CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Modern age economy of countries all over the world is driven by industries. Industries require capital in order to operate and register its existence. Capital is the most important part of any organization, which is required for investments. It works as blood of human being providing nutrients and energy to industries for sound operation. Capital is termed as fund raised in current time for future investment. Here investment refers to sacrifice of money now in expectation to get better return in future. Capital can be generated through sources of funds like equity share capitals, preference share capital or debts. These sources of funds are said to be securities and they are traded in primary and secondary securities market. Here securities market is the place where buyers and sellers of securities are gathered in order to exchange their financial assets. In other words it facilitates the exchange of financial assets by bringing together buyers and sellers of securities. Securities market is divided into primary and secondary market. Primary market is the place where the issuer offers the purchase of security to general public for the first time, while secondary market is the place where security are offered for trading by the investors.

For sound performance of the industry better capital structure is to be maintained. Capital structure here refers to the mixture of the sources of funds a firm uses which may be debt, equity and preferred stock. Equity share capital is the funds provided to firm by its owners and is the primary source of funds for any organization which is used primarily

for long term investments. Owner of equity share capital are the real owner of the organization and has right to appoint the directors of the organization. Preference share capital is however slightly different from equity share capital. Preference share holders enjoy partial ownership like that of equity shareholders but do not have all the rights that an equity shareholder enjoys. They are entitled to a fixed dividend and are paid before any dividends are paid to common stockholders. Another source of raising capital for an organization is long term debt which includes corporate bonds. Corporate bonds are different from that of preference and common stock. They are fixed income securities which are entitled to fixed interest as agreed by issuer and holder. Corporate bonds holder are like debtors, who do not have any ownership in the company and are not entitled to any dividends. A bond is a long-term promissory note that promises to pay the bondholder a predetermined, fixed amount of interest each year until maturity. At maturity, the principal will be paid to the bondholder. In the case of a firm's insolvency, a bondholder has a priority of claim to the firm's assets before the preferred and common stockholders. Also, bondholders must be paid interest due them before dividends can be distributed to the stockholders. The future payment of coupon interest and payment at the time of maturity is almost certain though there is a variation in purchase price of bond before maturity. Corporate bonds may have long or short life span. Bonds with long maturity period are backed by securities. Some bonds have short life span and are not backed by securities and are called debentures. Through corporate bond investors can get benefit through regular interest payments or through difference in the price of bond at the time of maturity and price in the beginning. Financing a business through borrowing is cheaper than using equity. This is because lenders require a lower rate of return than

ordinary shareholders. Debt financial securities present a lower risk than shares for the finance providers because they have prior claims on annual income and liquidation. In addition security is often provided and covenants imposed. Furthermore a profitable business effectively pays less for debt capital than equity for another reason the debt interest can be offset against pre-tax profits before the calculation of the corporation tax bill, thus reducing the tax paid. Issuing and transaction costs associated with raising and servicing debt are generally less than for ordinary shares. Normally institutions with an intention of earning profit issues bonds for collecting funds that may be used for fulfilling working capital requirement or investing in fixed assets.

In Nepal there are less investment alternatives to the investors due to very short history of securities market. In Nepal among most of the security instruments equity share is very popular. We can say that securities market in Nepal is dominated by trading of equity share. For fixed income securities like bond and debentures there is very few alternatives or we can say close to nil. Bond as a source of long term debt is very popular all over the world. But in Nepal people are more interested in investing in common stocks rather than bond. Looking back to the history of securities market of Nepal from emergence of Security Exchange Centre in 1976 till date, very few companies have issued bond. The first company to issue bond was Bottlers Nepal back in 1986/87, which issued 5 million units with 18% coupon interest rate. Second to issue bond was Jyoti Spinning Mills Ltd with issue of 20 million 14 % bond in 1992/93. In 1997/98 another company Shree Ram Sugar Mills Ltd. issued convertible debentures worth Nepalese Rupees 93,000,000. It had features like secured Rs. 1,000 par value bond, convertible in 4 years with 14% coupon

rate (Shree Ram Sugar Mill, Debenture Prospectus, 1997). It was listed in the stock exchange but separate trading system was not followed due to which it was later delisted in the year 2001-2002. Himalayan Bank was next company to issue debenture. It issued 360,000 debentures with Rs. 1000 par value and 8.5 % semi-annual coupon interest rate. Out of 360,000 debentures 100,000 were issued through issue manager and rest though private placement. It had maturity period of 7 years and were unsecured in nature (Himalayan Bank Ltd., Debenture prospectus, 2002). Debenture issuance was more frequent afterwards with issue of 300,000 units "Nepal Investment Bank Bond 2010" worth Rs. 300,000,000 by Nepal Investment Bank Limited in year 2003. Out of 300,000 units of bonds issued only 100,000 amounting Rs. 100,000,000 were offered to general public rest were placed privately. It had 7 years maturity and 7.5% semi-annual coupon interest (Nepal Investment Bank Ltd., Debenture prospectus, 2003). Everest Bank was next to follow the trend of debenture issuance. It issued Rs. 300,000,000 worth debenture with par value of Rs. 1,000 in year 2005. It had 6 % coupon interest paid semi-annually and maturity period of 7 years (Everest Bank Ltd., Debenture prospectus, 2005). In the year 2005 Bank of Kathmandu was another company to issue debenture. It issued debentures worth Rs. 200,000,000; out of which debentures worth Rs. 50,000,000 was issued through issue manager and debentures worth Rs. 150,000,000 was privately placed. It too had semi – annual coupon rate of 6 % valid for 7 years with Rs. 1,000 par value (Bank of Kathmandu Ltd., Debenture prospectus, 2005). In 2006 the Nepalese debenture market saw the issue of three more debentures which were "6% Nepal Industrial Commerce Bank Bond 2070", "6% Nepal SBI Bank Bond 2070" and "Nepal Investment Bank Bond – 2070". NIC Bank issued debenture worth Rs. 200,000,000 with

6% semi – annual coupon interest maturing in 7 years and par value of Rs. 1,000. Debenture worth Rs. 50,000,000; out of Rs. 200,000,000 were issued through issue manager while rest were issued through private placement (NIC Bank Ltd., Debenture prospectus, 2006). SBI Bank debentures had similar features as that of NIC Bank debentures. Redeemable NIB debentures issued in the year 2006 had maturity period of 7 years with 6% semi – annual coupon rate and maturity value of Rs. 1,000. NIB debentures worth Rs. 80,000,000 were issued through issue manager and debentures worth Rs. 170,000,000 were issued through private placement out of total issue of Rs. 250,000,000 (NIB Ltd., Debenture Prospectus, 2006). In the year 2007 NIB again issued "Nepal Investment Bank Bond 2071", the last debenture to be issued till the study period, which had 6.25% semi – annual coupon interest with maturity value of Rs. 1000 and payable in 7 years. NIB issued debenture worth Rs. 250,000,000 out of which debenture worth Rs. 50,000,000 were issued through issue managers and rest through private placement (NIB Ltd., Debenture prospectus, 2007).

The history of debenture issuance in Nepal showed sluggish growth but if the trend of past five years is viewed, the pace had been increasing rapidly. This is mainly due to the contribution of issuers, traders, agents, investors and regulators whose roles are played in Nepal by Security Board, Commercial Banks, Nepal Rastra Bank, Government itself, Private organization, stock exchange, general public who buys debenture and brokers and agents who facilitates trading of debentures. But still there is lack of specific provision in security market for development of debentures. For development of debenture market development of industry, development of securities market, development of adequate

rules and regulations facilitating issue and trading of debentures and development of positive attitude of investors towards debenture in general public. In Nepal there has been various activities regarding development of debentures with establishment of Securities Exchange Board of Nepal (SEBON), Nepal Stock Exchange (NEPSE) under stock exchange Act, 1983, establishment of license system for brokers and amendment of previous regulations. But there is still some area that needs to be developed. Development of industrial sector comes first in the list as they are the one who issues the debentures. Since debentures are not backed by securities, it needs to be organized by profitable organization in order to get faith of investors. Government should organize different programs to increase the level of education on debentures among the investors in that case. Currently NEPSE has been involving in development of securities in Nepal with the introduction of securities transaction Bye-laws in 1990 and securities listing Bye-laws in 1996.

As per company act 2053 BS any company can issue debentures if it is in need of funds but the use of funds has to be revealed prior to issuance. Bonds or debentures can be issued with or without any pledge, provided the provision regarding issuance of bonds and debentures is mentioned in "Articles of Association" and "Memorandum" of the company. While issuing debentures company must provide full information on debentures being issued, like maturity period, interest rate and face value etc. Debenture issuance process is almost same as that of common stock issuance. Debentures are issued in primary market through trustee or could be privately placed. As per company act 2053 BS, company should have an agreement with trustee if it is going to issue debenture by

establishing any trustee. But as per company ordinance issued in late September 2005, any company should issue debenture through debenture trustee only. Later amendment draft to this ordinance was issued according to which banks, finance companies or merchant banks will be allowed to be a Debenture Trustee, if their Articles include a provision that allows them to be such Trustee and they have the appropriate manpower and valuation capabilities. Company act 2053 BS also suggests that these debentures could be pledged or sold in secondary market. While transferring the ownership of debentures, buyer should request the issuing company. The issuing company then updates the same in debenture registration book maintained as per company act. This book contains information like name & address of debenture holder, number of shares owned by them, total amount paid and outstanding if any, date of registration of buyer's name as debenture holder and date and time of debenture holder's name stuck off. This book can be inspected by debenture holder at any time he may deem necessary. Interest and maturity value of debentures at the time of maturity is distributed as per the debenture registration book.

1.2 Focus of the Study

Debenture market is very popular in developed countries as debentures are less risky alternatives of investment. Definite and regular coupon interest payment and entitlement of payment before common stock are some of the features that attract investors to invest in bonds or debenture. But in the context of Nepal, bonds or debenture market is not so much popular among the investors. Hence the primary focus of this study is to find out

the reason of the unpopularity of debenture market in Nepal. In light of above statement focus of the study can be pointed out as below:

- Primary and secondary market of corporate debentures in Nepal
- Features of corporate debentures issued by Nepalese firms
- Legal provisions regarding issuance and trading of corporate debentures in Nepal
- Primary and secondary trading of corporate debentures in Nepal
- Present market value and duration of corporate debentures issued in Nepal

1.3 Statement of the Problem

Development of stock market in Nepal had started in 1976 with the establishment of Securities Exchange Centre (SEC) by government to support the development of both government and corporate securities. Despite 30 year old history of stock market, securities' trading in Nepal is still not popular. Currently in stock market the most traded security is common stock among various investment alternatives like common stocks, government bond, corporate bond, preference share, right shares, option, warrants, convertible securities etc. More precisely we can say common stock has dominated both primary and secondary stock market of Nepal. The focus here is to find out why bonds or debentures are not so much popular in stock market of Nepal as common stock. As per the liberal economy followed by Nepal since 1980s, development of bonds & debenture market is necessary to flourish the economic growth of the country which is suggested in eight and ninth five year plan. But in Nepalese capital market, very few organizations issuing debentures are witnessed, if fact the number is just nine companies. In 30 year old history of stock market the number of companies issuing bond or debenture is very few.

The reason for the least preference in the corporate debenture is due to the lack of knowledge among investors and issuing organizations. Further there are very few studies done in Nepalese corporate debenture. In order to fulfill the research gap and to provide the knowledge about the corporate debenture and its status in Nepalese capital market to both investors and issuing organization, researcher has intended to study "Corporate Debenture Market in Nepal". To summarize the main motive of this research is the development of Nepalese corporate debenture market. Thus some of the issues which the being dealt in the study is presented below:

- What are the problems and prospects of corporate debenture market in Nepal?
- What are the factors responsible for the growth of corporate debenture market in Nepal?
- What is the current practice of primary and secondary trading of corporate debentures in Nepal?
- How many companies have issued debenture and what are their features?
- What are the reasons for the corporate debenture market not being popular in Nepalese debt market?
- What are the legal provisions regarding issuance and trading of corporate debentures and whether it is sufficient or not for its development?
- What is the effect of coupon interest rate and maturity period in the value of debentures?
- What is the current value and duration of Nepalese corporate debentures?
- What are the views of the different parties involved in issuance and trading of corporate debentures in Nepal?

1.4 Objectives of the Study

The objectives of the study are listed below:

- To examine current position of Nepalese corporate debenture market
- To identify the problems faced by debenture market of Nepal
- To evaluate the potentials for the growth of the Nepalese corporate debenture market
- To conduct the opinion survey of various stake holders of Nepalese corporate debenture market

1.5 Significance of the Study

The researcher in this thesis has tried to study about the debenture market of Nepal and the problems faced by it. The study has explained the concept of debenture and bonds and its market. The study has provided the information regarding the features of debentures and its types. The study has tried to highlight the different aspects of debenture markets and find the remedial actions to be taken for development of debenture market in Nepalese context. It has collected and presented various statistical data (both primary and secondary) which provide the clear picture of current Nepalese debenture market.

Debenture market in Nepal being in initial phase needs more focus than that of already developed common stock market. On the contrary till date very few researches have been conducted relating to debenture market of Nepal. Through this research, the researcher has tried to reveal the current condition of Nepalese debenture market. So this research is

expected to help development and growth of debenture market of Nepal by identification of problems and its solution. Through this research investors, thriving to get optimum benefit thorough investment in debentures, are expected to be benefited with the information on debenture market. Apart from that new investor looking for different investment opportunities would be benefited. Furthermore it will provide literature to the researcher interested in researching the debenture market of Nepal.

1.6 Limitation of the Study

The study provides information about the debenture market in Nepal subject to following limitations:

- The study is based on primary and secondary data.
- The study covers the corporate debenture market of Nepal only.
- The data in the study is taken up to the fiscal year 2006/07.
- The study was done on the basis of the data provided by the organizations. So the output of the study is entirely dependent on the data provided by the organization.
- Although the study contains both qualitative and quantitative analysis, the use of statistical tools may be limited to a certain extent because of non availability of required data in some cases.

1.7 Organization of the Study

In order to provide clear picture of debenture market in Nepal the whole study has been divided into following five chapters.

Chapter I: Introduction

Introduction, which includes background of study, focus of study, statement of problem, objectives of study, significance of the study, limitations of study and organization of the study.

Chapter-II: Review of Literature

Second chapter deals with the review of available literature. It includes conceptual framework, review of previous unpublished Master degree thesis, journals and articles etc.

Chapter-III: Research Methodology

Third chapter explains the research methodology used in the study. It includes research design, population and sampling, sources of data, method of data analysis and research variables etc.

Chapter-IV: Data Presentation and Analysis

This is an important chapter of the study and will consist of the presentation and analysis of primary and secondary data.

Chapter-V: Summary, Conclusion and Recommendation

The last chapter summarizes the main conclusion that follows from the study and offers suggestion and recommendation for further improvement and conclusion of the study.

CHAPTER - II

REVIEW OF LITERATURE

This chapter highlights upon the existing literature and research related to the present study with a view to find out what had already been explained and how the present research adds new dimension to the study. Researching in same subject without any new findings does not make sense. So review of literature is an essential part of any research so as to eliminate any duplication of work.

The chapter is further divided into conceptual review where related literatures have been reviewed for conceptual development, review of journals where related published journals have been reviewed, review of securities laws and acts to understand legal provisions and review of thesis.

2.1 Conceptual review

2.1.1 Concept of debt

Debt is anything that one person owes to another, especially a sum of money (The world book of encyclopedia). Furthermore a person who owes a debt is called debtors and a person to whom s/he owes is the creditor. Debt can be public or private depending upon the debtor.

Public debt is borrowings of the state or government taken from its public and foreign countries. As per A. H. Hanson public debt is debt owned by government to people and institution within its own borders (i.e. internal debt) and over the foreign creditors (i.e. external debt).

Government generally collects debts through the issuance of treasury bills, development bonds, national saving bonds etc. Nepalese government has collected debt through Treasury bills, Development bonds, National Saving bonds, Special bonds and Public Saving card. Public debt being backed by government itself is considered as safest alternative for investment among the investors.

Private debt in other hand is debt taken by private institutions in order to fulfill their long term or short term fund requirement. For short term requirement these institution refers to bank and other financial institution in form of overdraft, short term loans, stock financing etc. But for long term debt it generally collects through issuance of different debt instruments like bonds and debentures.

Debentures are a type of debt instrument that is not secured by physical asset or collateral. Debentures are backed only by the general creditworthiness and reputation of the issuer. Both corporations and governments frequently issue this type of bond in order to secure capital. Like other types of bonds, debentures are documented in an indenture. Debentures have no collateral. Bond buyers generally purchase debentures

based on the belief that the bond issuer is unlikely to default on the repayment. (www.investopedia.com).

Bond or debenture is a debt security which when is purchased; one is lending money to any institution known as the issuer. In return for the loan, the issuer promises to pay a specified rate of interest during the life of the bond and repay the face value of the bond (the principal) when it "matures," or comes due. Unlike common stock corporate bond holder is not entitled to the ownership of the issuing company, which allows the company to raise funds without increasing no of shareholders. For investors bond or debenture being fixed income security and holds first right to be paid than common stock, is safe investment option. Bonds may be secured or unsecured, secured bonds are backed by assets as security while unsecured bonds are not backed by assets. Long term bonds are generally backed by securities while short term bonds are usually unsecured.

We can define debt as borrowing by any institution through various instruments in order to generate long term funds which are refunded to the investor upon completion of time period. During the period before maturity the issuer pays certain fixed amount in regular interval as interest. Debt holder has first priority to claim due amount in case of insolvency than common stock but does not bear ownership of the issuing organization.

2.1.2 Debt Securities Market

A market is a place where two parties' buyer and seller involve in exchange of goods and services. Securities are marketable financial instrument that provides its owner right to

make specific claims on particular assets. In other words securities refer to a legal representation of the right to receive prospective future benefits under stated conditions (Francis, Jack Clark, 1986). An individual security provides evidence of either creditor ship or ownership depending upon whether it is debt or common stock. Thus security market refers to a place that is used to buying or selling of securities. Securities markets exist in order to bring together buyers and sellers of securities, meaning that they are mechanisms created to facilitate the exchange of financial assets (Francis, Jack Clark, 1986). Security market may be divided into primary and secondary market depending upon the security traded.

Primary market can be defined as a place used for initial trading of securities while issuing the securities. In order words primary market is a place where issuer offers security for sales. The new capital issues in primary market facilitate mostly for raising long term fund requirement. On the other hand secondary market is a place where securities once purchased from issuer is traded among the investors. In other words secondary market is a place to further trade securities purchased from primary market. The only way to convert securities into cash is through sales in secondary market (Kohn, 1999).

Securities market can be classified into capital or money market depending upon the life span of the security. Securities having maturity of less than one year is traded in money market. Commercial paper, certificates of deposit, treasury bills are some of the example of securities traded in money market. On the contrary security with maturity of more than

a year is traded in capital market. Such securities include common stock, corporate and governments etc.

Debt securities market is a place where debt instruments like bonds, debentures, treasury bonds etc. are traded. Thus debt securities market plays vital role in the development of debt securities. For that debt market needs to be efficient, here efficient debt market is characterized by competitive market with low transaction cost, high level of heterogeneity among participants and low level of fragmentation with safe market infrastructure. The development of efficient money market requires the development of institutions, instruments and operating procedures that facilitate widening and deepening of the market and allocation of short – term resource with minimum transaction costs and the minimum of delays (Pandey, 1996). Debt market primarily includes government debt market and corporate debt market and facilitates the transfer of capital from savers to the issuers or organizations requiring capital for government projects, business expansions and ongoing operations (www.thefreedictionary.com).

- **Government Debt Market**

In government debt market government debt or public debt are traded. As discussed earlier, government collects funds from public in order to bridge the budget deficits. In developing countries like Nepal, government is not able to invest in development projects through tax revenues only, due to which government is compelled to collect funds from public in form of government debt. Another reason for issuing public or government debt is to involve its people in development of the country. Government collects funds through various instruments like treasury bonds, national saving bonds, development bonds,

municipal bonds etc. To facilitate the issue and trading of such instruments government debt market was evolved. Thus government debt market can be defined as a place where primary and secondary trading of government debt instrument takes place. Government debt thus being very important is development of country, government debt market is considered crucial. It generates funds for the government and investment opportunities for the investors at less risk. Government debt market converts ideal small savings into huge fund ready for investment and reduce dependency of government towards foreign nation. Thus development of government debt market can be linked with development of the country.

- **Corporate Debt Market**

Corporate houses require fund frequently in order to upgrade themselves with the change in technology, for further investments, in order to increase capital and for many more reasons. To fulfill such scarcity of funds one way is to issue debt in the form of debentures and bonds. And to facilitate such trading corporate debt market is required. Corporate debt market brings buyer and seller of corporate debt at one place to conduct trading of such debt instruments. Corporate bond is a certificate of promise made by issuing organization to pay the specified amount upon maturity and in the mean time to pay interest in regular interval. In other words corporate debt market is a place where primary and secondary trading of corporate debt instruments takes place. Since corporate debt is issued by private organization it is not considered as safe as government debt. In case of insolvency of firm bond holders will get payment depending upon the financial situation of the issuer. Corporate bonds come in several different forms. The basic classification include collateralized (secured) or uncollateralized (unsecured), senior or

junior (subordinate), callable or non callable and convertible or non convertible bonds (Thygerson, 1993).

A corporation can issue common stock only once but can issue bonds and debentures as much as it likes depending on its financial status. So there is huge prospect in bond and for the development of bond and debenture corporate debt market needs to be developed. Various enhancements like giving credit rating to organization issuing debt, introducing disclosure system, enacting various laws which could eliminate loop holes in corporate debt market that is pulling is back. Corporate debt market plays very important role in private organization by arranging additional funds require by firms. This will ultimately help in growth of the organization.

2.1.3 History of Corporate Debt Market in Nepal

In Nepal the first instance of debt was cited back in 1961 AD through the issuance of Treasury bill amounting Rs. 7 million with 1% interest rate. The debt was issued in order to fulfill the budget deficit, so with the view that public participation is must for development of the country interest factor was not considered important. Later in 1963 AD, with the introduction of Public Debt Regulation Act 1963, Development bond worth Rs. 137 million was issued. From 1984 AD government started to borrow funds from National Saving Bonds too. In order to facilitate the transaction of those bonds "Security market center" (SMC) was established in 1976 AD which in the initial phase was limited to primary trading of security only. Later in 1981 AD it started secondary trading of the security but that too was related to trading of government securities only. After that since no law regarding trading of securities were in place, Securities Exchange Act, 1983 was

introduced back in 1983 AD. This act facilitated trading of securities and restricted the trading to the security of listed companies only. Later in 1984 SMC was changed into Securities Exchange Center (SEC). SEC was the only institution to manage and operate primary and secondary trading of both government and corporate securities at that time. This provoked the thought for the need of another institutional mechanism to avoid potential conflict of interest between the services provided. Securities exchange act 1983 was amended in 1993 AD, paved the way for the structuring of securities market in Nepal (www.sebonp.com).

The first amendment of securities exchange act 1983 in 1993 AD influenced the establishment of Securities Board of Nepal (SEBO) with a purpose to regulate and develop securities market in Nepal. SEBO was established to register the existing securities and approve the issuance of new securities. The first amendment of securities exchange act also changed the SEC into Nepal Stock Exchange Ltd. (NEPSE) and limited its operation to secondary transaction and management of securities. NEPSE started full-fledged stock exchange from January 13, 1994 (www.nepalstock.com).

Later in 1997 AD second amendment was made to Securities exchange act, 1983. This made provision for registering securities business persons and empowered SEBO to provide license to them. The amendment also made securities business persons to submit annual reports incorporating the securities transactions carried out by them to SEBO and the listed companies to submit their annual and semi – annual reports to SEBO (www.sebonp.com).

Corporate debt issuance in Nepal was observed for the first time in 1986/87 with the issuance of 18%, 5 million debentures by Bottlers Nepal, which was later redeemed at maturity (Bhattarai, 1995). Later in 1992/93, Jyoti Spinning Mills Ltd issued 14% bond of 20 million which was managed by NIDC (Baral; 1999). Shree Ram Sugar Mills Ltd then issued 14% convertible and redeemable debenture in 1997/98. The debentures were secured and amounts Rs. 93 million with par value of Rs. 1,000 and convertible to shares after 4 years. These were listed in exchange but no separate trading system was followed. Very few of these debentures were traded and were later delisted (and redeemed) in fiscal year 2001/02 (Bhattarai, 2003). Corporate debt issuance then progressed with issuance of "8.5% Himalayan Bank Limited debenture 2009" with following features (Himalayan Bank, Debenture Prospectus; 2002):

- Rs. 360000000 worth of debenture
- Rs. 100000000 worth issued through issue manager
- Rs. 260000000 worth issued through private placement
- Semi – annual interest payment
- 8.5 % coupon interest rate
- Maturity period of 7 years
- Rs. 1000 par value and
- Unsecured in nature

Nepal Investment Bank then followed with issue of "7.5% Nepal Investment Bank Bond, 2010" in 2003 AD. It had following feature (Nepal Investment Bank, Debenture Prospectus; 2003):

- Rs. 300000000 worth of debenture
- Rs. 100000000 worth issued through issue manager
- Rs. 200000000 worth issued through private placement
- Semi – annual interest payment
- 7.5% coupon interest rate
- Maturity period of 7 years
- Rs. 1000 par value

Next to issue debenture was another bank in 2005 which was Everest Bank Limited. Everest bank issued 300 million worth debentures with following features (Everest Bank, Debenture Prospectus; 2005):

- Debentures worth Rs. 300000000
- Semi – annual interest payment
- 6% coupon interest rate
- Maturity period of 7 years
- Rs. 1000 Par value

Bank of Kathmandu then contributed to the development of corporate debt market in 2005 with issuance of debentures worth 200 million which had following features (Bank of Kathmandu, Debenture Prospectus; 2005):

- Debentures worth Rs. 200000000
- Rs. 50000000 worth issued through issue manager
- Rs. 150000000 worth issued through private placement
- Semi - annual interest payment
- 6% coupon interest rate
- Maturity period of 7 years
- Rs. 1000 par value

A year later in 2006 Nepal Industrial Commerce Bank Limited issued "6% Nepal Industrial Commerce Bank Bond 2070" with features listed below (Nepal Industrial Commerce Bank, Debenture Prospectus; 2006):

- Debenture worth Rs. 200000000
- Rs. 50000000 worth issued through issue managers
- Rs. 150000000 worth issued through private placement
- Semi - annual interest payment
- 6% coupon interest rate
- Maturity period of 7 years
- Rs. 1000 par value

In the same year Nepal SBI Bank Ltd also issued "6% Nepal SBI Bank Bond 2070" worth 200 million with following features (Nepal SBI Bank, Debenture Prospectus; 2006):

- Debenture worth Rs. 200000000
- Rs. 50000000 worth issued through issue managers

- Rs. 150000000 worth issued through private placement
- Semi - annual interest payment
- 6% coupon interest rate
- Maturity period of 7 years
- Rs. 1000 par value

In the same year SEBO provided issue approval to another debenture, "Nepal Investment Bank Bond – 2070". It had following features (Nepal Investment Bank Ltd., Debenture Prospectus; 2006):

- Debenture worth Rs. 250000000
- Rs. 80000000 worth issued through issue managers
- Rs. 170000000 worth issued through private placement
- Semi - annual interest payment
- 6% coupon interest rate
- Maturity period of 7 years
- Rs. 1000 par value

Nepal Investment Bank was again granted approval to issue debenture in year 2007. NIB in year 2007 issued, "Nepal Investment Bank Bond – 2071" which had following features (Nepal Investment Bank Ltd., Debenture Prospectus; 2007):

- Debenture worth Rs. 250000000
- Rs. 50000000 worth issued through issue managers
- Rs. 200000000 worth issued through private placement

- Semi - annual interest payment
- 6.25% coupon interest rate
- Maturity period of 7 years
- Rs. 1000 par value

In Nepal very slow development of debt market, especially corporate debt market can be observed. The reason for this is traditional thinking and lack of awareness about the securities among investors. Only nine companies have issued debenture in Nepal among them 6 companies are commercial banks. Seven out of nine companies listed their debenture and further trading of those listed debenture were very few or negligible compared to share trading. Debentures of only two companies have been traded till date in secondary market. The reason for this sluggish development of debt market is due to lack of knowledge about debentures, lack of fruitful investment opportunities and market interest rate. Market interest rate in Nepal is so low in comparison to that of debenture that there is no any investment alternative after sales of debenture. So people are keen to hold the debenture rather than trading them for better opportunities. In current situation some positive development can be seen in the trend of debenture issuance. In last six years six listed companies have issued debenture which all were private banks. This is mainly due to provision made by NRB to increase the capital to 2 billion by 2010 AD. So, more instances of debt issuance can be expected in near future. With the increment of literacy proportion in Nepal some private organization are too expected to issue debts in order to fulfill their scarcity of funds.

2.1.4 Long Term Debt Instruments

By the term debt instruments it generally refers to bonds and debentures. Bonds and debentures are synonymous in nature. Bonds and debentures may be secured or unsecured with maturity of short, mid and long term. Bonds or debentures are certificate that states amount to be paid in maturity, rate of interest and interest payment interval and time of maturity. Apart from bonds and debentures some other instruments can also be found in market. Some of the long term debt instruments are illustrated below:

i. Debentures

Debentures are most popular debt instrument used by organizations for generation of fund. Though, debentures being unsecured in nature there is risk of default while paying interest and principal. Due to which only well established and credit worthy organizations are expected to get good response from issuance of debentures. Despite this provisions are made in indenture in order to save investors interest.

ii. Subordinate Debentures

By the word subordinate it means inferior, so here subordinated debenture are the debt that is ranked behind other debt in respect of claiming on assets. To make it clearer, subordinate debentures holder cannot be paid until all senior debt as named in debenture indenture has been paid at the time of liquidation or reorganization (Weston and Brigham, 1996). Due to this feature of subordinate debenture it needs to provide more incentive to its investors in order to attract them.

iii. Mortgage Bond

Mortgage bond are the debt instrument which are backed by security of the issuing organization. Mortgage is done in the fixed assets which may be first, second or third depending upon debenture for the total debenture amount. This provides trustee on behalf of bond holder right to take over the property and sell it in order to payback the debenture holders in case of default due to any of provision mentioned in the bond indenture.

iv. Income Bond

Income bond holder gets interest payment in regular interval as specified in bond indenture but only if the issuing organization is earning. In other words if the issuing organization cannot earn as much as required to pay interest to bond holders, then the company is not obliged to pay interest. These interests, however is accumulated for payment later when organization earns, but generally the period is up to three years. Income bonds thus are not too much popular among the investors.

v. Equity – Linked Debt

These are the debt instrument with an option to own a common stock of the company. Debt issued with warrants provides opportunity to debt holders to own common stock of the organization and continue to hold the debt instrument. This is done mainly to attract investors to invest in debt with lower rates. Convertible bonds are similar to this type of debt which allows holder to exchange the bonds with certain number of stock. These bonds are considered very attractive, especially when issued by firms with high growth rate. In return for this attractive feature, a convertible bond normally requires the firm to

pay less interest that would be paid for a comparable nonconvertible bond (Hampton, 2001). Exchangeable debt on the other hand gives opportunity to its holder to exchange the bond with the common stock of another corporation. This type of financing is applicable to companies that have stock holdings in another organization.

vi. Treasury bills

Treasury bills are short term debt instruments with no coupon interest paid. These are discounted at the time of issuance and the holder gets full value at the time of maturity. Although treasury bills are sold at discount, their dollar yield (that is difference between the purchase price and the face value if bill is held to maturity) is treated as interest income for tax purpose (Sharpe et al; 1989). The discount rate thus can be calculated by following formula:

$$\text{Discount rate in \%} = \frac{(100-\text{BP}) \times 365 \times 100}{\text{BT} \times \text{T}}$$

Where,

BP = Bill price or purchase price of Treasury bill

T = Maturity period of Treasury bills

Treasury bills are generally used to generate short term fund which may be used to repay previously issued matured treasury bills. These are generally issued by government itself in order to fulfil its short term fund requirement.

vii. Municipal Bonds

Municipal bonds are debt obligations issued by states, cities, counties and other governmental entities to raise money to build schools, highways, hospitals and sewer systems, as well as many other projects for the public good (www.investinginbonds.com). These types of bonds are generally tax exempted. So these are more popular among investors due to certainty, safety, marketability and tax exemption. Municipal bonds may be issued with or without coupon interest. In case of non coupon or zero coupon municipal bond, they are sold at a substantial discount from the face amount and at the time of maturity the investor receives the full face amount of the bond.

An investor needs to be very much clear and careful while investing in debt instruments. Debt instruments being less risky than common stock and preferred stocks, makes it to be ultimate destination for the investment among investors. Furthermore fixed interest income until maturity despite issuer's loss or profit and fixed maturity makes its market lucrative. But while investing one must consider its drawbacks as no opportunity to take part in management limited taxable interest income in spite of company's huge profit. Similarly in investor's perspective too debt may sound more preferable in comparison to common stock due to features like tax benefit, flexibility in capital structure management, minimum cost of capital. These features may be overshadowed by its negative points like obligation to pay after maturity, permanent burden to the company, increment in liability, reduction in goodwill. So, proper evaluation needs to be carried out both by issuer and investor while issuing and investing in debt instruments.

2.1.5 Types of Government Debt Securities

Government raises debt needed for development of infrastructure of the country through internal and external resources. Government to its people is considered as strong borrower is likely to get full support from public in terms of collecting debt. Government too believes in public participation in development of country through debt lending, hence opting internal resource for debt collection. Government thus, collects funds from public through issuance of different debt securities. The most commonly used securities for debt collection are discussed below.

i. Treasury Bills

Treasury bills are most commonly used short term debt to raise government fund. They are generally issued in order to bridge budget deficit gaps. It is normally issued with maturity of 91 days but it may sometimes have maturity of 365 days. Treasury bills are normally auctioned on discount basis with face value refundable at the time of maturity.

ii. Development Bonds

Development bonds are long term government debt with normal maturity of 5 years. Development bonds generally pay semi – annual coupon interest where interest is taxable. They, being long term debt, can be pledged as collateral while taking loans. Both individuals and corporate houses can apply and hold government development bonds.

iii. National Saving Bond

These are most popular government among individual investors. Investors apart from commercial banks can have the ownership of this bond. They pay non taxable semi – annual interest to its investors. These are normally long term debts with normal maturity of 5 years and can be pledged while taking loans.

iv. Citizen Saving Certificate

These bonds are almost synonymous to other government bonds that have long term maturity. Like other long term government bonds they also can be used as collateral while borrowing.

v. Special Bond

Special bonds are issued on special occasions for short time period. They can be issued by government to individual or institution as a payment for government dues. These bonds can also be used as collateral by bondholders to generate funds.

2.1.6 Terms related to Corporate Bond Market

a) Interest Rate and Inflation

Interest Rate

People lend their saving in order to get some benefit from it. Such benefit is termed as interest. In order words it is a charge made for a loan, or a credit facility or a payment made by borrower to lender for the use of the money borrowed. It is calculated as a percentage of the amount borrowed.

Interest rate may be simple, compound and discount. The interest rate depends on the relationship between supply and demand. If the demand for loan increases, interest rate rise and fall if the demand for loans decreases. Supply and demand in turn, are affected by several factors, such as government policy, inflation, economic activities, the length of loan and the degree of risk (The world book of encyclopedia, 1996).

Interest rate plays very important role in corporate bond market. In fact it is a driving factor for the investment in corporate bonds or debentures. Interest rates provided determines the income that an investor will earn and also capital gains or losses that the investor will incur. Bonds pay interest that can be fixed, floating or payable at maturity. Most debt securities carry an interest rate that stays fixed until maturity and is a percentage of the face (principal) amount (www.investinginbonds.com). Mostly interest rates are paid semi annually to the bond or debenture investors.

Inflation

Inflation is an increase in the supply of currency or credit relative to the availability of goods and services, resulting in higher prices and a decrease in the purchasing power of money (Encarta Dictionary, 2007). An investor should clearly monitor inflation rate too while investing in debt. The real interest rate can be obtained by subtracting the inflation rate from the nominal interest rate. And nominal interest rates are highly correlated with inflation (Kaen; 1995). If only interest rate is considered while investing then there is a risk of it being overshadowed by high inflation rate. In other words return earned through nominal interest on investment may be spent in compensating rise in price due to

inflation. Inflation causes tomorrow's dollar to be worth less than today's; in other words, it reduces the purchasing power of a bond investor's future interest payments and principal, collectively known as "cash flows." Inflation also leads to higher interest rates, which in turn leads to lower bond prices (www.investinginbonds.com). Inflation in caused due to steep rise in economic growth, which raises the cost of goods and services and leads to higher interest rate and erodes bond value. Thus the rate of inflation too needs to be considered while investing along with the nominal interest rate.

Bonds or debentures offer fixed interest rate for investors. But the real rate of return that investors receive is calculated by subtracting inflation rate from normal interest rate. Inflation rate is measured by percentage change in the Consumer Price Index (CPI) over the period. CPI can be calculated by collecting the prices of consumer goods. In Nepal CPI is calculated by NRB. Inflation for a single period can be measured as follows (Bhattarai, 2005):

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

Where,

q_t = inflation rate for the time t

CPI_t = Consumer Price Index at beginning of time t

$CPI_{(t+1)}$ = Consumer Price Index at end of time t

Annual inflation rate is given by $(1 + \text{per month } q)^{12}$

To provide full compensate for the investors borrower has to adjust the inflation rates with nominal rates (Sharpe et al; 1999). Then adjusted normal rate of return can be derived from:

$$r = rr + q$$

Where,

r = normal rate of return

rr = real rate of return

q = inflation rate

With the formula given above borrower or lender can easily determine the real interest rate and invest or lend accordingly.

b) Investment Bankers / Underwriters of Securities

Investment bankers or underwriter acts as a bridge between investors and issuing company. The agent responsible for finding buyer for brand new securities is called the investment banker or underwriter (Francis, 1986). Investment bankers purchases initial offerings of the issuing company and later sell to general public.

At the time of issuance of new security member of issuing firm and investment bankers hold pre-underwriting conferences where amount of capital to be raised, security to be issued and the terms of the agreements are discussed. When investigations are completed, an underwriting agreement is drawn up by the investment banker (Weston and Copeland, 1992). The risk to the underwriter is that the issue may not attract buyers at a positive differential (Jordan and Fischer, 1993). To mitigate this risk investment bankers buy security as slightly low prices than they expect them to sell and the difference is considered profit to underwriter. Furthermore the investment bankers charge flotation costs to issuing company for designing, underwriting and selling the security. Other costs like filing, legal and tax incurred at the time of initial offering apart from underwriting

fees are paid by the issuing organization. Investment bankers also involve in advising businesses in arranging mergers and acquisitions. In other countries investment bankers also provide brokerage services, but in Nepal the issue managers only manage initial public offering and provide financial services (Bhattarai, 2005).

c) Duration of bond

Duration is defined as the weighted average number of years that cash flows occur. Cash flows include both coupon and principal payments. The weights are the present value of each cash flow as a percentage of the total present value of all cash flows (Macaulay; 1938). A bond's duration may be defined as the weighted average number of years until the cash flows occur, with the relative present values of each cash flow used as the weights (Francis, 1988). Frederic Macaulay was the first person to introduce the concept of duration in 1938, so it is also called as Macaulay Duration. A measure of the average time prior to the receipt of payment is obtained by calculating the bond's duration. 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 (Sharpe et. al; 2003).

Macaulay duration can be used to determine the following:

- The duration of a zero coupon bond is equal to its time to maturity.
- The duration of a coupon bearing bond is less than its time to maturity.
- If two bonds have the same coupon rate and yield, then the bond with the greater maturity has the greater duration.
- If two bonds have the same yield and maturity, then the one with the lower coupon rate has the greater duration.

Duration may be derived from the function of term, coupon, maturity value and yield to maturity. Duration is directly proportionate to term and inversely to coupon rate or yield to maturity. This means with increase in term will increase duration of the bond and vice – versa. Similarly increase in coupon rate or yield to maturity cause decrement in duration of bond and vice – versa.

Duration of bond indicates systematic risk for the bond and also helps in analyzing and managing the risk of bond portfolios. The duration thus is also known as sensitivity or elasticity of bond price with respect to interest rate change. The longer the duration of bond is the more volatile the bond price will be. This is due to possibility of interest rate change in long duration. Thus an investor should be well aware of the duration of bond while investing in the bonds. Frederic Macaulay has derived model to calculate the formula. Thus Macaulay duration of bond is given by:

$$MD = \frac{\sum_{t=1}^{T} PV}{TPV}(C_t) \times t$$

Where,

MD = Macaulay Duration

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

T = time (year)

TPV = Total present value

d) Immunization

Immunization is the strategy for protecting a bond portfolio against the risk of rising interest rates. The concept of immunization was emerged after the introduction of concept of duration of bond. 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 the period (Alexander et. al, 2003).

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 level. 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 (Alexander et. al, 2003).

Immunization is subjected to reduce only interest rate risks; it does not minimize other risks of portfolio though corporate bonds are included. Immunization expected to exist when total value of a portfolio of bonds at the end of some specified planning horizon equals the value of the portfolio based on the YTMs that existed when it was purchased.

For accomplishment of immunization investment should be made in portfolio with equal duration or the promised outflows. 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 (Sharpe et. al, 2002). When 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 (Sharpe et. al, 2002).

Immunization is used only to minimize interest rate risk in the portfolio of the bonds with equal duration. Thus the bond duration is an insightful measure of the time structure of a bond's cash flows and a measure of a bond's interest rate risk which is useful in development of strategies for managing the interest rate risk in a portfolio of bonds.

e) Yield Curve

Yield curve, also known as term structure of interest rate, is concerned with the relationship between yield and maturity of security with same default risk. It also shows the relationship between short term interest rates and long term interest rates. It describes the pure time value of money for different lengths of time. It is obtained by calculating yield to maturity at different time to maturity. All the factors other than maturity must be held constant if the relationship studied is to be meaningful (Van Horne, 2004).

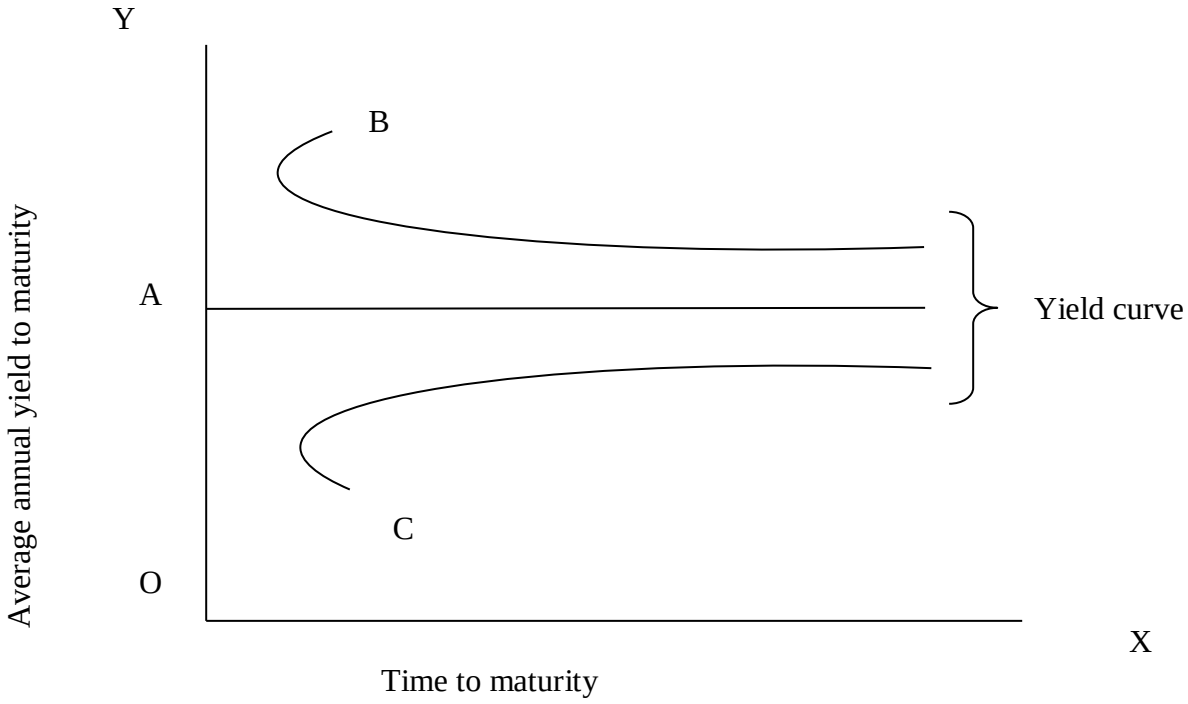
The most common shape of the yield curve mostly seen in modern days is upward sloping but degree of steepness has varied. Real rate of interest, the rate of inflation and

the interest rate risk are the three components used for the determination of the shape of the Yield Curve.

To determine the shape of the yield curve three theories were developed (Francis, 1986). The theories are Liquidity premium theory, Segmentation theory and Expectations theory. As per liquidity premium theory on average the yields from long-term bonds must be higher than the yields from short-term bonds. This is due to investors pay price premium on short maturities resulting lower yields in order to avoid the higher interest rate risk present in bonds with longer maturities. This would result yield curve to slope upward. Segmentation theory says loan market is segmented on the basis of the maturity of the loan, which may be short term or long term. Furthermore market interest rate of loans is determined by demand and supply of loans. Thus the yield curve is determined by relationship of prevailing market interest rate in each market segment. Yield curve would slope upward when there is low interest rate in short-term market segment and high interest rate in long-term market segment. Similarly if interest rate is high in short-term market segment and low in long-term market segment the yield curve would slop downwards. Expectation theory, however suggests that long-term yields are the average of the short-term yield and if all investors expect rates to rise the yield curve would slope upward and vice versa.

Figure 2.1

Different shapes of yield curves



In Figure 2.1, A, B, & C are three yield curves where curve A is flat that indicates short-term and long-term yields being approximately equal. Curve B shows short-term interest rates are higher than long-term interest rate and are descending curve. However curve C is ascending curve with short-term interest rate lower than the long-term rates. Yield curve being visual representation of term structure of interest rates, we can get different shapes while plotting yield of different maturities bond.

f) Interest Rate Swaps and Bond Swaps

Interest Rate Swaps

Swap means to trade or exchange something for something else. In case of interest rate swaps exchange of two different cash flows between two counterparties which may be two corporations, two financial institutions or any two borrowers. Through appropriate swap one can get opportunity to reduce cost. Interest rate swaps involve exchange of interest only not principal. The structure of swap is determined when two borrowers agree to make a series of payments to each other on specified payment dates. Major bank can quote swap prices by deciding on an interest rate swaps structure. The larger the amount above this standard minimum, the more negotiating power an aspiring swapper has in dealing with a swap bank. The amounts and maturity dates of swaps are easily customized as per the need of swapper.

Bond Swaps

Bond swaps involve sales of one bond issue ahead of its maturity followed by immediate purchase of another. Bond swaps are undertaken mostly in order to increase a bond portfolio's return. Bond swaps may be of different types.

Bond swap may be substitution swap which involves exchange of bonds that are perfectly substitutes in every respect except their prices or YTM. In case of inter – market spread swap, bonds being exchanged might have price difference but issued by same corporation. Rate anticipation swap is another instance of bond swap where investor purchases short term bonds and sells long term bond in other to avoid risk arose due to

change in interest rate. Pure yield – pick up swap is the simplest bond swap. In which no speculation is done and bond are swapped for higher YTM.

2.1.7 Key Characteristics of Bonds

Different bonds have different characteristics but illustrated below are some common characteristics of bonds.

a) Par Value

Par value is the value of the bond on which interests are calculated. In other words par value is the value that issuer agrees to pay to the purchaser of bond at the time of its maturity. Par value generally represents the amount of money the firm borrows and promises to repay on the maturity date (Brigham, Gapenski & Ehrhardt; 1999).

b) Coupon Rate

Coupon rate states the rate of interest paid to the bond holder. Bonds pay interest that can be fixed, floating or payable at maturity. Most debt securities carry an interest rate that stays fixed until maturity and is a percentage of the face (principal) amount. However interest payments are done generally in semi – annual basis. Some bonds have no periodic interest payments. Instead, the investor receives one payment at maturity that is equal to the purchase price (principal) plus the total interest earned, compounded semi – annually at the (original) interest rate. In case of zero coupon bonds, they are sold at a substantial discount from their face amount. For example, a bond with a face amount of Rs. 20,000 maturing in 20 years might be purchased for about Rs. 5,050. At the end of

the 20 years, the investor will receive Rs. 20,000. The difference between Rs. 20,000 and Rs. 5,050 represents the interest, based on an interest rate of 7%, which compounds automatically until the bond matures. If the bond is taxable, the interest is taxed as it accrues, even though it is not paid to the investor before maturity or redemption.

c) Maturity

A Bonds maturity refers to the specific future date on which the investor's principal will be repaid. Maturity period of bond plays huge role in determining the value of bond. Bond maturities generally range from one day up to 30 years. In some cases, bonds have been issued for terms of up to 100 years. We do not find any instance of bonds having maturity up to 100 years. But in US bonds with maturity of 100 years was witnessed in the 1800s when Disney and Coca – Cola issued 100 years bond. It was sold out immediately which showed the existence of people having interest in 100 year bonds. But for issuing long term bonds the issuer must have good credibility. Generally maturity ranges are often categorized as follows:

- Short – term notes: maturities of up to five years;
- Intermediate notes/bonds: maturities of five to 12 years;
- Long – term bonds: maturities of 12 or more years.

In case of long – term bonds there is risk of fluctuation in price of bond with little change in interest rate. So, one should issue bond with appropriate maturity period.

d) Call Provisions

Bonds might have redemption, or "call" provisions that would allow or require the issuer to repay the investors' principal at a specified date before maturity. Bonds are commonly "called" when prevailing interest rates have dropped significantly since the time the bonds were issued. Call provisions are advantage to issuer as they can exercise whenever they like. If interest rate goes up, the company will not call the bond, and the investor will be stuck with the original coupon rate on the bond, even though interest rates in the economy have risen sharply. However if interest rates fall, the company will call the bond and pay off investors, who will then have to reinvest the proceeds at the current market interest rate which is lower than the rate investor were getting on the original bond. Conclusively the investor loses when interest rates go up, but does not reap the gains when rates fall (Brigham, Gapenski & Ehrhardt; 1999). While calling the bonds, issuer pays price higher than market price. The difference is termed as call premium. While investing in bonds one should always take an account of call provisions.

e) Puts

Bonds having "puts" provide investors the option of requiring the issuer to repurchase the bonds at specified times prior to maturity. Investors typically exercise this option when they need cash for some purpose or when interest rates have risen since the bonds were issued. They can then reinvest the proceeds at a higher interest rate.

f) Collateral

Collateral is property used as security against bonds. The security placed as collateral can be used to recover the bond's maturity value in case of default by issuer. It is not necessary that bonds need to have collateral, some might be collateralized and some might not. Depending upon collateral bonds may be secured or unsecured or sinking fund bond. Bonds backed by security or collateral are termed as secured. On the contrary bonds that are not backed by security is called unsecured bond. However in case of sinking fund bond, the issuer accumulates certain amount each year for payment of bond at the time of maturity. The sinking fund agent, who is generally a trustee mentioned in indenture, collects such yearly payments and either calls at premium or buys the bonds through the market.

g) Indenture

The indenture is a written legal agreement between the corporation issuing the bonds and the lender which contains detail of terms of bond issue and restrictions on the issuing company. Generally contract is done with trustee who represents the investors of the bond.

h) Other Features

Apart from above mentioned features some other features like convertible bonds where bond holder can convert their bond in to common stock of same company make bond more attractive. Bond also has features like warrant, an option to buy common stock, income bond which gives benefit to issuer by allowing it to pay interest only when the

organization is in profit. Purchasing power bond gives benefit to bond holder by protecting it from inflation by its feature of interest payment based on inflation rate.

2.1.8 Risk associated with Bond Investment

All investments offer a balance between risk and potential return. The risk is the chance that one will lose some or all the money that is invested. The return is the money that one stands to make on the investment.

The balance between risk and return varies by the type of investment, the entity that issues it, the state of the economy and the cycle of the securities markets. As a general rule, to earn the higher returns, one has to take greater risk. Conversely, the least risky investments will also have the lowest returns.

The bond market is no exception to this rule. Bonds in general are considered less risky than stocks for several reasons like they carry the promise of their issuer to return the face value of the security to the holder at maturity. On the contrary stocks do not have such promise from their issuer. The other thing is most bonds pay investors a fixed rate of interest income that is also backed by a promise from the issuer. Stocks sometimes pay dividends, but their issuer has no obligation to make these payments to shareholders. Historically the bond market has been less vulnerable to price swings or volatility than the stock market which makes it safer than that of common stock.

The average returns from bond investments have also been historically lower, if more stable, than average stock market returns due to it being less risky. However no any

investment is free from risk so some of the risks associated with bond investment are discussed below.

a) Interest rate risk

Interest rate risk refers to risk caused due to fluctuation of bond interest rate. When interest rate of bond rises, prices fall; conversely, when rates decline, bond prices rise. The longer the time to a bond's maturity, the greater will be its interest rate risk.

b) Duration risk

Duration risk deals with the possibility of loss in bond investment due to fluctuation in duration of the bond. The modified duration of a bond is a measure of its price sensitivity to interest rates movements, based on the average time to maturity of its interest and principal cash flows. Duration enables investor to more easily compare bonds with different maturities and coupon rates by creating a simple rule: with every percentage change in interest rates, the bond's value will decline by its modified duration, stated as a percentage. For example, an investment with a modified duration of 10 years will rise 10% in value for every 1% decline in interest rates and fall 10% in value for every 1% increase in interest rates. So while investing in bond average duration needs to be increased when the rate is expected to decline, and decrease average duration when rate is expected to rise.

c) Reinvestment risk

Reinvestment risk exists when market interest rate is declining. When interest rates are declining, investors have to reinvest their interest income and any return of principal,

whether scheduled or unscheduled, at lower prevailing rates. The current bond market of Nepal is facing reinvestment risk as market interest rate is very low than that of bond coupon rate.

d) Inflation risk

Inflation risk is another major consideration that is to be made while investing in bond. Inflation causes reduce in the purchasing power of a bond investor's future interest payments and principal, collectively known as "cash flows." Inflation also leads to higher interest rates, which in turn leads to lower bond prices. To defy this risk one can invest in purchasing power bonds which gives return based on inflation rate.

e) Market risk

Market risk is the risk associated with decline of whole bond market, bringing the value of individual securities down with it regardless of their fundamental characteristics. Despite this occurs in worst case scenario, we still need to consider market risk while investing in bond.

f) Selection risk

Selection risk is based in the risk that an investor chooses a security that underperforms the market for reasons that cannot be anticipated. This type of risk is unpredictable in nature and difficult to be assessed.

g) Default risk

Default risk refers to the possibility that a bond issuer will be unable to make interest or principal payments when they are due. If these payments are not made according to the agreements in the bond documentation, the issuer can default. This risk is minimal for mortgage-backed securities issued by government agencies or government sponsored enterprises and most asset-backed securities, which tend to carry bond insurance that guarantees payments of interest and principal to investors.

h) Event risk

The risk that a bond's issuer undertakes a leveraged buyout, debt restructuring, merger or recapitalization that increases its debt load, causing its bonds' values to fall, or interferes with its ability to make timely payments of interest and principal. Event risk can also occur due to natural or industrial accidents or regulatory change. (This risk applies more to corporate bonds than municipal bonds.

Bond though have less risk than that of other securities, one should not ignore the minimal risk present. So proper risk assessment should be carried out before investing in bond so as to ensure certain return from the investment.

2.1.9 Bond Ratings

Bond ratings here refer to the quality rating given to each bond by individual securities rating agencies that reflects the probability of bond going into default. Bond with high rating are considered most secured while lower rating bonds are considered unsafe. Bond

rating helps investors to invest on bonds. Various qualitative and quantitative factors are considered while rating bonds. Some of which are discussed below (Brigham, Gapenski & Ehrhardt; 1999).

- **Ratios:** Ratios are best measure to determine the rating of any organization. The better the ratios like debt ratio, times – interest – earned ratio, current ratios of the organization the higher would be the rating.
- **Security:** Bond rating varies depending upon security of the bond. Secured bonds are rated higher than unsecured bonds and for secured bonds; bonds with high value security are always rated higher.
- **Subordination provision:** Subordination of bond to other debts would result in decrement of security. Conversely a bond with other debt subordinated to it will have somewhat higher rating.
- **Guarantee provision:** Some bonds are guaranteed by other strong firms which would provide bond of weaker companies rated as the organization guarantying the bond. This usually happens when the bond issuing organizations are sister concern of the guarantying organization.
- **Sinking fund:** Bond with sinking fund provision is considered safe and rated highly than other bonds.
- **Maturity:** Bond having shorter maturity period are considered less risky in comparison to the bond with long maturity. This would cause change in ratings of bond.

Above are the basic factors for judging the bonds present in the market. Apart from above antitrust, environmental factors, regulation etc are also considered while determining the rating of the bond. Basically main factor for rating bonds is risk factor, bonds with higher risk are rated low and bonds with lower risks are rated high.

2.1.10 Buying and selling rules of Securities

Securities price is fluctuating in nature and varies with small change in market variables. Due to such change in market price of securities one can get capital gain through buy and sell of those securities. Through the trading of security income is generated by purchasing securities when its price is low and selling when the price is high. Despite the fact when to buy and sell the securities in the market where market price is highly fluctuating is difficult task to the investor. Market depending upon price of securities can be divided in to bear market and bull market. Securities market may be termed as bear market when securities price is in decreasing trend and conversely bull market is the place where securities prices are in increasing trend. With the identification of the type of market one can get investment benefit by buying securities in bear market and selling it in bull market. Apart from market price of securities, required and expected rate of return can also be considered while buying and selling of the securities. Securities are under priced when expected rate of return is greater than required rate of return. On the other side if the expected rate of return is less than required rate of return securities are over – priced. But if both expected and required rate of return are equal then the security is rightly priced. As an investor one should buy securities when it is over – priced and sell when it is under priced. In case of rightly priced securities no trading should be done. Table

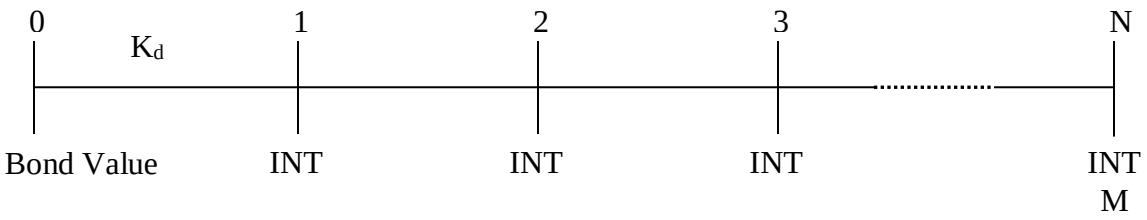
appended below would clarify more regarding investment in securities based on expected and required rate of return.

Buying and Selling Rules of Security

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

2.1.11 Valuation of Bond

Bond is a long term debt instrument where issuer agrees to pay certain amount at the time of maturity and periodical interest in between. It being long term while investing in bond value should be computed in order to identify improper pricing of the security. Value of any asset is computed by determining the present value of the cash flows the asset is expected to produce. In case of bond, bond holder gets certain amount as interest each period and gets maturity value at the time of the maturity of the bond. Thus value of bond represents sum of present value of the periodical interest payments and the par value of bond due at the time of maturity. The situation of periodical interest payment and payment of maturity value is shown below.



Where,

K_d = bond's market interest rate

N = number of years the bond matures

INT = NPR periodical interest

M = Par value or maturity value of bond

Thus the value of bond is given by

$$V_b = \frac{INT}{(1+k_d)^1} + \frac{INT}{(1+k_d)^2} + \ldots\ldots + \frac{INT}{(1+k_d)^N} + \frac{M}{(1+k_d)^N}$$

$$= \sum_{t=1}^{n} \frac{INT}{(1+k_d)^t} + \frac{M}{(1+k_d)^N}$$

The value of bond is a function of several factors as presented below.

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

Where,

F = Face value or par value

N = Maturity period

I = Coupon interest rate

P_m = Market price of bond

K_b = Market interest rate or opportunity rate

f = Function

Bond value is variable in nature, its value changes with the change in any of the above variable. Value of bond would increase with increase in coupon interest rate of the bond and vice versa. Similarly increase in loan tenure would cause decrease in the value of bond and decrease would cause increase in the value of bond. So while purchasing bond

either in primary or secondary market value along with above variable needs to be evaluated.

Valuation of bond depends on the type the bond is i.e. Ordinary Bonds, Callable Bonds and Perpetual Bond. Valuation of these bonds is illustrated below.

- **Ordinary bonds**

In case of ordinary bonds issuer pays certain amount at the time of maturity and regular interest payment in between. Valuation of such bonds is computed by formula illustrated below.

i. Annual interest payment

$$V_b = \frac{I_1}{(1+k)^1} + \frac{I_2}{(1+k)^2} + \frac{I_3}{(1+k)^3} + \cdots\cdots + \frac{M}{(1+k)^n}$$

$$= \sum_{t=1}^{n} \frac{I_t}{(1+k)^t} + \frac{M}{(1+k)^n}$$

Where,

V_b = Present value of bond

I_t = Interest payment during "t" period

k = Market interest rate

t = Time periods

n = Number of time periods

M = Maturity value of bond

ii. Semi – annual interest payment

$$V_b = \sum_{t=1}^{n\times 2} \frac{I_t}{(1+k/2)^t} + \frac{M}{(1+k/2)^{n\times 2}}$$

- **Callable Bonds**

Callable bonds are ordinary bonds with right to redeem the bond before its maturity. Valuation of which is given by formula below.

i. Annual interest payment

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

Where,

P_c = Call price

m = Number of periods to call period

Semi – annual interest payment

$$V_b = \sum_{t=1}^{m\times 2} \frac{I_t}{(1+k/2)^t} + \frac{P_c}{(1+k/2)^{m\times 2}}$$

- **Perpetual Bonds**

Perpetual bonds do not have maturity period and the issuer does not need to pay par value or maturity value. Instead the investor is paid interest regularly for indefinite period. Value of such bond is given by formula below.

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

Where,

I = Interest payment each year

K = Interest rate of bond.

2.1.12 Bond Return Measures

It is expectation of future return that drives investors invest their money in current time. Investment is done only if the expected return covers the compensation of the current sacrifice of investment amount along with expected rate of inflation and risk of loss of current investment in future. From bond, investor gets income from price appreciation or loss from price depreciation and capital gain or loss. Return from bond is calculated through expected rate of return which is calculated by using price of bond. Current yield, yield to maturity, holding period return, expected rate of return etc which are defined below are considered as main measures for calculating return form bond.

- **Current Yield**

Current yield is considered most popular measure used for calculating bond return. Calculation of current yield is entirely based on the relationship between coupon rate and current price of the bond. The current yield provides information about the cash income a bond will generate in a given year. This can be expressed mathematically as below,

$$I_C = \frac{C}{P_0}$$

Where,

I_C = Current or coupon yield

C = Annual coupon amount

P_0 = Current market price of bond

Current yield calculates return based on current price of the bond. It does not take account of capital gains or losses that will be realized if the bond is held until maturity or call due to which it does not provide accurate measure of the total expected return. As an example if the bond is selling current at its face value then current yield would be exactly equal to its coupon interest rate. Thus it is considered partial indicator for bond return.

- **Yield to Maturity (YTM)**

Yield to maturity is defined at the rate of interest that an investor earns on her/his investment if s/he holds the bond till its maturity. In other words it is the discount rate that equates the present value of all the bond's expected future cash flows with the current market price of the bond (Alexander et. al, 2003). YTM is synonymous to the effective interest rate or the internal rate or return that is commonly used in capital budgeting. But if there is any probability of default in bond or if it is callable then the calculated YTM may be different from its expected rate of return. The YTM for a bond that sells at par consists entirely of an interest yield but if the bond sells at a price other than its par value, the YTM will consists of the interest yield plus a positive or negative capital gains yield. The bond's YTM changes whenever interest rates in the economy changes. One who purchases a bond and holds it until the maturity will receive the YTM that existed on the purchase date, but the bond's calculated YTM will change frequently between the purchase date and the maturity date.

YTM is calculated on the ground that value of bond is known and it can be calculated either through trial & error method or through approximation formula method.

Trial & Error Method

Through trial & error method YTM is calculated through computation of value of bond by substituting of rate that would be equal to the price of bond.

$$V_b = \sum_{t=1}^{n} \frac{INT}{(1+YTM)^t} + \frac{MaturityValue}{(1+YTM)^n}$$

Where,

V_b = Value of bond

t = Time periods

n = Number of time periods

Approximation Formula Method

Thorough approximation formula method YTM is calculated by solving formula stated below.

$$AYTM = \frac{I + \left[{}^{(F-P)}/_{N}\right]}{{}^{(F+2P)}/_{3}} \times 100$$

Where,

AYTM = Approx. YTM

F = Face value of bond

P = Price of bond

N = no. of the years of the bond

I = Interest payment per year

- **Yield to Maturity for callable bonds**

Bonds can be issued with feature to call prior to the maturity by issuer. Such bonds are called callable bonds and if these bonds are called by issuer then bond holder does not have option to hold it until maturity. Bonds are likely to be called if current interest rates are below an outstanding bond's coupon rate. In that case yield to call best represents the rate of return. Yield to call can be calculated by solving given equation.

$$\text{Price of bond} = \sum_{t=1}^{n} \frac{\text{INT}}{(1+\text{YTC})^{t}} + \frac{\text{CallPrice}}{(1+\text{YTC})^{n}}$$

Here n is the number of years until the company can call the bond, call price is the price the company must pay in order to call the bond and YTC is yield to call. Bonds are called mostly during period of declining yields and most specifically when the yield to maturity is below coupon yield.

- **Holding Period Return**

Investors involved in trading of securities are mostly concerned about Holding Period Return (HPR). HPR can be defined as total return an investor would earn during specified period. HPR can be calculated either for past or future period. HPR for past period is called historical or ex – post measure and HPR for future period is called expected or ex – ante return.

The concept of HPR has evolved due to the change in strategy of investors. Here the change in strategy of investors refers to the shift from traditional concept of long term buy and hold strategy to short term strategies. HPR for bonds with coupons can be calculated as

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

Where,

HPR_t = Holding period return for the period "t"

P_t = Beginning or purchase price of the bond

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

I_{t+1} = Coupon or interest received for the period "t"

This equation assumes that interest will be received at the end of holding period "t" as bonds are sold with accrued interest due to the seller.

- **Expected Rate of Return**

In analyzing various bonds for investment, the analyst must consider the expected rate of return that each bond can provide. A more detail analysis is needed when a bond has default probabilities or is not going to be held till maturity or when yields in general may change over the holding period (Cheny and Moses, 10^{th} edition).

Expected return is the weighted average rate of return calculated using probability of each rate of return as weight. It can be expressed as:

Expected HPR = P_1 HPR_1+P_2 HPR_2+…….+P_n HPR_n

$$= \sum_{i=1}^{n} P_i \times HPR_i$$

Where,

P_i = Probability of event "i"

HPR_i = Holding period return at event "i"

n = n^{th} event

2.1.13 Cost of Debt Capital

Here cost of debt capital refers to all direct or indirect cost included in generating debt capital. Corporate bond or debenture being debt securities might have been issued at par or at discount or at premium. Further costs must have been incurred at the time of issuance of the bonds and debentures. Those costs are expenditure for issuing bonds and debentures such as preparation of prospectus, advertising cost and brokerage costs etc. Cost of debt capital also includes interest paid to debt holders.

Among three components of generating capital debt, preferred stock and common stock, debt is considered less costly. This is due to fixed legal claim to investors which would entitle bond holders greater security. Further on the basis of risk & return bond investors demand less return than stock holders and tax applicable on interest makes debt cheaper than other sources.

Cost of debt can be calculated mathematically as follows:

$$K_d = \frac{I}{NP}$$

Where,

K_d = Cost of debt before tax

I = Interest

NP = Net processed amount received after deducting all costs

Since tax is applicable in interest paid to debt holder, debt is less expensive to issuer. So after tax cost of debt is calculated as:

$K_{dt} = k_d (1-t)$

Here K_{dt} represents cost of debt after tax, k_d refers cost of debt before tax and t refers tax rate applicable.

2.1.14 Bond Spreads

Difference in the interest rate of two different bonds is termed as "bond spreads" or "spreads". Mathematically, a bond spread can be obtained by simple subtraction of one bond yield from another. Bond spreads are the common way that market participants compare the value of one bond to another; much like "price-earnings ratios" are used for equities.

Spreads reflect the relative risks of the bonds being compared. The higher the spread, the higher the risk usually is. People referring to bond spreads are generally talking about comparing the yields on federal government bonds, generally considered a country's most

creditworthy bonds, to the bonds of other issuers such as provinces, municipalities or corporations. Bond spreads can also be calculated between bonds of different maturity, interest rate coupon or even different countries and currencies.

- **Calculating Yield Spreads**

Bond yield spreads is differential interest between two bonds and can be calculated by subtracting one bond yield from another. For example, let's compare the Himalayan Bank Limited 7.5% debenture due in 2009 and the National Saving Bond 9.5% bond due in 2009. To properly understand the concepts of bond spreads, firstly the mechanics of spreads calculation can be examined. The current yield for instance on the HBL bond, is 5.3% compared to the NSB bond yield of 4.5%. Below we subtract the HBL bond yield from the NSB yield to obtain the spread:

5.3% (HBL yield) - 4.5% (NSB yield) = 0.8% "Spread"

Here bond yield spread is 0.8%.

- **Types of Spreads**

Spreads seem simple but reflect a lot of underlying valuation factors. Below we list some of the spreads that can be calculated and the commonly understood meaning:

- **Credit Spreads**

Credit Spreads are the differences in interest rates that reflect the credit risk between two bonds. The larger or "wider" the spread, the higher the credit risk of the high interest rate bond compared to the low interest rate bond. Corporate bonds generally have higher

yields than similar maturity federal government bonds, as in our Sears Canada example above, reflecting their higher default or credit risk. The lower the credit quality and rating, the higher the yield spread compared to governments. That is why "less than investment grade" or "junk bonds" are commonly called the "high yield" sector of the bond market.

- **Term or Duration Spreads**

Term or Duration Spreads are the spreads that reflect the different interest rates between bonds of different maturity. For example, the current interest rate on the very short-term, two year Nepal Investment Bank bond in our example is 4.5% reflecting its minimal capital risk because of interest rate movements. The current interest rate on a seven year National Saving Bond 8% of 2013 is 6.1%, reflecting its greater "interest rate risk". The yield spread or "curve spread" between these two bonds is 1.6% which reflects the interest rate between the two bonds and the conditions of monetary policy.

- **Coupon Spreads**

Coupon Spreads are spreads that reflect the differences between bonds with different interest rate coupons. For example, the Government of Nepal has issued two bonds which are due in 2008, one with a 10% coupon and one with a 7% coupon. These two bonds have very similar maturities but very different coupons with a 3% different in payment each year until the final repayment of the principal of Rs.100 at maturity. In this case, a taxable investor would prefer to have less up front taxable income and would prefer to own a "lower coupon" bond. In recent years, the "stripping" activity of investment

dealers, which produces "zero coupon" bonds, has caused coupon spreads to narrow considerably as high coupon bonds were sought because of their profitable "stripping" characteristics (higher profits for dealers).

- **Liquidity Spreads**

Liquidity Spreads reflect the difference in "liquidity" or ease of trading between bonds. For example, an investor can buy a zero coupon bonds for the same maturity date in three different forms: 1) a "coupon" which is a stripped coupon payment form bond; 2) a "residual" which is the stripped principal payment from bond; and 3) an actual zero-coupon bond issue which was originally issued as a zero coupon "global" bond issue. In terms of liquidity, the "global zero" trades at the lowest spread to other bonds, given its high liquidity. The residual trades at a wider spread reflecting its lower liquidity. The coupon trades at the highest yield and spread, reflecting its smaller size (each "coupon" is ½ of a bond's stated interest rate e.g. Rs. 4 on an 8% interest rate) where the residual is Rs.100.

There are many other types of spreads such as "swap spreads" which reflect the demand for fixed to floating interest rate swaps or "Yankee spreads" which are spreads between U.S. dollar bonds of domestic and foreign issuers. Investment strategists use the spreads between the dividend yield and earnings yields on stocks and bond yields in their judgments on the relative attractiveness of these markets.

2.1.15 How Bonds Trade

Bonds generally can trade anywhere in the world that a buyer and seller can strike a deal. There is no central place or exchange for bond trading, as there is for publicly traded stocks. The bond market is known as an "over-the-counter" market, rather than an exchange market. There are some exceptions to this. For example, some corporate bonds in the Nepal are listed on an exchange. Also, bond futures, and some types of bond options, are traded on exchanges. But the overwhelming majority of bonds do not trade on exchanges. The trading of here discussed are marketable bonds which are permissible for trading.

- **Bond Dealers**

While investors can trade marketable bonds among themselves whenever they want, trading is usually done with bond dealers, more specifically, the bond trading desks of major investment dealers. The dealers occupy centre stage in the vast network of telephone and computer links that connect the interested players. Bond dealers usually "make a market" for bonds. What this means is that the dealer has traders whose responsibility is to know all about a group of bonds and to be prepared to quote a price to buy or sell them. The role of the dealers is to provide "liquidity" for bond investors, thereby allowing investors to buy and sell bonds more easily and with a limited concession on the price. Dealers also buy and sell amongst themselves, either directly or anonymously via bond brokers. The name of the trading game is to take a spread between the price the bonds are bought at and the price they are sold at. This is the main way that bond dealers make (or lose) money.

- **Bond Investors**

The major bond investors are financial institutions, pension funds, mutual funds and governments, from around the world. These bond investors, along with the dealers, comprise the "institutional market", where large blocks of bonds are traded. There is no size limit, and trades involving sum as high as Rs. 500 million or Rs. 1 billion at a time can take place. There similarly is no size restriction in the "retail market," which essentially involves individual investors buying and selling bonds with the bond trading desks of investment dealers.

2.1.16 Why Interest Rates Change

When interest rates change, it is the result of many complex factors. People who study interest rates find that it is as difficult to forecast future interest rates. Since interest rates reflect human activity, a long-term forecast is virtually impossible. After the fact, explanations are many and confident! Some of the major factors which help to dictate interest rates are explained below.

- **Supply and Demand for Funds**

Interest rates are the price for borrowing money. Interest rates move up and down, reflecting many factors. The most important among these is the supply of funds, available for loans from lenders, and the demand, from borrowers. For example, mortgage market can be taken. In a period when many people are borrowing money to buy houses, banks and trust companies need to have funds available to lend, which can be obtained from its own depositors. The banks pay 6% interest to depositors and charge 8% interest to its

borrower. If the demand for borrowing is higher than the funds available, the interest rates can be raised or borrow money from other people by issuing bonds to institutions in the "wholesale market". The trouble here would be the source of funds being more expensive. Therefore interest rates would go up. If the banks and trust companies have lots of money to lend and the housing market is slow, any borrower financing a house will get "special rate discounts" and the lenders will be very competitive, keeping rates low.

This happens in the fixed income markets as a whole. In a booming economy, many firms need to borrow funds to expand their plants, finance inventories, and even acquire other firms. Consumers might be buying cars and houses. These keep the "demand for capital" at a high level, and interest rates higher than otherwise it might be.

- **Monetary Policy**

Another major factor in interest rate changes is the monetary policy of governments. If a government loosens monetary policy, this means that it has printed more money. If the Central Bank has created more money by printing it, interest rates will lower, because more money is available to lenders and borrowers alike. If the supply of money is lowered, it will tighten monetary policy and causes interest rates to rise. Governments alter the money supply to try and manage the economy. The trouble is, it is unpredictable regarding the amount of money necessary and the way to utilize it once it is available.

- **Inflation**

Another very important factor is inflation. Investors want to preserve the "purchasing power" of their money. If inflation is high and risks going higher, investors will need a higher interest rate to consider lending their money for more than the shortest term. After the very high inflation years of the 1970s and early 1980s, lenders had to receive a very high interest rate compared to inflation to lend their money. As inflation dropped, investors then demanded lower rates as their expectations become lower. We can imagine the plight of the long-term bond investor in the high inflation period. After lending money at 5-6%, inflation moved from the 2-3% range to above 12%. The investor receives 7% less than inflation, effectively reducing the investor's wealth in real terms by 7% each year.

2.1.17 Bond Management Strategies

Bond management strategies are based on interest rate anticipation, sector rotation and security selection.

- **Interest Rate Anticipation**

Strategies which involve forecasting interest rates and altering a bond portfolio to take advantage of that forecast are called interest rate anticipation strategies. Interest rates are the most important factor in the pricing of bonds. The price of a bond is based on its interest rate or yield at any particular time and the most important influence on a bond's yield is the market interest rate structure. The market interest rate for any particular term of bond is generally agreed to be represented by the yields on government bonds, as these are viewed as highly liquid and of very low default risk.

a. Basic interest rate anticipation strategy involves moving between long-term government bonds and very short-term treasury bills, based on a forecast of interest rates over a certain time horizon.
b. Yield curve strategies are more sophisticated interest rate anticipation strategies take into account the differences in interest rates for different terms of bonds, called the term structure of interest rates. A chart of the interest rates for bonds of different terms is called the yield curve. A yield curve strategy would position a bond portfolio to profit the most from an expected change in the yield curve, based on an economic or market forecast.

- **Sector Rotation in Bonds**

A sector rotation strategy for bonds involves varying the weights of different types of bonds held within a portfolio. An investment manager will form an opinion on the valuation of a specific sector of the bond market, based on the credit fundamental factors for that sector and relative valuations compared to historical norms and technical factors, such as supply and demand, within that sector. A manager will usually compare his/her portfolio to the weightings of the benchmark index that s/he is being compared to on a performance basis.

- **Security Selection for Bonds**

Security selection for bonds involves fundamental and credit analysis and quantitative valuation techniques at the individual security level. Fundamental analysis of a bond considers the nature of the security and the potential cash flows attached to it. Credit

analysis evaluates the likelihood that the payments will be received as contemplated, or at all. Modern quantitative techniques use statistical analysis and advanced mathematical techniques to attach values to the cash flows and assess the probabilities inherent in their nature.

2.2 Review of Finance Journals

In line to least development in debt securities and its market in Nepal, there are not many studies done in debt securities market. Due to this researcher has given more focus to review journals published internationally. The researcher believes such study would help Nepalese debt market to prosper.

2.2.1 Are long – term bond yields excessively volatile?

The above journal is extracted from emrald.com published in Journal of Economic Studies, Vol. 28, and year 2001. The researcher Zhen Zhu from University of Central Oklahoma, Oklahoma USA has tried to find out whether long – term bond yields are excessively volatile or smooth through data of 200 years on interest rates. The study was conducted due to conflict between different studies regarding volatility of yield of long term bonds. Singleton (1980) found long – term bonds to be excessively volatile. Flavian (1981), Marsh & Merton (1986) however pointed out that Shiller and Singleton's test are biased toward finding excessive volatility, since short are non – stationery.

The researcher has extended the study of Cushing and Ackert (1994) the study of Cushing to a long span of data. Cushing and Ackert drew conclusion of excess volatility

when short term rates are modeled as a stationary process. The researcher had performed volatility test for both short – term and long – term bonds. From the test researcher found longer span of data to be more informative about the property of the long rates. Using shorter span of data the researcher found less significantly smooth rates. The researcher performed volatility tests based on root tests and found out that long rates are excessively smooth in the sense that the variances of long rate innovations obtained from the information about current and past short rates are in general quantitatively larger. And significantly they are different from the long rate innovations predicted from both short and the long rates. This test provided empirical support to the expectation model of term structure of interest rates.

2.2.2 Information Asymmetry, Monitoring, and the Placement Structure of Corporate Debt

This journal was published in Journal of Financial Economics, volume 51, issued in the year 1999. The study was carried out by S. Krishnaswami et al. affiliated with university in New Orleans, USA.

The study is focused on impact of flotation costs, agency conflicts, regulation, and information asymmetries on a firm's mix between public and private debt. The study is conducted using data on privately placed and publicly issued debt for a sample of 297 publicly traded firms of US over the time period 1987–1993, we empirically examine why many firms borrow in both debt markets and what determines the placement mix they select. The focus is given to the firms that have access to both private and public

debt. Here private debt refers to Private debt includes bank loans, finance company loans, mezzanine financing, and other debt that is privately placed with or without intermediate agents.

The result of study indicated flotation costs in public debt issues to be a significant part of the cross sectional variation in placement structure and firms with larger issue sizes exploit the scale economies in flotation costs of public debt with lower proportions of private debt. It also found that firms with higher contracting costs due to moral hazard have higher proportions of private debt. Moreover very little evidence of firms with favorable private information about future profitability choosing more private debt was found. However, firms with favorable information about future profitability operating under greater information asymmetry relying more on private debt was identified. Through the study they found out that the firms in the sample used over 60% of their long term debt funded by private debt. Through the study the researchers also found that the firms with more growth options in their opportunities choose private debt in order to get benefit of close monitoring and avoid costs arising due to conflict between share holders and bond holders. As a whole the study pointed out that small firms are more attracted towards the private debt due to high cost included in issuance of public debt. On the contrary larger firms are attracted towards public debt as they enjoy benefit of low issuance cost due to mass issuance of public debt. So issuance cost has huge impact on firms for choosing public or private debt.

2.2.3 The Maturity of debt issues and predictable variation in bond returns

Published in Journal of Financial Economics issue 70 in year 2003, this journal was written by M. Baker et al. Above journal was downloaded from elsevier.com.

The major concern for each organization is to choose perfect combination of debt and equity that would minimize its cost. In the view of Modigliani and Miller and Stiglitz cost of different capital do not vary independently in an efficient, integrated and perfect capital market. So in these type of market there is no gain exists through change in the form of capital of changing the term structure of the capital issue. But due to the capital market being inefficient or segmented and optimal capital structure and rational expected returns tend to vary over the time period, cost of different forms of capital are different from each other. The cost of different capital changes at different situation and time period. The change is driven by different factors which organization needs to identify in order to identify perfect combination that would lower the cost of capital of the firm. The journal has tried to find out the significance of time series variation in maturity of debt in predicting excess long term debt yields. Generally firms tend to issue long term debts when long term bond returns are relatively low. The researchers of the journal tried to find out whether the above practice is more consistent with debt market timing or with an explanation that involves time – varying optimal debt maturity and rational variation in expected bond returns. To be more specific the researchers tried to find out whether variation in the maturity of new debt issues is connected to the debt market conditions that forecast excess bond returns and to future excess bond returns themselves.

The researcher used two sources of debt issues data, the Federal Reserve Flow of Funds (Board of Governors of the Federal Reserve System, various issues) and firm-by-firm aggregations of Compustat. The debt market variables that were used to capture predictable variation in excess bond returns were inflation (actual or expected), the real short-term interest rate (realized or ex ante), the term spread, the credit spread, and the credit term spread. Future excess bond returns were measured as the excess return of Treasury bonds over Treasury bills, and as the excess return of high-grade corporate bonds over commercial paper. Most of the tests used annual data covering 1953 through 2000. The research conducted by studying predictable variation in excess bond return due with respect to debt market conditions, debt issue data from Federal Reserve Flow of funds to examine the way the market conditions affect the debt issue maturity and its predictive power for excess bond returns using aggregated compustat data.

The researcher through the study found that the maturity of debt issues were closely connected to predictable variation in excess bond returns. As per the study firms tend to issue long-term debt when future excess bond returns are predictably low and the long-term share in total debt issues predicts excess bond returns on its own. They also found that the predictive power to appear largely to reflect its contemporaneous relationships with inflation, the real short-term rate, and the term spread—variables which themselves would predict excess bond returns. The results were consistent with the hypothesis that managers try to time the debt market using publicly available market conditions as a guide to their maturity decisions. The researcher found it difficult to determine whether issuing firms actually reduce the overall cost of capital or not. This is because of the

usual difficulties in interpreting predictability regressions. According to the researcher the results obtained hinted need of theories of debt maturity to incorporate a larger role for debt market conditions and excess bond return predictability if they are to explain basic patterns in the data.

2.3 Review of Securities Laws and Acts

In order to systematize the primary issue and secondary trading of securities various legislation regarding primary and secondary securities market, has been issued. Organizations issuing new securities and listed in secondary market for secondary trading of securities need to adhere to the regulations directed by legislation of securities. In Nepal Security Board of Nepal plays the role of securities legislator. In order to make securities issue and trading systematic it has issued various act and ordinances. Some of important acts and ordinances are listed below:

- Security exchange Act, 1983
- Securities exchange Licensing regulation, 1983
- Security allotment guidelines, 1994
- Securities listing Bye – laws, 1996
- New Issue management guidelines, 1997
- Company act, 1997
- Membership of stock exchange and Transaction Bye laws, 1998
- Securities registration and issue approval guideline, 2000

Apart from above acts there are some other acts like insurance act, banking and financial ordinance etc needs to be followed while issuing the securities by related organizations. Some important provisions made regarding securities issues and trading are pointed below:

a) Company Act, 1997

Company Act, 1997 has pointed out following regulations regarding securities issuance and trading:

- The prospectus issued at the time of security issuing should incorporate company's objectives and important points that are mentioned in memorandum and article of association
- Minimum number of shares needed to become board of director.
- Introduction of directors and promoters and their remuneration and rewards.
- Detail information regarding amount, par value, number and type of securities being issued and its application process.
- Reasons for issuing securities at premium if it is issued in premium.
- Allotment of securities needs to be done within three months from the invitation by company to apply for the share but if company is not able to collect 50% of shares within three months then the time period could be extended.
- Provision regarding representation of general shareholder in board of directors.
- Provision of bonus shares should be made public by the company.

- Primary and secondary transaction of securities needs to be done through the organizations recognized to do security transactions including all such acts as the sale, allotment and recovery of the sum of such securities
- A share certificate in the prescribed format shall be issued to every shareholder in respect of each share purchased by him, within 3 months of the allotment of the shares. In case if the share ownership is held jointly the certificate should be addressed to any one of the joint owner.
- A company may, if it deems necessary, raise loans or issue debentures, specifying the reason therefore, the plan of action to be executed from the proceeds, and the estimated budget necessary for that purpose, with or without pledging or mortgaging the immovable assets of the company.
- As per the act any person in whose name the shares or debentures are registered in the records of the company shall be regarded as the owner, so one should register his/her name in company's book after holding ownership through secondary transaction.
- Under company act no company can sell its shares or debentures on discount.
- A company may issue preference shares subject to the privileges and restrictions as prescribed in the company Act and Memorandum or the Articles of Association of the company.
- A debenture may be converted into a share in accordance with the provisions made in the Memorandum or Articles or as per the decision made by the Board of Directors prior to the issuance of debenture. In the event of conversion of a debenture into a share, information on that matter shall be given clearly through the prospectus.

b) Security Exchange Regulation Act, 1994

The security exchange regulation act, 1994 has been issued under the securities exchange act, 1983. Under this act following provisions have been made:

- Details of memorandum, articles of association and prospects of the company.
- Acts and rules under which company is formulated
- Detail of current fixed assets
- Amount, par value, number, type and other special provisions of issuing security
- Reason of debenture issues rationality, board of director's decision and application of fund.
- Other condition and facilities of security issue.
- Reason of change in price of two times issued securities
- Types, number, amount and transaction of last three years, if securities are issued previously
- Issue manager of security and underwriting of securities
- Provision of representation in board of directors for equity shares
- Provision about distribution of profit
- Three year audited and three year projected income statement and balance sheet
- Name, cast, address, qualification of person who prepares memorandum and articles of association
- Number of institutional investors and their representation in board of directors
- Other details advised by SEBO

c) Securities Registration and Issue Approval Guidelines, 2000

As per the Securities Registration and Issue Approval Guidelines, 2000 following information are required while applying for securities.

- Objective of the public issue and should mention about the application of raised fund.
- Description of company
- Projected company three year net worth, profit and loss a/c, balance sheet, name, address, qualification and experience of persons who prepares statements.
- Name, address, qualification and experience of persons who prepares prospectus.
- Description of capital before and after securities issue
- Information to help rationalize people's investment decision
- Impact of finance shortage risk, materials shortage risk, production and market risks in operations and management of company
- Delaying in project completion and cost overrun risk
- Foreign currency rage fluctuation risk
- Points of deed if company is operated through foreign investment and management
- Convertibles debentures ratio of conversion with shares and time
- Information if conversion of debentures and preferred stock in equity changes in board of directors in company
- Provision of restriction in applying more than one application by one person
- Photo copy of minor birth certificate in case of applying in the name of minors
- Explanation about objectives of debentures issue, face value of debentures application. Maturity period of debentures interest rate, time and method of interest payment in prospectus

- Explanation about debentures holders right on organization assets as first right or second right. If second right exists the name of first right person should be mentioned.
- Debt and capital ratio during debentures maturity period should not exceed 70:30. If it exceeds proper justification needs to be provided.
- Comment of debentures redemption reserve fund if redemption debentures are issued
- Par value of security to be mentioned
- Information on human resource should be provided
- Statement of creditors should be provided
- Name, address and qualification of company secretary should be provided
- Name, address and qualification of auditor should be mentioned
- Agreement with issue manager of the company
- Agreement of underwriting if any
- Bases of certifying projected financial statements
- Agreement of loan with banks and financial companies
- Details of assets and liabilities revaluation at the time of conversion of private limited company into public limited company
- Commitment and remarks of experts and professional on projected income statements prepared by companies or organizations
- Reasons of deviation of profit if projected profit if greater than 20 percent of last 5 years actual profit

2.4 Review of Thesis

There is very short history of corporate debt in Nepal due to which very few studies regarding corporate debt market has been found. In Nepal the development of debt market was very sluggish. The studies conducted on debt market were more focused on government debt market of Nepal. Studies regarding corporate debt market are very nominal in Nepal in comparison to other countries. In this part some of the related thesis submitted as a partial fulfillment of Masters Degree of Business studies and articles have been reviewed.

Mainali (2002) had studied on the subject "Problem and prospects of debt market growth in Nepal". His main objective of study was to find out the bottle necks in the debt market of Nepal that is stopping it to grow like common stock market. He used both primary and secondary data for the study. Through the study he found that Nepalese investors are not much interested on investing in debt market because while investing in the securities they prefer liquidity, marketability and other features that are present in equity market. He has suggested that debt market being vital for the economic development in the country and has focused government role to be more important in development it. As a part of government role he has focused in passing favorable laws, removing inappropriate provisions regarding debt market and introducing new provisions that help flourishing debt market of Nepal. He also adds that new laws relating to investor's interest protection should be formulated in order to develop the debt market of Nepal.

Bhattarai (2002) had studied on the "Problems and prospects of debt security market in Nepal". From the study using both primary and secondary data he drew a conclusion that corporate debt gets least priority than that of common stock and government debt securities. Through the survey he found that common stock gets first priority for investment, government securities in second and corporate debt gets third priority as an alternative for investment in the view of investor. In his view the existing rules and regulations for the growth of Nepalese debt market are insufficient. He also views decreasing trend of interest rate of commercial banks in deposit as another reason for corporate debt market not grooming. He thus suggests that new rules and regulations should be introduced in order to bridge the gap and also suggests the depositors to invest in debt securities.

Pahari (2003) has studied on the "Debt market growth in Nepal". He conducted study with the objective to analyze the structure of securities market in Nepal and to examine its key characteristics. He also studied duration and valuation of Nepalese corporate debt securities. As in other studies he too drew the conclusion that common stock and government securities come first in the mind of investor and corporate debt gets third priority while investing securities. He too has emphasized the government role in making corporate debt market more attractive for investment.

Pandey (2006) also had conducted study on "Issues and Prospects of Developing Corporate Debenture\ Bond Market in Nepal". He conducted the study with objective to evaluate and identify existing prospects and issues of corporate debenture market and examine its growth potentiality. He too has found the main reason for the slow growth of

the corporate debt market is due to the high preference of investors towards common stock. He has found some prospects of corporate debt market growth as commercial bank's interest in issuing debenture in order to meet capital requirement issued by NRB. He has concluded that the development of corporate market is must for the development of overall securities market of Nepal. He has recommended the government role in developing corporate debt market through various activities like tax rebates, introduction of rules and regulations in order to protect the interest of investors, maintain political stability and establishment of securities and credit rating agencies.

Goyal (2007) in her study "Trends and Problems of Bond Market – The Nepali Context" tried to evaluate the nature of bond market in Nepal. She used secondary data to identify the major problems of Nepalese bond market development and their cause. In her study, she tried to find out the importance of bond financing and growth potentiality of Nepalese bond market. Through her study, she found that Nepalese bonds are underpriced and have duration less than maturity period. She found that the proportion of corporate debt sector to total debt is very low and investors are interested to invest mostly in debenture of commercial banks. She has pointed weak governance, lack of central market infrastructure, lack of credit rating agencies and lack of trained professionals as the reason for the sluggish debt market growth in Nepal. She hence has recommended for the increased government role for encouraging bond market practice, encourage other business sectors to issue bond for fund collection. She has also suggested for formation of credit rating system and has suggested for different platform for debenture trading as debenture and common stock have different features. She has also suggested additional

effort from brokers for the promotion of debt market in Nepal and has pointed out proper information disclosure as must for development of debt market in Nepal.

Kakshapaty (2008) had conducted study on "Investors Preference and Financial Instruments in Nepal". She used both primary and secondary data in her study to explore the most widely used financial instrument in Nepal. She wished to analyze and understand the investor's preference towards different financial instruments. Through the study she found that the Nepalese securities market is dominated by common stock. She also found that there is very poor information disclosure practice in Nepal and investor's awareness towards different types of securities is poor. In case of secondary trading of securities, she found that the secondary market is dominated by trading of common stock of commercial banks. She has recommended on increasing investor's awareness level towards different financial instruments and to attract them towards capital market. She has suggested in issuance of Hybrid instruments in Nepalese capital market. For the investors she has suggested to study and analyze prior to investment in any securities and to listed companies she has suggested analyzing investor's psychology and preference while issuing securities and has suggested issuing different types of financial instruments.

2.5 Research Gap

From the review of the previous studies presented above it can be concluded that all the studies done have focused in the problem side of corporate debt market in Nepal. Moreover their primary focus is on the role of government in the development of the corporate debenture market. In the developing country like Nepal, debenture being new

instrument with very short history, there is very few research conducted in the corporate debenture market. This has an adverse effect on the growth of debenture market of Nepal.

On the above note this research has tried to bridge the research gap and has tried to point out the various aspects of prevailing Nepalese corporate debenture market. The research has not only identified and analyzed the problems that the debenture market of Nepal is currently facing, but also has tried to find out the various measures including change in current practice, change in policies, change in rules and regulation etc for sound growth of Nepalese corporate debenture market. The research contains study about the secondary trading of the debentures floating in Nepalese secondary market which was not studied in earlier researches. Further the research has highlighted the effect of the capital adequacy requirement which has been recently implemented by NRB to all the commercial banks in Nepal, which was not mentioned in earlier studies. On top of above the research contains data up to fiscal year 2006/07; the previous studies were done taking data up to fiscal year 2005/06 only. Hence this research would bridge various research gaps and provide various aspects of Nepalese debenture market and effectively help in its development.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view (Kothari, 1990:10). In other words, research methodology describes methods and processes applied in the entire part of the study. One of the major objectives of this study is to analyze, examine, highlight and interpret the financial as well as statistical tools to analyze the data in order to reach a conclusion. Therefore, appropriate research methodology is required.

This chapter deals with the research design, nature and sources of data, data collection procedure and tools and technique of analysis. The study follows the research methodology as described below.

3.2 Research Design

A research design is the arrangement of conditions for collection and analysis of data that aims to combine relevance to the research purpose with economy in procedure. Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variances. Research design includes definite procedures and technique which guide to sufficient way for analyzing and evaluating the study. To achieve the objective of this study, descriptive and analytical research design has been used. Some financial and statistical tool has also been applied to examine facts

and descriptive techniques have been adopted to evaluate the debenture market of Nepal. Both the primary and secondary data have been used in order to achieve the above objective.

3.3 Sources of Data

The study deals with both the primary as well as secondary data. As for primary data the researcher has used questionnaire and direct interview method wherever appropriate. A set of questionnaire (see Appendix I) has been developed for various respondents that would provide research data. Further direct interview have been made with respondents by the researcher. Here the respondents are staffs from listed companies, brokers, issue managers, individual investors and other experts. For secondary data quarterly Economic Bulletins Published by NRB, various Economic reports, Economic surveys, debenture prospectus, Annual Report of Securities Board, various publications of NEPSE, economic journals, periodicals, bulletins, magazines and other published and unpublished reports and documents from various sources. All the secondary data are compiled, processed and tabulated in the time series as per the need and objectives. Formal and informal talks with the concerned authorities of the SEBO and NEPSE were also helpful to obtain the additional information of the related problem.

3.4 Population and Sample

As stated earlier debenture market in Nepal has not been able flourished as common stock market has. There is very short history with very few organization issuing debentures. Due to this complete population has been taken for study. in case of

secondary data the organizations issuing debentures being relatively few in number population has been taken which included 9 debenture issuing companies. In case of primary data the number of listed companies, broker, issue manager, individual and other experts being huge in number, sample has been taken. The total of 100 samples was chosen for the study purpose and a set of questionnaire were provided to each of them. Only 65 out of 100 responded and returned the questionnaire. The respondents were from different sectors viz. 27 were Investors, 23 were working in listed companies, 4 were from issue managers and 11 were experts. The samples of investors have been selected from the investors that visited NEPSE from May 11, 2008 to May 22, 2008.

3.5 Research Variables

The researcher has underlined some specific research variable viz. rules and regulation of corporate debentures market, investors' attitude, information dissemination, primary and secondary markets.

3.6 Graph

Graph helps to show the general trend of the relation in respect to the time periods of the analysis. Graph is a very common way of presenting data for two variables having relationship with each other. Graph is used to show the change of a dependent variable in relation to the independent variable. Graph consists of x – axis where independent variables are tabulated and y – axis where dependent variables are tabulated.

3.7 Method of Analysis

Data analysis consists of organizing, tabulation and performing statistical analysis. Data analysis is done in order to change the unprocessed data into understandable and presentable from. For secondary data the results have been derived by using the data for the period starting from fiscal year 1990/91 to 2006/07. In case of primary data various statistical and financial tools have been used for classification, tabulation and analysis of the data.

3.7.1 Duration of Bond

Duration of bond may be defined as the weighted average numbers of years until the cash flows occur, with the relative present values of each cash flow used as weights. This concept was put forward by F. R. Macaulay in 1938. He suggested studying the time structure of a bond by measuring its average term to maturity. Hence it is also called as Macaulay Duration (MD). Mathematically MD can be expressed as below:

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

Where,

MD = Macaulay Duration

Y = Market Interest Rate (YTM)

T = Term to maturity

C = Coupon rate of debt securities

In this study the above model was used with the help of Microsoft Excel software in order to calculate the duration of Nepalese corporate debt securities.

3.7.2 Valuation Model

The valuation model used in the study for calculating the value of Nepalese corporate debt securities is as described by Brigham & Houston. The value of bond is determined as the sum of the par value that is due at the end of bond life. Mathematically it can be expressed as below:

$$V_0 = I\ (\text{PVIFA})_k^n + M\ (\text{PVIF})_k^n$$

Where,

V_0 = Intrinsic value of bond

I = Coupon amount of bond

M = Maturity value or par value of bond

k = Market interest rate

n = maturity period

Value of Nepalese debenture floating in current market in the research has been calculated through Microsoft Excel software.

3.7.3 Statistical Tools Used

Both the primary and secondary data were organized and tabulated with the help of MS Excel software. For the analysis of primary data one, of the most commonly used three forms of central tendency, median has been used throughout the thesis. Median is the middle value of an arrayed set of numbers. The primary data has been obtained with the help of questionnaire. In the questionnaire various questions were asked that require scaling. The overall ranking is derived based on the median value of the responses obtained from the respondents.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

The study focused on the current status of corporate debenture market of Nepal and to identify the problems faced by it and find out the remedies for the growth of it. In the history of Nepal only corporate debenture has been issued only 10 times. Hence whole data has been taken for the study and analysis. In case of primary data questionnaire with a set of 10 questions was prepared and distributed to different organizations including banks, hotels and trading companies. Individual investors also have been included as respondents. A total of 100 responses have been received. Apart from questionnaire, opinions from various experts have also taken in order to gather more information and for reliability of information. Thus in order to find out the true picture of current corporate debenture market of Nepal, analysis has been done with both primary and secondary data.

4.1 Presentation and Analysis of Secondary Data

4.1.1 Corporate debt securities in Nepalese Market

The existence of corporate debt securities is very nominal in Nepalese securities market highly dominated by common stock. The total instance of corporate debt issued till date is only nine. Out of nine, only two manufacturing industries have issued debenture and rest by banks. The first one to issue debenture being Bottlers Nepal Ltd. and it was followed by another manufacturing firm Shree Ram Sugar Mills. After that the only banks have been issuing corporate debentures in Nepal. Banks issuing corporate

debenture are Himalayan Bank Ltd, Nepal Investment Bank Ltd, Everest Bank Ltd, Bank of Kathmandu Ltd, Nepal Industrial and Commercial Bank Ltd and Nepal SBI Bank Ltd. The debenture issued by Bottlers Nepal Ltd. has already matured. Similarly convertible debenture issued by Shree Ram Sugar Mills amounting NPR 93 million in fiscal year 1997/98 has also been converted fully into shares. As of the observed period the debentures issued by banks exists in the market. The details of which are given below:

- "Himalayan Bond 2066" amounting NPR 360 million with 8.5% coupon interest rate paid semi – annually with 7 years of maturity period issued in fiscal year 2001/02.
- "Nepal Investment Bank Bond 2067", which was issued in fiscal year 2003/04 with coupon rate of 7.5% paid semi – annually. The bond was issued with the maturity period of 7 years and NPR 300 million was raised through the issue.
- Everest bank debenture worth NPR 300 million with 6% coupon rate paid semi – annually with maturity period of 7 years issued in fiscal year 2004/05.
- "Bank of Kathmandu Bond, 2069" worth NPR 200 million issued in fiscal year 2005/06 with coupon rate of 6% coupon rate and with maturity period of 7 years.
- "NIC Bond – 2070" issued in fiscal year 2005/06, worth NPR 200 million with maturity period of 7 years. Coupon interest paid semi – annually is 6%.
- "6% Nepal SBI Bank Debenture 2070" worth NPR 200 million with coupon interest rate of 6% paid semi – annually. It was issued in fiscal year 2005/06 with maturity of 7 years.

- "Nepal Investment Bank Bond – 2070" worth NPR 250 million with coupon rate of 6% paid semi – annually and 7 years maturity, issued in fiscal year 2005/06.
- "Nepal Investment Bank Bond – 2071" worth NPR 250 million with coupon rate of 6.25% paid semi – annually and 7 years maturity, issued in fiscal year 2006/07.

As per the annual report of SEBON out of total securities issue of 193 in between fiscal year 1993/94 and 2006/07 debentures were issued in only 9 instances. Debenture issue along with the total issue in Nepal from fiscal year 1993/94 to 2006/07 is shown in table below.

Table 4.1

Debenture issue out of Total Securities Issue

(NPR in millions)

Year	Total No Of Issues	No Of Debenture Issue	Total Issuance Amount	Cumulative Amount Of Total Issues	Corporate Debenture issue amount	Cumulative Of corporate Debenture Issue amount	% Of Debenture Issue On Total Issue
1993/94	16	-	244	244	-	-	0.00%
1994/95	10	-	174	418	-	-	0.00%
1995/96	12	-	294	712	-	-	0.00%
1996/97	5	-	332	1,044	-	-	0.00%
1997/98	12	1	462	1,506	93	93	20.13%
1998/99	5	-	258	1,764	-	93	0.00%
1999/00	6	-	327	2,091	-	93	0.00%
2000/01	9	-	410	2,501	-	93	0.00%
2001/02	12	1	1,441	3,942	360	453	24.98%
2002/03	18	-	557	4,499	-	453	0.00%
2003/04	14	1	1,028	5,527	300	753	29.18%
2004/05	14	1	1,627	7,154	300	1,053	18.44%
2005/06	29	4	2,443	9,597	850	1,903	34.79%
2006/07	31	1	2,758	12,355	250	2,153	9.07%
Total	**193**	**9**	**12,355**		**2,153**		

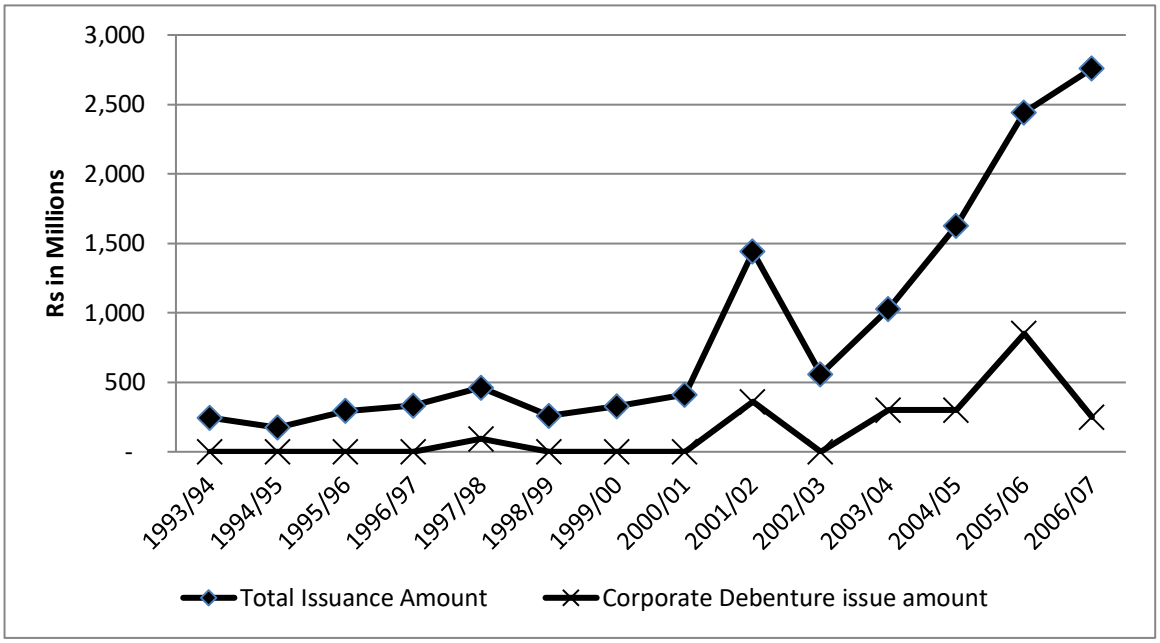
Source: Annual report SEBO 2006/07

The above table shows debenture issued in the observed period was only 9 out of total securities issue of 193. The total issue of debenture amounted NPR 2,153 million against total securities issue worth NPR 12,355 million. In fiscal year 1997/98, debenture issue worth NPR 93 million which was 20.11% of the total securities issue in that year. The next debenture issue was witnessed in fiscal year 2001/02 amounting NPR 360 million and was 24.98% of total securities issued in the year. In the next fiscal year 2002/03 there was no any debenture issue, but from fiscal year 2003/04 debenture issue go momentum. Debenture issue has been regular since 2003/04 till observed period. In fiscal year 2003/04 and 2004/05 debenture worth NPR 300 million in each year was issued which were 29.20% and 18.44% of total securities issued in the same fiscal year respectively. In fiscal year 2005/06 Nepalese securities market witnessed 4 debentures worth NPR 850 million issued in a fiscal year. Debenture issue in 2005/06 contributed 34.79% of total securities issued in that fiscal year. In fiscal year 2006/07 Nepalese corporate debenture market saw the issuance of debenture worth NPR 250 million which was 9.07% of total securities issue.

The comparison between total securities issued and debenture issued during the observed period is shown in figure below:

Figure 4.1

Debenture out of Total Securities Issue

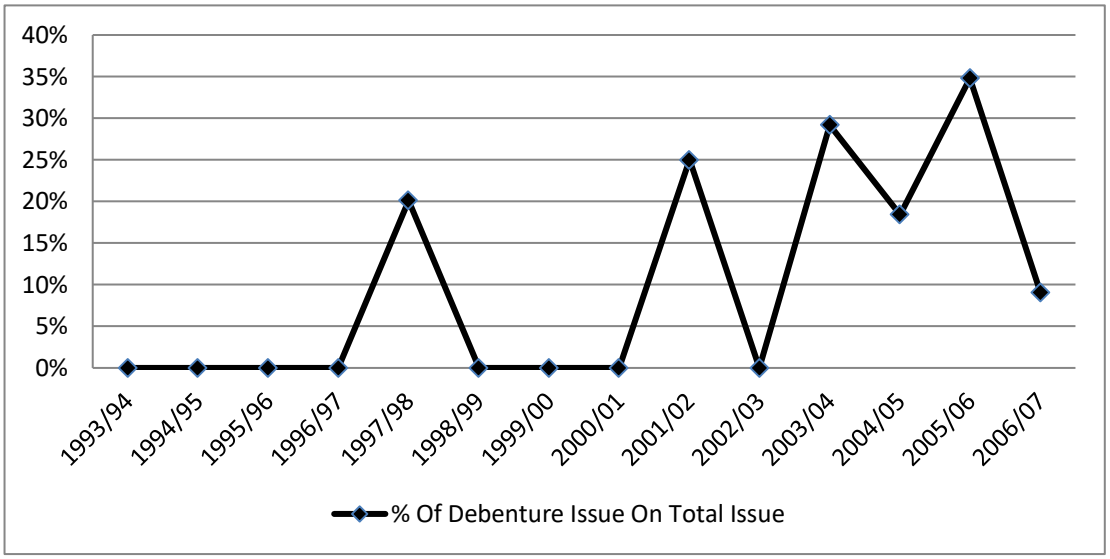


In the figure above we can see the similar trend of both total securities and debenture issued till fiscal year 2005/06. At the end of observed period the debenture issue has been declined, while total securities issue is in increasing trend. The total securities issue amount prior to fiscal year 2001/02 was below NPR 500 million which increased to nearly NPR 1,500 million in year 2001/02. In case of debenture prior to 2001/02 debenture issue was witnessed only in 1997/98. Debenture issue was more frequent after 2001/02. The figure shows both debenture issue and total securities issued has started to increase from fiscal year 2003/04 and by the end of the period total security issue is still rising but debenture issue has fallen down. Keeping past trend into consideration debenture issuance is expected to rise next year.

The figure below has been presented to show percentage covered by debenture issued during fiscal year 1993/94 to 2006/07.

Figure 4.2

Percentage of Debenture Issue out of Total Issue



During the observed period, there were no debenture issued till fiscal year 1997/98. In 1997/98 Shree Ram Sugar Mills issued convertible debenture worth NPR 93 million which was 20.11% of total securities issued in that fiscal year. No any debentures were issued in next three years. Later in 2001/02 Himalayan Bank issued debenture worth NPR 360 million which was 24.98% of total securities issued. Debenture issue was frequent after 2003/04 with the issue of NPR 300 million each in fiscal year 2003/04 and 2004/05 and NPR 850 million in fiscal year 2005/06. The issue were 29.20%, 18.44% and 34.79% of the total securities issued in fiscal year 2003/04, 2004/05 and 2005/06 respectively. In fiscal year 2006/07 the debenture issue out of total securities issue has decreased to 9.07%. The figure shows the fluctuating trend of debenture issue percentage out of total securities issue but the positive thing is the proportion has been increasing year by year.

4.1.2 Position of Corporate Debt in Total Debt Market of Nepal

Total debt comprises of government debt securities and corporate debt. In order to fulfil its fund requirement, both government and private corporate sector borrows fund from public through debt securities. Debt securities issued by government are government debt which includes treasury bills, national saving bonds etc. and debt securities issued by private sector are corporate debt which includes bonds or debenture.

Nepalese government issues treasury bills in order to fulfil its short term fund requirement while National Saving Bonds and Citizen Investment Certificate in order to fulfil its long term fund requirement. These securities being issued by government are very popular in Nepalese debt market. These debt securities have interest rate higher than the prevailing market interest rate and with maturity period of up to 15 years from the date of issuance. These instruments are issued with the intention to cap the unutilized funds of general public and utilize the same in development of the country.

Corporate debt on the other hand has very small history and is not much popular to public too. Corporate debt includes debentures issued by private sector in order to fulfil its fund requirement. In Nepal very few corporate debentures have been issued. The corporate debenture issued have maturity period ranging from 3 to 8 years and with coupon interest higher than prevailing market interest rate.

The position of both corporate and government debt in Nepalese debt market is shown in table below.

Table 4.2

Position of corporate and government debt in total debt market

NPR in million

Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Govt. Debt	60,044	73,627	84,645	86,134	87,564	89,955	99,304
Corporate Debt	93	453	453	753	1,053	1,903	2,153
Total Debt	60,137	74,080	85,098	86,887	88,617	91,858	101,457
Percentage of Corporate debt to total debt	0.15%	0.61%	0.53%	0.87%	1.19%	2.07%	2.12%
Percentage of Govt. debt to total debt	99.85%	99.39%	99.47%	99.13%	98.81%	97.93%	97.88%

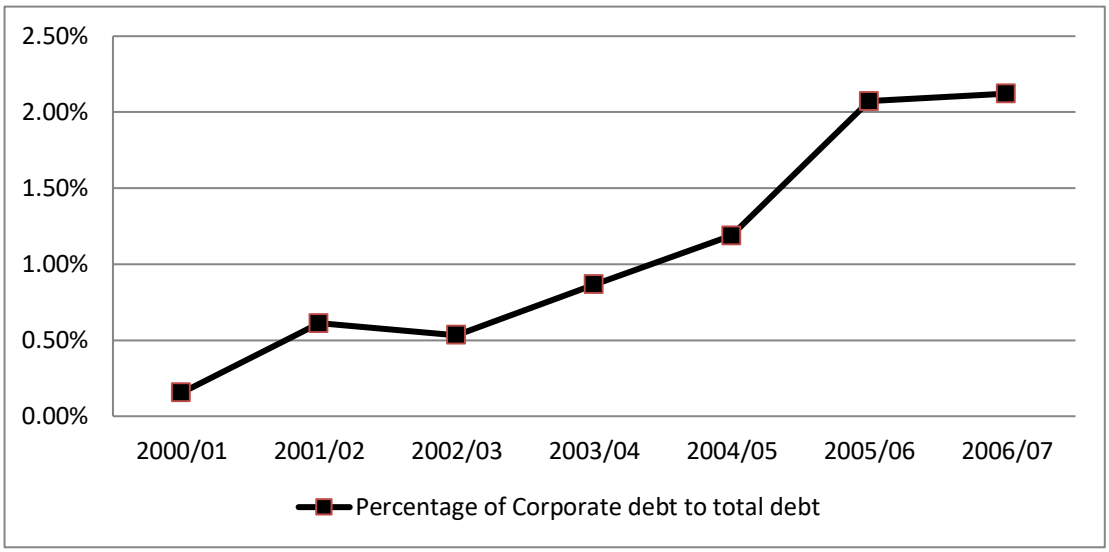
Source: Annual report SEBO 2006/07 and NRB Quarterly Economic Bulletin mid July 2007

The table clearly shows that the corporate debt is far behind the government debt. The total debt market of Nepal is heavily dominated by government debt. One of the reasons is non issue of corporate debt in Nepalese debt market. Another reason being government debts are regarded as less risky than corporate debt. The maximum contribution of corporate debt in Nepalese debt market is 2.12% in fiscal year 2006/07 against 97.88% contribution of government debt in same year.

The figure below shows the percentage of corporate debt in total debt market throughout the observed period of 2000/01 to 2006/07.

Figure 4.3

Contribution of Corporate Debt in Total Debt of Nepal



The figure above shows the very nominal contribution of corporate debt in total debt of Nepal. However there is increasing trend of corporate debt contribution to total debt of Nepal which can be regarded as positive sign. This increase has been achieved due to new issue of corporate debt. Thus more frequent issue of corporate debt can increase its contribution in the total debt market.

4.1.3 Position of Corporate Debenture in Nepalese Capital Market

Nepalese capital market is heavily dominated by common stock issue. In past 13 years there were 193 securities issued worth NPR 12.4 billion in Nepal out of which issue of ordinary share amounted NPR 4 billion, right share issue amounted NPR 5.5 billion, preference share issue worth NPR 0.6 billion and debenture issue amounted NPR 2.1 billion. Table below shows the instrument wise yearly security issue approval.

Table 4.3

Instrument wise securities issue

NPR in million

Year	Debenture	cumulative of debenture issue	Ordinary Share	cumulative of ordinary share issue	Preference Shares	cumulative of preference share issue	Rights share	cumulative of right share issue
1993/94	0	0	228	228	17	17	0	0
1994/95	0	0	174	402	0	17	0	0
1995/96	0	0	225	627	0	17	69	69
1996/97	0	0	57	684	0	17	275	344
1997/98	93	93	119	803	0	17	250	594
1998/99	0	93	148	951	80	97	30	624
1999/00	0	93	202	1153	0	97	125	749
2000/01	0	93	279	1432	0	97	132	881
2001/02	360	453	319	1751	140	237	622	1503
2002/03	0	453	394	2145	0	237	162	1665
2003/04	300	753	658	2803	0	237	70	1735
2004/05	300	1053	377	3180	0	237	949	2684
2005/06	850	1903	580	3760	0	237	1,013	3697
2006/07	250	2153	290	4050	400	637	1,817	5514
Total	**2,153**		**4,050**		**637**		**5,514**	

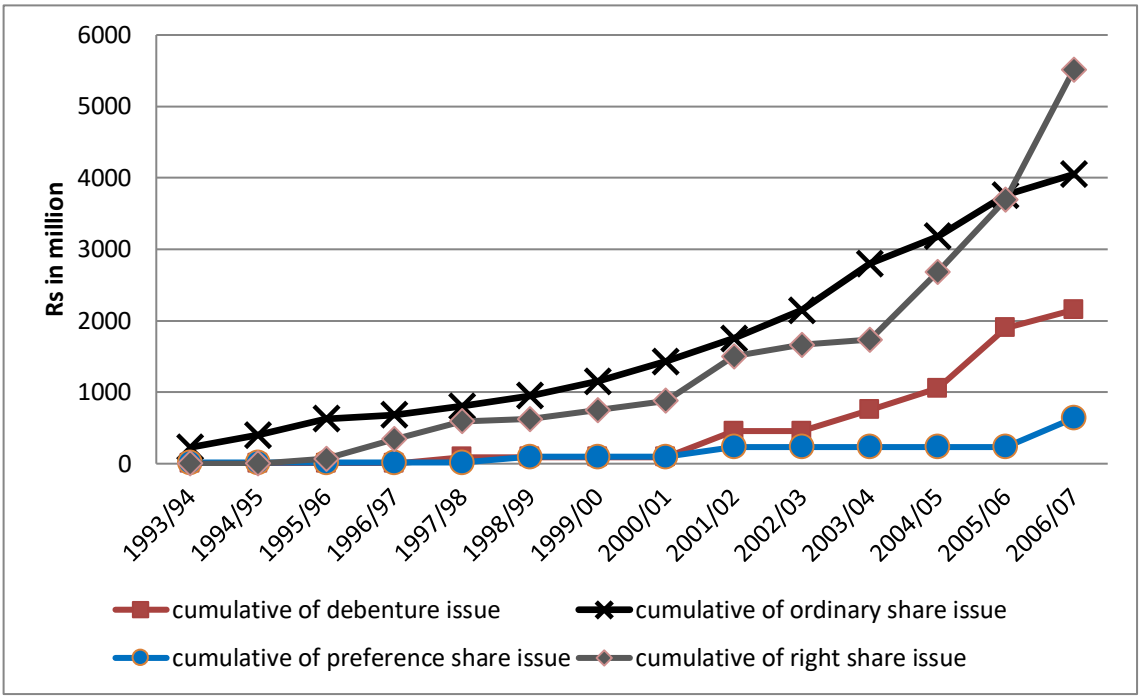
Source: Annual report SEBO 2006/07

Except for ordinary shares, there has not been regular issue of securities in Nepal throughout the observed period. Issue of right shares has been regular since 1995/96. Frequent issue of debenture was witnessed from 2001/02 but for preference shares issue has been fluctuating. The above table shows companies in Nepal are interested in issuing ordinary shares and right shares than debenture and preference share. Preference comes in least preferred least while debenture is getting popular with highest issue in a year being in fiscal year 2005/06.

The figure below shows the trend of instrument wise issuance of securities.

Figure 4.4

Trend of Securities Issue Instrument Wise

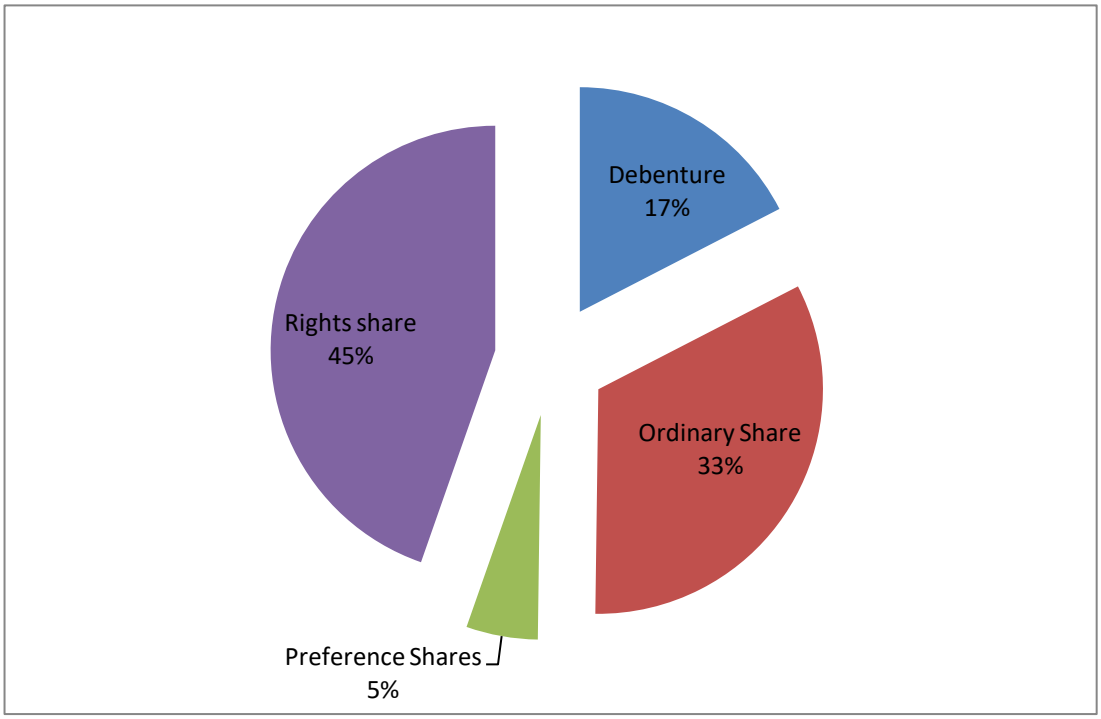


The above figure shows the lines of ordinary shares and rights shares incresing throught out the period. But in case of debenture and preference share it has been static till 2000/01. Debenture issue has increased from 2001/02 onwards but preference share issue increased in 2001/02 and remained static rest of the period. Thus through the figure we can see the good prospect of debenture, right shares and ordinary shares in future.

A look at instrument wise concentration of securities in current capital market:

Figure 4.5

Market share of Security Instrument



In the figure above it is clearly seen that securities market of Nepal is heavily dominated by Ordinary and Right share. Contribution of Rights share and ordinary share in Nepalese security market is 78% each and Debenture contribution is 17%. Preference shares contribute only 5% in Nepalese capital market.

4.1.4 Information Disclosure

In order to retain current investors and attract the new investors, company must disclose sufficient information regarding company's policies, performance and future plans. Inadequate information disclosure may discourage investors from investing in company's securities. Investors need to know about the performance of the company that s/he is

investing in. Proper and adequate disclosure of information will not only help in setting price of the securities but also help in attracting new investors to invest. Each and every investor's main motive to invest in any kind of securities is to earn good return through his or her investment. Hence to attract or retain the investors, company must assure investors that they will get good return from the investment. The only way to win the customers faith is through the disclosure of both past and present financial performance and good future business plan. Thus information disclosure is very important aspect in development and growth of securities market. Companies disclose information through financial statement, annual reports and annual general meeting. If there is not good information disclosure, possible investors both in primary as well as secondary market will not be able to receive good knowledge about the past, present and future financial solvency and profitability.

Under the provisions of present securities legislation, listed companies must furnish with the price sensitive and other important information immediately to their investors and NEPSE. In addition to NEPSE, companies are required to submit their annual and half yearly reports to SEBO/N as per the second amendment made in "Securities Exchange Act 1983". The new amendment has made companies mandatory to submit its financial statements to SEBO/N within 4 months of expiry of fiscal year and half yearly report within 2 months after the expiry of 6 months period. SEBO/N has continuously been monitoring and putting its best effort through various correspondences and public notices in order to ensure all the companies submit their reports in time. Despite this in the fiscal year 2006/07, out of 135 listed companies only 91 companies have submitted their

reports. Among the listed companies submitting the reports only 9 companies submitted within specified time.

Sector wise information disclosure by listed companies in fiscal year 2005/06 is presented in table below.

Table 4.4

Sector wise information disclosure by listed companies

Sector	no of listed companies	no of companies disclosing information	percent
Commercial Bank	15	14	93.33%
Development Bank	16	9	56.25%
Finance Company	53	40	75.47%
Insurance Company	16	10	62.50%
Hotel	4	3	75.00%
Manufacturing & Processing Company	21	8	38.10%
Trading Company	5	3	60.00%
Others	5	4	80.00%
Total	**135**	**91**	67.41%

Source: Annual report SEBO 2006/07

The table above clearly shows the poor information disclosure practice in Nepal. Only 67.41% of the total listed companies have submitted their annual reports to SEBO/N in fiscal year 2006/07. Commercial Bank segment was impressive with 14 out of 15 companies disclosing their annual performance. The only bank not to submit the report according to annual report SEBO 2006/07 was Nepal Bangladesh Bank. In case of development bank 9 out of 16 have submitted their reports. Information disclosure from Manufacturing & Processing Companies has been poor with submission rate of 38.10%. The table shows the poor display by Nepalese companies regarding disclosure of

information which is ultimately hampering the development of securities market in Nepal.

The prevailing securities legislation states that the listed companies should conduct their AGM within six months of the expiry of fiscal year. But as per annual report of SEBO only 57 companies out of total listed companies of 135 have conduct AGM within the stipulated time. The total number of companies that held AGM during the fiscal year was 98 which include 14 commercial banks, 8 development banks, 47 finance companies, 13 insurance companies, 3 hotels, 7 manufacturing & processing companies, 2 trading companies and 4 companies from other group.

From the above analysis it can be concluded that one of the reason for sluggish growth of debenture market is poor information disclosure by the Nepalese companies. Not only growth of debenture but it has negative impact in growth of all securities. The poor information disclosure by Nepalese organizations has discouraged the existing as well as potential investors.

4.1.5 Interest Rate Analysis

Interest rates plays very important role when it comes to investing in debt. Interest is the lucrative part in any of the debt securities that attracts investors to invest in debt securities. The table below is presented to give the information on interest rates of various government securities, NRB's refinance rates, deposit and lending rates of commercial banks.

Table 4.5

Structure of interest rate

	Mid- Jul 1999	Mid- Jul 2000	Mid- Jul 2001	Mid- Jul 2002	Mid - July 2003	Mid- Oct 2003	Mid - Jan 2004	Mid - Apr 2004	Mid- Jul 2004	Mid- Jul 2005	mid - Jul 2006	Mid- Oct 2006	Mid - Jan 2007	Mid - Apr 2007
A. Government Securities														
Treasury Bills (91 - day)*	3.32	5.36	4.94	3.78	2.98	3.75	3.98	1.70	1.47	3.94	3.25	2.54	2.67	1.85
National Savings Certificates	8.5-13.25	8.50-13.25	8.50-13.25	8.50-13.25	7.00-13.00	7.00-13.00	7.00-13.00	6.50-13.00	6.50-13.00	6.50-13.00	6.00-8.50	6.00-8.50	6.00-8.50	6.00-8.50
Development Bonds	3.00-12.00	3.00-10.50	3.00-10.50	3.00-3.80	3.00-3.80	3.00-3.80	3.00-3.80	3.00-3.80	3.00-3.80	3.00-3.80	3.00-3.80	3.00-3.80	3.00-3.80	3.00-6.75
B. Nepal Rastra Bank (Policy Rates)														
Bank Rate & Refinance Rate	9.00	6.50-7.50	4.00-6.50	2.00-5.50	2.00-5.50	2.00-5.50	2.00-5.50	2.00-5.50	2.00-5.50	1.50-5.50	1.50-6.25	1.50-6.25	1.50-6.25	1.50-6.25
Refinance Rate (against Foregin Currency Loans)	5.50	5.50	5.50	2.00	2.00	2.00	2.00	2.00	3.25	3.25	3.25	3.25	3.25	3.25
C. Commercial Banks														
1. Deposit Rates														
Saving Deposit	5.75-8.00	4.00-6.50	3.50-6.50	2.50-6.25	2.5-6.0	2.50-6.00	2.50-5.50	2.25-5.00	2.00-5.00	1.75-5.00	2.00-5.00	2.00-5.00	2.00-5.00	2.00-5.00
Time Deposit														
3 months	4.00-7.50	4.00-6.00	2.50-6.00	2.50-5.25	2.00-5.00	2.00-5.00	2.00-5.00	2.00-4.50	2.00-4.00	1.50-4.00	1.50-4.00	1.50-4.00	1.50-4.00	1.50-4.00
6 months	6.00-8.00	5.00-6.75	3.50-6.75	2.50-6.00	2.50-6.00	2.50-6.00	2.50-6.00	2.50-5.50	2.00-4.50	2.50-4.50	1.75-4.50	1.75-4.50	1.75-4.50	1.75-4.50
1 year	7.25-9.50	6.00-7.75	4.50-7.75	3.50-7.00	3.00-7.00	3.00-7.00	3.00-7.00	2.75-6.00	2.75-5.75	2.25-5.00	2.25-5.00	2.25-5.00	2.25-5.00	2.25-5.00
2 year & above	7.25-10.25	5.75-8.50	4.25-8.50	3.25-8.00	3.25-7.50	3.25-7.50	3.25-7.50	3.00-6.50	3.00-6.00	2.50-6.05	2.50-6.40	2.50-6.40	2.50-5.50	2.50-5.50
2. Lending Rates														
Industry	11.00-17.00	10.50-15.50	7.00-15.00	7.00-14.50	8.50-14.00	8.50-14.00	8.50-14.00	8.50-14.00	8.50-13.50	8.25-13.50	8.00-13.50	8.00-13.50	8.00-13.50	8.00-13.50
Agriculture	14.00-15.50	12.00-14.50	12.50-14.50	12.00-14.00	10.50-14.50	10.50-14.50	10.50-14.50	10.50-13.00	10.50-13.00	10.00-13.00	9.50-13.00	9.50-13.00	9.50-13.00	9.50-13.00
Export Bills	7.50-15.00	7.50-15.00	7.00-12.50	6.50-12.00	4.00-12.50	4.00-12.50	4.00-12.50	4.00-11.50	4.00-11.50	4.00-12.00	5.00-11.50	5.00-11.50	5.00-11.50	5.00-11.50
Commercial Loans	11.00-17.00	9.00-16.50	7.00-16.00	7.00-16.00	7.50-16.00	7.50-16.00	7.50-16.00	9.00-15.50	9.00-14.50	8.00-14.00	8.00-14.00	8.00-14.00	8.00-14.00	8.00-14.00
Overdrafts	10.00-19.00	10.00-18.00	10.00-18.00	11.00-17.00	10.00-17.00	10.00-17.00	10.00-17.00	10.00-16.00	10.00-16.00	5.00-14.50	6.50-14.50	6.50-14.50	6.00-14.50	6.00-14.50
D. Financial Institution														
Agriculture Development Bank of Nepal **														
To Cooperatives	12.00-15.00	11.00-12.00	11.00-12.00	10.00-12.00	10.00-12.00	10.00-12.00	10.00-12.00	10.00-12.00	10.00-12.00	1.50-13.50	8.00-9.50	8.00-9.50		
To others	14.00-17.00	12.00-16.00	12.00-16.00	12.00-16.00	12.00-16.00	12.00-16.00	12.00-16.00	12.00-16.00	12.00-16.00	10.00-12.50	9.50-12.50	9.50-12.50		
Nepal Industrial Development Corporatio	15.00-17.00	15.00-17.00	13.50-14.50	12.50-13.50	12.50-13.50	12.50-13.50	11.50-12.50	11.50-12.50	12.50-13.50	12.50-13.50	12.50-13.50	na		

* monthly average

** already included in commercial bank

Source: NRB Quarterly Economic Bulletin (Mid - April 2007)

Nepal Rastra Bank has been publishing interest rates per annum on different government debt securities and borrowing and lending rate of commercial banks. For the study purpose interest rate published since 199 mid July to mid April 2007 has been used.

Interest rates treasury bills issued by government are fluctuating throughout the period. Maximum rate recorded during the study period was 5.36% back in Mid July 2000 and the lowest being 1.47% in mid July 2004. At the end of observation period i.e. in Mid April 2007 government announced 1.85% return on its 91 days treasury bills.

The table above shows that the National Savings Bond has high interest rate with compared to other government debt securities. The interest rate in NSB throughout the period was less volatile. The maximum interest rate given to NSB was 13.25% and the minimum was 6% throughout the period. High interest rate and low risk have made it the most attractive debt security in Nepalese securities market.

In case of development bonds the interest rate increased up to 12% in mid July 1999 later it dipped down up to 3%. As of mid April the interest rate in development bonds ranged from 3% to 6.75%.

Nepal Rastra Bank being institution that controls the demand and supply of liquidity in market sets the interest rate for its refinance and refinance against foreign currency loan. The refinance rates throughout the period have been decreasing and as of mid April 2007

it ranged from 1.5% to 6.25%. Refinance against foreign currency loans was 3.25% as of mid April 2007.

In case of deposit and lending rate of commercial banks, both have been decreasing throughout the observed period. The saving deposit rate of commercial bank has decreased from 5.75 – 8% per annum in the beginning of observation period to 2 – 5% at the end of observation. The interest rate of different time period of time deposit too has decreasing trend. In the similar way lending rates too have been declining. Lending rates for all kinds of loans have decreased which is due to worsening economy of the country throughout the period. The political instability, poor infrastructure for the growth of the Nepalese industry and frequently changing rules and regulation of the government has adversely affected the prosperity of Nepalese industries. This has ultimately decreased the borrowing need of the industries, which is a cause for decreasing lending rate. And the fall in lending rates have caused fall in deposit rates.

Commercial bank lending rates are varied according to different business sectors. Lending rates of all the sectors in between the observed period are in decreasing trend. Lending rates to industries have decreased to 8% - 13.5% in mid April 2007 from 11% - 17% in mid July 1999. Similarly lending rates to Agriculture, Export Bills, Commercial Loans and overdrafts have decreased to 9.5% - 13%, 5% - 11.5%, 8% - 14% and 6% - 14.5% respectively in mid April 2007.

The next table below shows the coupon interest rate of debenture floating in current securities market.

Table 4.6
Interest Rate of Debenture currently floating in Nepalese Market

Debenture	Coupon Rate
Himalayan Bond 2066	8.50%
Nepal Investment Bank Bond 2067	7.50%
Everest Bank Bond 2068	6.00%
Bank of Kathmandu Bond 2069	6.00%
NIC Bond 2070	6.00%
Nepal SBI Bank Debenture 2070	6.00%
Nepal Investment Bank Bond 2070	6.00%
Nepal Investment Bank Bond 2071	6.25%

The interest rate structure of debenture currently available in the market, as shown by the table above, ranges from 6.25% to 8.5%. The interest in debenture issued by Himalayan Bank Ltd. has high interest rate of 8.5% and the lowest being 6% issued by Everest Bank Ltd, Bank of Kathmandu Ltd, NIC Bank Ltd and Nepal SBI Bank Ltd.

The interest rate analysis above in Table 4.5 and Table 4.6 shows good prospect of debenture market development in Nepal. The lending rate in the country is higher than the interest rate of debenture which encourages industries to raise the required funds through debenture rather than bank loans. In the view of investors the low deposit rate would discouraged the savings in bank and attract them towards debenture as its interest structure is better than that of deposit interest rate.

4.1.6 Features of Nepalese Corporate Debentures

Corporate debentures have various features like call provisions, convertible or non convertible, coupon rates, maturity period etc. A look at the different features of corporate debentures floating in Nepalese debenture market:

Table 4.7

Features of Nepalese corporate Debentures

Debenture	Issue year	Issue amount (NPR in Millions)	Coupon Rate	Interest payable	Maturity period	Callable / Non Callable	Convertible / Non convertible	Trustee	Issue Manager
HBL Bond 2066	2001/02	360	8.50%	Semi - Annual	7 years	Non Callable	Non - Convertible	None	Nepal Merchant Bank and Finance Ltd.
NIBL Bond 2067	2003/04	300	7.50%	Semi - Annual	7 years	Non Callable	Non - Convertible	None	Ace Finance Ltd
EBL Bond 2068	2004/05	300	6.00%	Semi - Annual	7 years	Non Callable	Non - Convertible	None	Nagarik Lagani Kosh
BOK Bond 2069	2005/06	200	6.00%	Semi - Annual	7 years	Non Callable	Non - Convertible	None	Nepal Merchant Bank and Finance Ltd.
NIC Bond 2070	2005/06	200	6.00%	Semi - Annual	7 years	Non Callable	Non - Convertible	NIDC Capital Markets	Ace Finance Ltd
Nepal SBI Debenture 2070	2005/06	200	6.00%	Semi - Annual	7 years	Non Callable	Non - Convertible	Citizen Investment Trust	Citizen Investment Trust
NIBL Bond 2070	2005/06	250	6.00%	Semi - Annual	7 years	Non Callable	Non - Convertible	Ace Finance Ltd	Ace Finance Ltd
NIBL Bond 2071	2006/07	250	6.25%	Semi - Annual	7 years	Non Callable	Non - Convertible	Ace Finance Ltd	Ace Finance Ltd

The table above depicts almost similar features of the entire debenture currently floating in Nepalese debenture market. All debentures had seven years of maturity and all pay interest semi – annually. All debentures were non – callable and non – convertible in nature. Interest rates of the debenture ranged from 6% to 8.5% p.a. Out of seven only three had appointed trustee and the mostly used issue manager was Ace Finance Ltd.

4.1.7 Debenture trading in Secondary Market

There is only one secondary market for securities trading in Nepal. Since it started stock exchange activities from 1994, NEPSE has been providing platform for the secondary trading of all securities. There are currently 135 companies listed in the NEPSE for secondary trading of the securities. On an average, ordinary shares of 20 - 30 listed companies are traded daily in NEPSE. But despite the fact that all debentures existing in Nepalese capital market being listed in NEPSE, very few secondary trading of debenture has been witnessed. Following table shows the secondary trading of debenture market in Nepal.

Table 4.8

Secondary trading of Corporate Debenture

Debenture	**HBL**			**NIBL 2067**		
Year	**Qty**	**Rate**	**Amount**	**Qty**	**Rate**	**Amount**
2004	920	1,000	920,000	700	1,000	700,000
2005	1,895	1,000	1,895,000	1,290	1,000	1,290,000
2006	2,530	1,000	2,530,000	2,140	1,000	2,140,000
2007	100	1,000	100,000	-	-	-
Total	**5,445**	**1,000**	**5,445,000**	**4,130**	**1,000**	**4,130,000**

Source: NEPSE

The table above clearly resembles that debenture trading in secondary Nepalese market is not much popular. Since debenture first listed in NEPSE in fiscal year 1997/98 secondary trading of debenture was witnessed only in the year 2004. First trading of debenture was 50 units of Himalayan Bank Debenture in July 30, 2004 at NPR 1,000.00 each. Apart from Himalayan Bank Bond, only corporate bond traded in Nepalese market was NIBL Bond. In 2004, 920 units of HBL bonds and 700 units of NIBL bonds were traded. In the year 2005, 1895 units of HBL bonds and 1290 units of NIBL bonds were traded. Similarly in the year 2006, 2530 units of HBL bonds and 2140 units of NIBL bonds were traded. In year 2007, only 100 units of HBL bonds were traded for NPR 1 million.

One of the reasons for debenture being unpopular in secondary market is the market interest structure. The deposit interest rates in banks are less than coupon interest rate of debentures. Due to this investors are happy to own the debenture rather than selling them. The another reason being banks providing loans against debt securities as a result of which debenture holder can fulfil their short term need of funds through borrowing against debenture. Thus they do not necessarily have to sell the securities due to short term fund requirement. The less volume of debenture present in the securities market is also viewed as another reason for less trading of debentures in secondary market.

4.1.8 Upcoming Corporate Debenture Issues

The table below proves the information on debenture being issued in near future.

Table 4.9

Upcoming Corporate Debenture Issues

(In NPR millions)

Name of Issuing Company	Amount of Issue Approved
Kumari Bank Ltd.	400
Himalayan bank Ltd.	250
Salt Trading Corporation	500
Nepal Investment Bank Ltd.	250
Nabil Bank Ltd.	300
Total	**1700**

Source: www.sebonp.com

The table above shows the good prospect of corporate debenture in Nepalese securities market. As per the table corporate debenture worth NPR 1.7 billion is being issued by five organizations in the Nepalese securities market. Out of five, four are banks viz. Kumari Bank Ltd. (NPR 400 Million), Himalayan Bank Ltd. (NPR 250 million), Nepal Investment Bank Ltd. (NPR 250 Million), and Nabil Bank Ltd. (NPR 300 million) and the rest one is Salt Trading Corporation (NPR 500 million). By the time the research has been written HBL, KBL and NIB has already issued the debentures.

4.1.9 Corporate debenture issue and Commercial Banks

Reviewing the past trend of debenture issuance commercial banks have been actively participating in corporate debenture market growth in Nepal. At present all the debenture floating in current Nepalese market is issued by commercial banks. With this information the prospect of debenture issuance by commercial bank in the future

is studied in this chapter. In order to prevent the bank from liquidation, Basel Committee was formed. The Basel Committee on the Banking supervision is a committee of banking supervisory authorities that was established by the central bank governors of Group of Ten countries in 1975 (Capital Adequacy Framework 2007 issued by NRB). The Basel Committee has developed the Capital Accord called Basel I to align the capital adequacy requirement to banks which was revised and re-introduced as Basel II in June 2006. NRB has planned to implement the Basel II accord in Nepalese commercial banks from FY 2008/09. As per this accord Nepalese commercial banks are required to maintain total capital to total risk weighted assets ratio to 10%. Failure to maintain the same would expose the commercial banks to face regulatory actions. The table below gives the present scenario of capital fund to risk weighted assets of commercial banks in Nepal.

Table 4.10

Capital Fund to Risk weighted asset ratio of Nepalese commercial Banks

Year	Mid - July						
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Capital Fund / Risk weighted Assets	-5.49	-9.88	-12.04	-9.07	-6.33	-5.3	0.17

Source: Banking and Financial Statistics—No 49 July 2007

In the table above it is clearly visible that the commercial banks of Nepal are way short of meeting the capital adequacy ratio as per Basel II. Capital fund to RWA ratio of the commercial banks are negative till fiscal year 2005/06. Though the capital fund to RWA ratio in the end of the observation period was positive at 0.17%, it is way behind the minimum acceptable ratio. The commercial banks of Nepal need to increase its capital in order to maintain the capital adequacy ratio to the acceptable level. Given the fact that debentures are one of the sources for increasing capital, the

above table shows the good prospect of debenture issuance by commercial bank sectors in Nepal.

4.1.10 Valuation of Nepalese Corporate Debenture

Debenture are paid periodic interest till maturity and after maturity of debenture holders are paid face value or maturity value as promised at the time of debenture issue by issuing firm. Valuation of Bond is done by estimating the total present value of the future inflows by using market interest rate. Here valuation of debenture is done in order find value of bond at present and as per prevailing market interest rate. Valuation of bond helps investors in investing on debentures by determining whether or not to invest in the debenture and if yes the amount that the debenture is to be purchased or sold. Debenture may be under priced, over priced or exactly priced. When price of debenture is below its value, it is under priced, it is over - priced when the price of debenture is above its value and the debenture is exactly priced when its price is equal to its value. In case if the debenture is under priced the debenture is purchased and held with the expectation to attain profit from price gains. Similarly if the value of debenture is overpriced debentures should be sold in order to avoid loss. When the value of debenture is exactly priced then no action is to be taken as the price is in equilibrium.

Valuation of debenture is given by formula stated below:

$$V = I \times PVIFA_{K\%,n} + M \times PVIF_{K\%,n}$$

Where,

V = present value of debenture

I = Coupon interest

K = market interest rate

n = number of periods

PVIFA = Present value of annuity factor

PVIF = Present value of future cash flows

In case of Nepalese corporate debenture all of them pays semi annual interest and have maturity value of NPR 1000. Based on this valuation of debentures currently floating in Nepalese Security market is given in table below.

Table 4.11

Valuation of Nepalese corporate debentures

S no.	Issuing organization	Value 'NPR
1	HBL	1,126
2	NIBL 2067	1,062
3	EBL	966
4	BOK	966
5	NIC	966
6	SBI	966
7	NIBL 2070	966
8	NIBL 2071	982

The table above depicts HBL and NIBL 2067 debentures are under – priced hence investment in these debenture are encouraged. All the other debentures, apart from afore mentioned are over – priced. HBL debentures have highest value and amounted NPR 1,126. While debentures issued by EBL, BOK, NIC, SBI and NIBL with maturity date 2070 B. S. worth NPR 966 and have lowest value among the existing Nepalese corporate debentures.

4.1.11 Duration of the Nepalese Corporate Debenture

Duration of bond can be defined as a weighted average of the time periods in which cash flows from a security are received. The weight attached to each period is the present value of the cash flow received in that period divided by the present value of the security. If the security pays a single cash flow at maturity, then the duration is equal to the maturity. Frederick Macaulay suggested a method for determining price volatility of bonds for the first time. He gave the name duration to the measure, but it is now often called Macaulay duration. As per him duration is the total weighted average time for recovery of the payments and principal in relation to the current market price of the bond. Macaulay duration is used to measure how sensitive a bond or a bond portfolio's price is to changes in interest rates. As per this measure duration of bond is calculated as:

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

Where,

D = Macaulay Duration

y = yield to maturity

c = coupon rate

T = term of maturity

Using the given formula the duration of Nepalese corporate debentures has been calculated and presented below.

Table 4.12

Duration of Nepalese Corporate Debentures

S .No.	Issuing organization	Maturity period (years)	Duration (Years)
1	HBL	7	**5.52**
2	NIBL 2010	7	**5.62**
3	EBL	7	**5.79**
4	BOK	7	**5.79**
5	NIC	7	**5.79**
6	SBI	7	**5.79**
7	NIBL 2070	7	**5.79**
8	NIBL 2071	7	**5.76**

The above table depicts, duration of all the debentures in Nepal have lower duration than its term of maturity. This is due to market interest rate being less than that of coupon interest rate. The duration being less than maturity date implies that the investors will receive income prior to the maturity date. With the help of duration we can also measure the price volatility of the debenture with respect to the change in market interest rate. The higher the duration the higher will be price volatility to interest rate change and vice versa. In the table above Himalayan Bank debentures with duration of 5.52 years have less price volatility to change in market interest rate. Overall all the Nepalese corporate debentures have less price risk. Further there is inverse relation between duration of the debenture and value of the bonds. The higher the duration is the less will be the value of the debentures. This is reflected by Table 4.11 and Table 4.12. The duration thus can be used by investors in order to determine their investment strategy. If the investor believes that the market interest rates are going to decline then the investors may alter his debenture mix to include bonds carrying higher duration in order to leverage the increase in bond value. Similarly

with the expectation for increase in market interest rates the investors may wish to include bonds of lower duration to minimize the negative effect in their portfolio due to decrease in bond value.

4.2 Presentation and Analysis of Primary Data

For the purpose of study of current situation of corporate debenture market in Nepal, a questionnaire survey was conducted. The questionnaire with 10 set of questions relating to corporate debenture market situation was distributed to 100 samples from Invertors, Listed companies, issue managers/brokers and experts. Out of 100, 65 respondents gave their opinion to each question. The respondents include 27 from investors, 23 from listed companies, 4 from issue managers/brokers and 11 from experts. The questionnaires contained information on most preferable securities for investment, most preferable type of debenture for investment, investment in Nepalese corporate debentures, most preferable issuing corporate sector, major factors for slow growth of debenture market in Nepal, reasons for Nepalese corporate sectors not being interested in collecting funds through debt securities. The opinion given by the respondents to each question are tabulated and analyzed using statistical tools.

4.2.1 Most Preferable Investment Alternative

Respondents were asked to rank the relative preference in six investment alternative on a scale of 1 (high preference) to 6 (least preference). The result obtained is shown in table below.

Table 4.13

Most Preferable Investment Alternative

Investment alternatives	Median	Overall Rank
Shares	1	1
Government Bonds	3	2
Mutual Funds	4	3
Long Term Corporate Debt Securities (debenture, bonds)	4	3
Fixed deposits in financial institutions	4	3

The table above shows that shares are the most preferred investment alternative among all the securities and then comes government bonds. Mutual Funds, corporate debt securities and fixed deposit in financial institutions are least preferred investment alternative. The finding is justified by current Nepalese capital market where it is dominated by both primary and secondary trading of common stock.

4.2.2 Investment in Corporate Debenture

Question was asked regarding whether the respondents have invested in corporate debenture issued in Nepal and if yes in which corporate debenture they have invested in.

Table 4.14

Investment in corporate debenture

	Number	%
Yes	19	29.23%
No	46	70.77%

Only 29.23% of the respondents had invested in Nepalese corporate debenture issues while 70.77% did not. This clearly shows that the corporate debenture is not that much popular instrument to invest in. Table 4.15 gives the information regarding the corporate debenture that the respondents have invested in.

Table 4.15

Most invested Corporate Debenture

Invested debenture	Number	%
Bottlers Nepal (1986/87)	0	0.00%
Jyoti Spinning Mills (1992/93)	1	3.45%
Shree Ram Sugar Mills (1997/98)	0	0.00%
Himalayan Bank Ltd (2002)	4	13.79%
Nepal Investment Bank Ltd (2003)	4	13.79%
Everest Bank Ltd (2005)	2	6.90%
Bank of Kathmandu (2005)	4	13.79%
NIC Bank Ltd (2006)	4	13.79%
SBI Bank Ltd (2006)	1	3.45%
Nepal Investment Bank Ltd (2006)	5	17.24%

From the table above it is evident that Nepal Investment Bank Bond issued in 2006 is highly invested corporate debenture and is followed by debenture issued by Himalayan Bank Ltd in 2002, Nepal Investment Bank Ltd in 2003, Bank of Kathmandu in 2005 and NIC Bank Ltd in 2006.

4.2.3 Most Preferred Corporate Debenture

Respondents were asked to rank the type of corporate debenture according to their preference from 1 (high preference) to 5 (low preference). The response received is presented in table below.

Table 4.16

Most preferred corporate debenture

Debenture	Median	Overall Rank
Convertible Debenture	2	1
Debenture attached with warrants	2	1
Straight Debenture	3	2
Junk Bond	4	3
Floating Rate Bond	5	4

According to the survey convertible debenture and debenture attached with warrants are high preferable corporate debenture to invest in. Second preference was given to straight debenture buy the respondents and third and fourth preference was given to Junk and Floating Rate Bonds.

4.2.4 Most Preferred Debenture Issuing Corporate Sector

Table 4.16 depicts the highest preferred debenture issuing corporate sector in Nepal. The respondents found debenture issued by Banks as highly secured and most preferred to invest in. 87.69% of the respondents gave their opinion towards the favor of Banks. The next preferred sectors were Finance Companies and Manufacturing Industries with 3.08% of respondents giving their opinion in favor of each sector. Apart from the given option, 3.08% of the respondents stated their interest towards debenture issued by Hydro Power companies.

Table 4.17

Most preferred debenture issuing corporate sector

Sector	Number	%
Banks	57	87.69%
Finance Companies	2	3.08%
Manufacturing Industries	2	3.08%
Insurance Companies	1	1.54%
Hotel	1	1.54%
Trading Companies	0	0.00%
Others	2	3.08%

4.2.5 *Major factor for Debenture Market not being Popular*

The respondents viewed lack of awareness towards debt securities as the primary reason for the non – popularity of debenture market among investors. Limited supply of quality debt securities and lack of debt market were the other important reasons. Lack of capital gain opportunity, uncertainty of interest rates, inflation and capital market as a whole and easy availability of funds from financial institutions were viewed as having least contribution in debenture market being non popular among investors which is shown by table below.

Table 4.18

Major factor for debenture market not being popular

Factors	Number	%
Lack of awareness towards debt securities	38	57.58%
Limited supply of quality debt securities	11	16.67%
Lack of capital gain opportunity	3	4.55%
Lack of debt market	9	13.64%
Uncertainty of interest rates, inflation and capital market as a whole	4	6.06%
Easy available of funds through banks and financial institutions	0	0.00%

4.2.6 *Reason for Nepalese enterprises preferring common stock rather than debt securities for generating fund:*

The question intended to know the respondent's view regarding the primary reason for Nepalese enterprises preferring common stock for fulfilling their fund requirement rather than debt securities. Respondents were asked to rank the given four reasons from 1 (high) to 4 (low).

Table 4.19

Reason for Nepalese Enterprises' preference towards issuing common stock

Reasons	Median	Overall Rank
They think only common stocks are marketable	1	1
They already have a high debt ratio	3	2
They are unable to take the tax advantage as they aren't operating in profit	3	2
They fear of default in interest and principal payment which might lead to bankruptcy	3	2

The table above shows that Nepalese enterprises' thinking of common stock being only marketable securities was viewed most prominent reason for their preference towards issuing common stock. The other factors included Nepalese enterprises having already high debt ratio, unable to take tax advantage due to them being in loss and fear of bankruptcy due to default in interest and principal payment.

4.2.7 Reason for less trading of Debt Securities in Secondary Market

The secondary trading of debt securities in Nepalese secondary market is very low. The question asked tried to analyze the main reason for the secondary trading being very few. 53.85% of the respondents viewed lack of proper debt secondary market as a reason for less secondary trading of debt securities in Nepalese corporate debt market. 35.38% thought that lack of awareness among investor as a reason, while 10.77% viewed lack of investment alternative as a reason for less secondary trading of debt securities.

Table 4.20

Reason for less trading of debt securities in secondary market

Reasons	Number	%
Lack of Proper debt secondary market	35	53.85%
Lack of awareness among investor	23	35.38%
Lack of investment alternative	7	10.77%

4.2.8 Observations on under developed stage of debt securities market in Nepal

Ten statements were presented regarding the current debt securities market and respondents were asked to present their view whether they strongly agree or agree or are indifference or disagree or strongly disagree to the statements. The statements were as follows and the respondent's opinion is given in table below.

Table 4.21

Observations on under developed stage of debt securities market

S no	Statement	Median
1	Companies prefer to issue shares than debentures	1
2	Debt securities market is new and hence risky to rely on	2
3	There is not much scope for debt securities due to small size of market	2
4	Lack of knowledge of debt securities among investors	2
5	Lack of professional investment bankers	2
6	Irregular and inadequate supply of corporate debt securities	2
7	Inadequate infrastructure (trading mechanism, rules and regulations etc)	2
8	Low disclosures requirement for raising funds through financial institutions	2
9	Lack of incentives by government (tax incentives) to buyers and sellers	2
10	Dominance of credit oriented transaction	2

The respondents strongly agreed in only statement that is the companies prefer to issue shares than debentures. The rest of the statements were agreed by the respondents. This means they believe debt securities market being new and is risky to rely on. They also think there is not much scope for debt securities due to small size of market. Lack of knowledge of debt securities among investors and lack of professional investment bankers were evident in Nepalese debt securities market. Inadequate infrastructure, irregular and inadequate supply of corporate debt securities along with low disclosures requirement for raising funds through financial institutions are acting against the development of debt securities market in Nepal. Lack of incentives by government to buyers and sellers of debt securities and dominance of credit oriented transactions are other reasons for least development of debt securities market in Nepal.

4.3 Major Findings

The major findings from the data analysis have been concluded as follows:

- Nepalese investors prefer commons stocks to invest in rather than debt securities. This is due to lack of awareness among investors regarding debt securities, inadequate and irregular supply of debt securities and lack of proper and systematic debt securities market.
- Due to the poor performance of hotel and manufacturing industries, investors prefer investing in debt securities issued by banks and financial institutions. This has been one of the major concerns regarding growth of debt securities market in Nepal.
- The existing legal provision regarding debenture market is not sufficient and the existing acts like investor interest protection act, trust act, securities exchange acts, provision for listing debenture in secondary market needs to be revised and made strong.
- Government should prepare policy to attract investors to invest in debentures. In course of doing so, government may provide some kind of incentive or benefit to buyers and sellers of corporate debentures.
- Information disclosure is another major concern in Nepalese debenture market. Disclosure of price sensitive information is not satisfactory and sufficient. Only 67% of total listed companies disclosed their information in FY 2006/07.
- Rules and regulation that helps market interest rate to cover at least inflation rate is required for the development of debenture market.
- Political instability is another major reason for slow growth of debenture market in Nepal. Political stability would bring prosperous environment in Nepalese

industrial sector which will ultimately help in developing Nepalese debenture market.

- During the observation period out of the total issue 17% were contributed by debentures, 5% were contributed by preferred shares and 78% by common stock. This shows dominance of common stock in Nepalese capital market.
- Nepalese debt market is highly dominated by governments which contribute 97.88% of the total debt market in Nepal. While corporate debt contribute only 2.12% of the total debt market in Nepal.
- Interest rates of banks have been decreasing over the period while there is no huge fluctuation in interest rate of debenture. This is expected to attract investors to invest in debentures in the expectation of earning higher interest.
- Convertible debentures and Debentures attached with warrants were the first choice debentures according to primary data analysis.
- Very few instances of secondary trading of corporate debentures were found in Nepal. Proper infrastructure is required to support and encourage secondary trading of Nepalese corporate debentures.
- The increasing trend of debenture issuance and huge amount of upcoming debenture issuance is expected to contribute in developing Nepalese corporate debenture market.
- The requirement of capital adequacy ratio by commercial banks as outlined by BASEL II accord is expected to stimulate the banks to issue debenture as they currently do not have adequate capital to RWA ratio.
- Some of the debentures issued in Nepalese debt market are under priced. Under price debentures attract investors and encourage holding them with the expectation of gaining profit from price change in future.

- Duration of all the Nepalese corporate debentures are less than that of maturity value which means the investors will get their return before the maturity period.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The study has been focused in analyzing current difficulties of the corporate debenture market in Nepal and its future prospects. Various facts and matters required for the study has discussed and explored in the preceding chapters. Analytical assessment of various aspects of the corporate debenture market has been done by using some important financial tools. Having completed the basic analysis required for the study, the final and most important task of the researcher is to enlist findings and give recommendation for further improvement. The objective of the researcher is not only to identify the problems but also to initiate for suggesting necessary measures and help in further growth and improvement of the corporate debenture market of Nepal.

5.1 Summary

Growth of capital market and growth of economic development are synonymous to each other. Economic development of any country is stimulated by growth of industries and the growth of the industries is possible with the growth of capital market. Capital market includes all institutions or organizations that are involved in financial intermediation between savers (those who have surplus money) and borrowers (those who have deficit of funds). These include banks and non-bank financial institutions, insurance companies, stock markets, brokerage and dealers firms, savings and loans and institutions, and credit unions etc. Capital market deals with the trading of capital instruments like debt, preferred stock, common stock etc) which are sources of fund for any firm. A firm can maximize its value with the proper

combination of these capital instruments. Hence each and every capital instrument is of equal importance for each and every industry or firm. Hence debt being a part of the capital structure of the firm plays vital role in the prosperity or decline of firm. Thus we can conclude that debt securities market is important part of the capital market and development of debt market is essential for the development of capital market. In case of Nepal debt market has very short history and is in developing stage. Nepalese capital market is highly dominated by common stock and debt securities issuance during the observation period (FY 1993/94 to FY 2006/07) was 20% of the total securities issue while common stock contributed 78%. The above data clearly shows the non popularity of the debt securities in the Nepalese capital market. With the enforcement of Public Debt Act 1960, the development of the debt securities market took its first step. The introduction of Securities Exchange Act 1993 further stimulated the development of debt market.

The emergence of corporate debt market in Nepal was witnessed for the first time in FY 1986/87 when Bottlers Nepal issued 18% debentures worth NPR 5 million. In the history of Nepalese debt market, only 10 instance of corporate debenture were seen till the study period. This shows that Nepalese organizations are still not confident with raising fund through debenture. Out of the 10 issues only three are from manufacturing industries and rest are from commercial banks. Poor performance of other industries has negative impact in debenture issuance by industrial sector. Investor's preference to invest in equity rather than debt securities, due to the expectation of capital gain in common stocks, is affecting debenture issuance. Not only this but poor legislative provision regarding debenture market, political instability, poor information disclosure are also affecting the development of

corporate debenture market in Nepal. For the development of capital market both primary and secondary trading of the securities is necessary but the secondary trading of debentures is very rare in Nepal. This has adverse affect on the growth of the debenture market. Despite all these, the trend of the debenture issuance over the observation period is rising, which can be viewed as positive step towards the prosperity of debenture market. Further commercial banks issuing debentures and investor's interest in the commercial bank debentures are also helping the development of Nepalese corporate debenture market. Further decreasing deposit interest rates in banks and high lending rate has been encouraging investors to invest in debentures and corporate houses to issue the debentures, which has been able to build platform for the debenture market growth.

A field survey was also conducted in course of research on Nepalese debenture market. A total of 100 samples were selected using stratified random and judgmental sampling technique. Samples were drawn from four different categories. The total sample included 30 from listed companies, 15 from issue managers/brokers, 40 from individual investors and 15 from experts. A questionnaire with 10 questions were prepared and distributed. Out of the 100 samples only 65 responded (23 from listed companies, 4 from issue managers/brokers, 27 from individual investors and 11 from experts). Different statistical tools were used in order to analyze the response of each respondent to each question. From the survey it was found that shares were the most preferable securities for investment. Convertible debentures and debentures with warrants were most preferred debentures and investors would prefer to invest in debentures issued by bank. Lack of awareness among investors and concept prevailing in Nepalese enterprises that common stock are marketable is negative point

for development of corporate debenture market in Nepal. Lack of proper debt securities market and proper infrastructure along with dominance of credit oriented transactions are also viewed problems of Nepalese debenture market.

From the research, various problems regarding corporate debenture market has been found. Along with the problems various prospects for the development of corporate debentures has also been identified. In Nepal commercial banks are highest profit making organizations. Their growing interest towards fund collecting from debt securities in order to maintain their capital adequacy ratio can be viewed as the affirmative step towards development of corporate debenture. Further Nepal has high potential in hydro power and for hydro power plant huge capital is required. With the recent increase in hydro power companies there is the prospect of debenture issuance from these companies. Given the fact that Nepalese investors prefer common stock to debentures, issuance of convertible debenture is expected to attract the investors.

5.2 Conclusion

With compared to government debt securities market, Nepalese corporate debt securities market is in infantry stage. During the observation period from FY 1986/87 to FY 2005/06 Nepalese corporate debt market has witnessed only ten instances of debenture issuance. Out of the ten, only 3 are by manufacturing companies while rest is by commercial banks. Debenture issuance by manufacturing companies for the last time was back in FY 1997/98 by Shree Ram Sugar Mills. The Shree Ram Sugar Mills convertible debentures were heavily undersubscribed and since then no nay manufacturing industries, in fact and institution except commercial banks have issued

debentures throughout the observation period. The primary reason for the manufacturing industries not issuing debentures is their poor performance.

However the resent increasing trend of the debenture issuance by commercial banks can be viewed as the positive factor for the development of debenture market in Nepal. The debentures issued by all commercial banks were over - subscribed. The debentures issued by commercial banks had similar features like semi – annual interest payment, non – callable and had maturity period of 7 years. The valuation and computation of duration of these bonds supports the findings of previous studies. That is when the market interest rate is less than the coupon interest rate, the value of bond exceeds its par value and vice versa. Similarly decrease in coupon interest rate results in increase in duration and vice versa. Since the less the duration is the quicker will be the return, hence investors are attracted towards acquiring the debentures. All the debentures currently available in market have less duration than maturity period. Despite this, due to lack of investors awareness towards debentures, very few secondary trading of Nepalese corporate debentures have taken place.

Due to investor's high preference towards common stock and the common stocks being easily subscribed, Nepalese companies are comfortable using common stock to fulfil their fund requirement. Further they find bank financing easier and quicker source for fulfilling long term and short term debt, though debenture issuance is considered less costly than bank financing.

Thus lack of investor's awareness, companies preference to bank loans and common stock for collecting fund, poor disclosure of price sensitive information, lack of proper

legislature regarding debt securities trading, lack of effective debt market, inadequate supply of debt securities, lack of proper government strategy for the development of corporate debt market can be viewed as the major factors that has been pulling down the growth of debenture market in Nepal. In addition to above, the Securities Board of Nepal which is the regulator for the issue and trading for the securities in Nepal is still running under traditional system. This also has negative impact on the development of the debenture market in Nepal.

Along with the negative factors, some positive factors for the development of the debenture market in Nepal have been identified during the research. Commercial banks, currently the most profit generating segment in Nepal, stepping forward in issuing debentures can be viewed as the positive step towards the development of corporate debenture market in Nepal. Lately NEPSE has replaced its traditional system by modern computerized system, which also has positive impact towards development of corporate debenture market in Nepal. Increasing lending rates are expected to attract the corporate houses in generating fund from debentures. Similarly the decreasing deposit rates are expected to attract investors towards investing in corporate debentures. The future prospects for development of debenture market can be explored through the issuance of convertible debentures and asset backed debentures which would be helpful in attracting investors towards debentures and would ultimately contribute in development of corporate debenture market.

To conclude, for the development of the corporate debenture market in Nepal the aforementioned problem should be minimized and the prospects are to be explored. Debt market development is must for the development of capital market which is

essential for the development of country as a whole. Hence all the stake holders should contribute towards development of corporate debt market.

5.3 Recommendation

The study has outlined various positive and negative factors regarding Nepalese corporate debenture market growth. Capitalization of positive factors and elimination of negative factors is essential for steady growth of debenture market in Nepal. Hence with the motive of Nepalese corporate debenture market growth and based on the research study following recommendations has been pointed out.

- The study pointed out investor's awareness as one of the major factor for the development of debenture market. Investor's may be both institutional and individual. Various programs should be launched in order to educate both individual and institutional investors regarding features of debentures. Proper analysis needs to be done by the investors prior to investing in debentures.
- The existing infrastructure for the debenture market growth in insufficient. Government should develop strong rules and regulation for protection of investor's interest and overall development of debenture market. Government should provide incentives like tax rebate or lower tax for the buyers and sellers of the debentures so that they are attracted towards it.
- Credit Rating system should be introduced so that the investors could invest in the debentures according to the credit rating of the issuing company.
- Country's political situation has huge impact in its capital market. In Nepal one of the reasons for least development of debenture market is political instability. Hence political reform is must for the development of debenture market in Nepal.

- Most of the respondents expressed convertible debentures as most preferred debentures. Hence Nepalese organizations need to be encouraged to issue convertible debentures.
- Manufacturing industries and Hotel industries regarded as poor performers in current Nepalese context. Due to this investors are not willing to invest in debentures issued by these organizations. These organizations can still generate fund through debt securities by issuing asset backed debentures.
- Strict rules and regulations regarding information disclosure should be formulated and implemented. The information disclosure rate should be increased by introducing reward and punishment policy.
- Secondary trading of debentures is must for the development of debenture market. Hence, brokers need to make the debentures trading easy and service provided needs to be quick. They should provide information regarding securities to interested persons. Trading market can also be activated by providing enough frameworks and encouraging issue of floating rate bonds.
- Trading platform in Nepal needs to be dematerialized as we can see in the foreign capital markets. RTGS (Real Time Gross Settlement) System can be implemented in order to prevent possible irregularities that may arise due to the long time needed for completion of transaction. In order to support this system deposit system can be introduced where investors deposit some amount of money with broker and s/he is allowed to transact securities up to the deposit amount through online system.
- From interest rate analysis it was found that deposit interest rates have been decreasing whereas there is no huge fluctuation in coupon interest rate of

debentures. Thus depositors should invest in debentures and take the benefit of higher interest rate than depositing in banks.

- The traditional system of securities board needs to be changed and should be made scientific and systematic so that the turnaround time for the issue approval process can be reduced.
- Debt securities can create liquid and large debt market substantially. Equity market in Nepal is in better position than debenture market which can maintain sufficient credit base for debt marker growth. Hence proper policy needs to be formulated regarding private companies that would help in development of debenture market in Nepal.
- In order to develop debenture market in Nepal, a transparent and equitable market pricing system needs to be developed. Investors that are attracted towards common stock expecting capital gain, should made aware that there exists capital gain in debentures too if the market interest rate goes down.
- Nepalese enterprises are focused in generating capital through equity but they need to understand equity as well as debt is required for effective and low cost capital structure.
- Nepalese enterprises should give more preference to debentures for generating funds instead of bank loans as debentures would be less costly due to very low interest rate. Furthermore there is option of Hybrid debt instruments which attract investors.

The debenture market being one of the parts of the capital market and the capital market growth being necessary for economic growth of the country, all the related parties need to contribute in development of debt or debenture market.

BIBLIOGRAPHY

Alexander, J, et. al. (2002). *Fundamental of Investment*. New Delhi: Prentice Hall of India (P) Ltd.

Anderson, C.W. (1999). Financial contracting under extreme uncertainty: an analysis of Brazilian Corporate Debentures. *Journal of Financial Economics.* Vol. 51: 45 - 84

Baker, M; et.al. (2003). The Maturity of debt issues and predictable variation in bond returns. *elsevier.com*

Basnet, H.B. (2006). Problems and Prospects of Debt Market in Nepal. An Unpublished Master Degree Thesis, Shanker Dev Campus

Bhattarai, R. (December, 2003). Debentures are Welcome. *New Business Age.*

Bhattarai, S.M (2003). Problems and Prospects of Debenture market Growth in Nepal. An Unpublished Master Degree Thesis, Shanker Dev Campus

Bhusal, S.L. (2060, Ashad). Research in Social Sciences. Kathmandu: Sukunda Pustak Bhawan.

Brigham, E.F and Hoston, J.F. (2001). *Fundamental of Financial Management*. Singapore: Harcourt Asia PTE. Ltd,

Bringham, D.F.; et.al. (2001). *Financial Management Theory and Practice*. Singapore: Harcourt Asia PTE. Ltd.

Datta, S; et.al. (1998). Bank Monitoring and the Pricing of Corporate Public Debt. *Journal of Financial Economics.* Vol. 51: 435 – 449

Denis, D.J. and Mihov, V.T. (2002). The choice among bank debt, non – Bank Private Debt, and Public Debt: Evidence from New Corporate Borrowings. *Journal of Financial Economics.* Vol. 70: 3 – 28

Fabozzi, F.J. and Mann, S.V. (2007). *A Hand Book of Fixed Income Securities*. New York: McGraw Hill Inc.

Francis, J.C. (1986). *Investment Analysis and Management*. New York: McGraw-Hill Inc.

Gautam, R. R and Thapa, K (2003) Capital Structure Management. Kathmandu: Asmita Books and Publication.

Gitman, L. J. and Joetink, M. D. (1990). *Fundamental of Investment*. New York: Halper and Row Publisher.

Hampton, J.J. (1973). *Financial Decision Making.* New Delhi: Prentice Hall India Ltd.

Johnson, R. W. (1955). Subordinated Debentures: Debt That Serves as Equity. *Journal of Finance.* Vol. 10: 1-16

Khatri, R (2006). Issues and Prospects of Developing Corporate Bond Market in Nepal. An Unpublished Master Degree Thesis, Shanker Dev Campus

Krishnaswami, S; et.al. (1998). Information asymmetry, monitoring and the placement structure of Corporate Debt. *Journal of Financial Economics.* Vol. 51: 407 – 434

Mainali, N.K. (2003). Problems and Prospects of Debenture market Growth in Nepal. An Unpublished Master Degree Thesis, Shanker Dev Campus

Nepal Rastra Bank (2002). *Public Debt Act*

Nepal Rastra Bank (2005). *Banks and Financial Institutions Ordinance.*

Nepal Stock Exchange (NEPSE), (1998). *Security Listing Buy Law*

Pandey I. M. (1996) Financial Management. New Delhi: Vikas Publishing Pvt. Ltd.

Pradhan, R.S. (2004). *Financial Management*. Kathmandu: Buddha Academic Publishers & Distributor Pvt. Ltd.

Pradhan, R.S. (2006). *Research in Nepalese Finance*. Kathmandu: Buddha Academic Publishers & Distributors Pvt. Ltd.

Securities Board Nepal (1994). *Securities Exchange Act*

Securities Board Nepal (2000). *Securities Registration and Issue Approval Guidelines.*

Securities Board Nepal (2005). *Journal of SEBO/N.* Vol. II

Sekhar, K (1996). Guide to SEBI Capital Issues, Debentures and Listing Vol. I

Sharpe, W.F. (1987). *Fundamentals of Investment*. New Delhi: Prentice Hall of India Pvt. Ltd.

Sthapit, A.B.; et.al. (2004). *Statistical Methods*. Kathmandu: Buddha Academic Publishers & Distributors Pvt. Ltd.

Thapa, K. (2003). *Investments Theory & Practice*. Kathmandu: Kishor Offset Press.

The companies Act, 1997

Van Horne, J.C. (2000). *Financial Management and Policy*. New Delhi: Prentice Hall of India Pvt. Ltd.

Wolff, H.K and Pant, P.R. (2002). *Social Science Research and Thesis Writing*. Kathmandu: Buddha Academic Publishers & Distributor Pvt. Ltd.

www.bigbooster.com

www.blackwellpublishing.com

www.emeraldinsight.com

www.emrald.org

www.financejournals.com

www.investinginbonds.com

www.investopedia.com

www.investorwords.com

www.jstor.org

www.nepalnews.com

www.nepalstock.com

www.nrb.org.np

www.sebonp.com

www.thefreedictionary.com

www.uic.edu

Zhu, Z. (2001). Are long – term bond yields excessively volatile? *Journal of Economic Studies*. Vol. 28: 433-445

Valuation of Corporate Debentures existing in Nepalese Market

	HBL	NIBL 2010	EBL	BOK	NIC	SBI	NIBL 2070	NIBL 2071
Face Value	1000	1000	1000	1000	1000	1000	1000	1000
Coupon Rate	8.50%	7.50%	6%	6%	6%	6%	6.00%	6.25%
Maturity Period (Years)	7	7	7	7	7	7	7	7
Interest payment	Semi − annual	Semi − annual	Semi − annual	Semi − annual	Semi − annual	Semi − annual	Semi − annual	Semi − annual
Interest amount (annual)	85	75	60	60	60	60	60	62.5
Market interest rate	6.29%	6.46%	6.71%	6.71%	6.71%	6.71%	6.71%	6.67%
Valuation (NPR)	**1,123**	**1,072**	**961**	**961**	**961**	**961**	**1,267**	**977**

Duration of Corporate Debentures existing in Nepalese Market

	HBL	NIBL 2010	EBL	BOK	NIC	SBI	NIBL 2070	NIBL 2071
Face Value	1000	1000	1000	1000	1000	1000	1000	1000
Coupon Rate	8.50 %	7.50 %	6%	6%	6%	6%	6.00 %	6.25 %
Maturity Period (Years)	7	7	7	7	7	7	7	7
Interest payment	Semi − annual	Semi − annual	Semi − annual	Semi − annual	Semi − annual	Semi − annual	Semi − annual	Semi − annual
Interest amount (annual)	85	75	60	60	60	60	60	62.5
Market interest rate	6.29 %	6.46 %	6.71 %	6.71 %	6.71 %	6.71 %	6.71 %	6.67 %
Duration	**5.52**	**5.62**	**5.79**	**5.79**	**5.79**	**5.79**	**5.79**	**5.76**