/2003	7	4.5	6	2043.70
7	Bank Of Kathmandu	1000		7	4.5	6	2043.70
8	Nepal Investment Bank Ltd.	1000	22/09/2005	7	8	6	1310.15
9	Nepal Industrial & Commercial Bank Ltd.	1000	9/6/2006	7	8	6	1310.15
10	Nepal SBI Bank Ltd.	1000	12/6/2006	7	8	6	1310.15
11	Nepal Investment Bank Ltd.	1000	4/7/2006	7	6.4	6.25	1599.86
12	Nepal Electricity Authority	1000	12/6/2007	-	7.7	7.75	-
13	Kumari bank Limited	1000	14/02/2008	5	7.7	8	1696.93
14	Himalayan Bank Ltd	1000	15/05/2008	7	7.7	8	1604.65
15	Nepal Investment Bank Ltd.	1000	22/06/2008	7	7.7	8	1604.65
16	Nabil Bank Limited	1000	26/06/2008	7	7.7	8.5	1668.11
17	Siddhartha Bank Limited	1000	13/07/2008	7	7.7	8	1604.65
16	Laxmi Bank Limited	1000	5/10/2008	7	7.7	8.5	

Source: SEBO/N

Model,

V_b = (PVIFA $_{K\%}$, n years) + M (PVIF $_{K\%}$, n years)

For Nepal Investment Bank Ltd.

= 75 /2 (PVIFA $_{4.7998/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{4.7998/2\%,}$ 7x2 yrs)

= 37.5x40.948999 + 1000 x 0.7174

= 1535.58 + 717.47

$\therefore V_b$ = Rs. 2253.05

For Everest Bank Ltd.

= 60 /2 (PVIFA $_{4.5/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{4.5/2\%,}$ 7x2 yrs)

= 30x43.712 + 1000 x 0.7323

= 1311.36 + 732.30

$\therefore V_b$ = Rs. 2043.7

For Bank Of Kathmandu Ltd.

= 60 /2 (PVIFA $_{4.5/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{4.5/2\%,}$ 7x2 yrs)

= 30x43.712 + 1000 x 0.7323

= 1311.36 + 732.30

$\therefore V_b$ = Rs. 2043.7

For Nepal Investment Bank Ltd.

= 60 /2 (PVIFA $_{8/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{8/2\%,}$ 7x2 yrs)

= 30x24.422 + 1000 x 0.5774

= 732.6599 + 577.3999

$\therefore V_b$ = Rs. 1310.15

For Nepal Industrial & Commercial Bank Ltd.

= 60 /2 (PVIFA $_{8/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{8/2\%,}$ 7x2 yrs)

= 30x24.422 + 1000 x 0.5774

= 732.6599 + 577.3999

$\therefore V_b$ = Rs. 1310.15

For Nepal SBI Bank Ltd.

= 60 /2 (PVIFA $_{8/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{8/2\%,}$ 7x2 yrs)

= 30x24.422 + 1000 x 0.5774

= 732.6599 + 577.3999

$\therefore V_b$ = Rs. 1310.15

For Nepal Investment Bank Ltd.

= 62.5 /2 (PVIFA $_{6.40/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{6.40/2\%,}$ 7x2 yrs)

= 31.25x30.606 + 1000 x 0.6434

= 956.44 + 643.40

$\therefore V_b$ = Rs. 1599.85

For Kumari bank Limited.

= 80 /2 (PVIFA $_{7.70/2\%,}$ 5x 2 yrs) + 1000 (PVIF $_{7.70/2\%,}$ 5x2 yrs)

= 40x25.288 + 1000 x 0.6853

= 1011.52 + 685.30

$\therefore V_b$ = Rs. 1696.93

For Himalayan Bank Ltd

= 80 /2 (PVIFA $_{7.70/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{7.70/2\%,}$ 7x2 yrs)

= 40x25.384 + 1000 x 0.5892

= 1015.36 + 589.29

$\therefore V_b$ = Rs. 1604.65

For Nepal Investment Bank Ltd.

= 80 /2 (PVIFA $_{7.70/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{7.70/2\%,}$ 7x2 yrs)

= 40x25.384 + 1000 x 0.5892

= 1015.36 + 589.29

$\therefore V_b$ = Rs. 1604.65

For Nabil Bank Limited

= 85 /2 (PVIFA $_{7.70/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{7.70/2\%,}$ 7x2 yrs)

= 42.5x25.384 + 1000 x 0.5892

= 1078.81 + 589.29

$\therefore V_b$ = Rs. 1668.10

For Siddhartha Bank Limited

= 80 /2 (PVIFA $_{7.70/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{7.70/2\%,}$ 7x2 yrs)

= 40x25.384 + 1000 x 0.5892

= 1015.36 + 589.29

$\therefore V_b$ = Rs. 1604.65

For Laxmi Bank Limited

= 85 /2 (PVIFA $_{7.70/2\%,}$ 7x 2 yrs) + 1000 (PVIF $_{7.70/2\%,}$ 7x2 yrs)

= 42.5x25.384 + 1000 x 0.5892

= 1078.81 + 589.29

$\therefore V_b$ = Rs. 1668.10

Appendix - 4

Rank wise Number of Respondents to field survey Based on Ranking

Question (Q. No.4)

Option	Group	Rank wise No. of Response				Total Responses	Weighted value	Weighted mean	Overall Rank
		1	2	3	4				
a	L.C.	7	11	5	2	25	52		
	I.M/B	1	4	3	1	9	22		
	Ind. Investors	9	21	14	4	48	109		
	Experts	4	6	7	1	18	41		
Total		21	42	29	8	100	224	2.24	2
b	L.C.	10	6	6	3	25	52		
	I.M/B	4	3	1	1	9	17		
	Ind. Investors	17	14	9	8	48	104		
	Experts	7	5	3	3	18	38		
Total		38	28	19	15	100	211	2.11	1
c	L.C.	6	5	9	5	25	63		
	I.M/B	2	2	4	1	9	22		
	Ind. Investors	9	11	18	10	48	125		
	Experts	4	4	7	3	18	45		
Total		21	22	38	19	100	255	2.55	3
d	L.C.	2	3	5	15	25	83		
	I.M/B	2	-	2	5	9	28		
	Ind. Investors	13	3	7	25	48	140		
	Experts	3	3	1	11	18	56		
Total		20	9	15	56	100	307	3.07	4

Tools used:

Weighted Value = $(Value_1 \times weight_1) + (Value_2 \times weight_2) + ...$

$+ (Value_n \times weight_n)$

Where,

Value = No. of Respnses,

Weight = Rank

$$\text{Mean weight} = \frac{\text{Total weithted value}}{\text{Total Re sponses}}$$

Note: Assign overall rank '1' to lowest mean weight; rank '2' to next lowest mean weight and so on.

Appendix:5

Structure of Nepalese Securities Market

ıment	Fiscal Year								
	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
l	49669.7 (88.36%)	54357.0 (87.89%)	60043.8 (87.89%)	73620.9 (88.37%)	84645.3 (86.51%)	86133.7 (86.29%)	82842.0 (81.30%)	94710.7 (80.22%)	103776.1 (80.21%)
Bond	-	-	-	360.0 (0.43%)	360.0 (0.37%)	660.0 (0.66%)	960.0 (0.94%)	1810.0 (1.53%)	2060.0 (1.59%)
Securities	49669.7 (88.36%)	54357.0 (87.89%)	60043.8 (87.89%)	73980.9 (88.80%)	85005.3 (86.88%)	86793.7 (86.95%)	83802.0 (82.24%)	96520.7 (81.75%)	105836.1 (81.80%)
rket	6487.4 (11.54%)	7347.4 (11.88%)	7939.0 (11.62%)	8680.2 (10.42%)	11898.0 (12.16%)	12016.0 (12.04%)	16776.0 (16.47%)	19958.0 (16.90%)	21746.0 (16.81%)
ıd M)	53.49 (0.10%)	143.30 (0.23%)	336.80 (0.49%)	645.30 (0.78%)	937.40 (0.96%)	1003.9 (1.01%)	1315.6 (1.29%)	1586.3 (1.35%)	1802.3 (1.39%)
rity Market	56210.59 (100%)	61847.7 (100%)	68319.6 (100%)	83306.4 (100%)	97840.7 (100%)	99813.6 (100%)	101893.6 (100%)	118065.0 (100%)	129384.4 (100%)

Source: Annual Report of SEBO/N 2007/08 and Quarterly Economic Bulletin

Appendix – 6

Questionnaire

Dear Respondent

I have been conducting a "**Study on Problems and prospects of Corporate Bond Market In Nepal"** as a requirement for the partial fulfillment of the degree of master of Business studies. In this regard, with a view to seek the views of Problem and Prospects of Corporate Bond/Debenture Market in Nepal of all the market participants and / or concerned bodies a list of questions is prepared.

I humbly request you to fill up the attached questionnaire. Your cooperation in this regard will be of immense value for me.

I assure you that the information collected from you will be exclusively used for the academic research purpose / project work, and will not be published in any media.

I shall be highly obliged for your response.

Thank you

_____

Youbaraj Poudel
(Researcher)
Shanker Dev Campus
Putalisadak, Kathmandu

Please tick in the group, in which you belong to:

Listed company [ ]

Broker /Issue Manager [ ]

Individual Investor [ ]

Other Export [ ]

Respondent

Name:-

Organization:-

Post:-

Signature:-

Date:-

Instruction; Please tick (√) in appropriate place and put your views in open ended question.

1. What types of securities do you prefer for raising long-term fund?

   a. Common stock/Equity [ ]

   b. Preferred stock [ ]

   d. Bond [ ]

   d. Others (if any, specify .....) [ ]

2. In your opinion, which type of bond is most desirable in Nepalese Bond market?

   a. Government bond less than one year [ ]

   b. Government bond more than one year [ ]

   c. Corporate bond less than one year [ ]

   d. Corporate bond more than one year [ ]

3. Which sectors' Bond, generally do you prefer for investment?

   a. Banking sector [ ]

b. Manufacturing sector [ ]

c. Hotel sector [ ]

d. Trading company [ ]

4. In your opinion, what are the main reasons for slow growth of Bond market? (Please rank assigning '1' to the most important reason and '4' for the least important reason)

a. Insufficient supply of bond. [ ]

b. Lack of investor's awareness. [ ]

c. Lack of proper legal provision. [ ]

d. Lack of capital gain opportunity. [ ]

5. In your opinion, why does the Nepalese organizations refer bank loan instead of issuing Bond?

a. Bank loan is easily available. [ ]

b. Issuing bond in difficult process. [ ]

c. Cost of bond is more than cost of bank loan. [ ]

d. There is risk that debenture may not be purchase in the market [ ]

6. As an investor, which type of bond do you prefer for investment?

a. Straight Bond. [ ]

b. Convertible Bond. [ ]

c. Attached with warrant. [ ]

d. Other (please specify)..... [ ]

7. In your opinion, which type of trading is more suitable in Nepal, in case of bond ?

a. Primary market. [ ]

b. Secondary market. [ ]

c. Third market [ ]

d. Fourth market. [ ]

8. In your opinion, which factor plays vital role to attract investors towards purchasing corporate bond?

a. Declining interest rate on bank deposits. [ ]

b. Lack of investment alternative. [ ]

c. Fixed income. [ ]

d. Portfolio with less risk. [ ]

9. Do you think that Nepalese Corporate bond market is systematic?

a. Yes [ ]

b. No [ ]

Please give some reason.

_____

10. Do you think that the present rule and regulation are sufficient for growth of Nepalese bond market?

a. Yes [ ]

b. No [ ]

If no, please specify.

_____

11) If you want to share further information and suggestion that will improve the quality of study report /research please mention.

Thank You