

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Nepal is popularly known as developing country where financial market is still in infant stage. Its economy is known as progressive economy. To progress economically, all sectors of the economy should contribute significantly. For this, capital market can play the vital role. In the capital market, various types of financial instruments are issued and traded. Mainly these instruments are equity, government debt, corporate debt, preference share and so on. The capital market is the place or mechanism, where various kinds of financial instruments are transacted. These are transferred from one person to another by means of different ways of trading mechanism. It helps the people to utilize their funds in productive sectors and also helps to get fund for those people, who need funds to run their enterprises. The mobilization of capital and channeling it to the productive sector should be able to create an environment for economic growth.

Debt market plays vital role for improving the capital market. The debt market is that type of market, where financial instrument especially bonds or debt securities are traded. In Nepal capital market and debt market has not reached in maturity stage. There is not proper exercise of debt securities till now. So, its history is very short. We can say the history of debt securities market was started from the year 1962 A.D. when the government issued the debt securities for the first time. Then the government has been issued the debt securities regularly to meet financing needs. Presently, the public debt act 2059 and its laws and by laws are active in regulating Nepalese government debt securities market. For transaction of debt security, the ‘Security Exchange Center’ was involved. Later, when it was

converted into 'Nepal Stock Exchange' the transaction of government debt securities has not been done through Nepal Stock Exchange.

1.2 Introduction to Public Debt

Public debt is the financial obligation of the state for which the government is committed to pay back its interest and principal within stipulated time period. The market deals on securities issued by government in order to collect fund to meet its financial needs with promise to pay a certain percent of interest at certain period of time with predetermined maturity period is government (public) debt securities market. Government raises fund from market to conduct the regular activities. Government securities are the fixed income securities issued by the government. The government is unlikely to default on interest and principal repayments. So, these securities are safe among other investment. Government raises fund from market to conduct the regular activities, to conduct the development programs, to recover the deficit budget etc. The government raises the necessary funds through various sources. These sources are internal as well as external also.

Public loans floated within the country are called internal debt while public borrowings from other countries are referred to as external debt. External debt represents a claim by foreigners on the real income of the country. When a country borrows from other countries it has to repay the borrowed sum at the time of maturity. External public debt permits inflow of real resources. It enables the country to consume more than it produces in a given year. Since external borrowing is received in convertible currency, the payment should likewise be made in foreign currency. Internal debt, on other hand, is lending to oneself with borrowing taking place within the country and the availability of total resources within the economy remaining unchanged. Simply, the resources are transferred from the bond holders-individuals and institutions to the public treasury. The main objective of public debt management is to ensure that the government's financing

needs and its payments obligations are met at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk. In Nepal, Nepal Rastra Bank issues various government securities. These securities are as follows:

Treasury Bills

Treasury bills are the short term money market instruments of the government. It normally matures in 91 days while some matures in 364 days. It is issued to meet short term financial requirements of the government. Investors buy the treasury bills at a discount from the stated maturity value. At the maturity, the investors receive from the government the payment equal to the face value of the bill. The difference between the purchase price and ultimate maturity value constitutes the investor's earnings. Treasury bills are highly liquid. They are easily converted to cash and sold at low transaction cost and with not much price risk

Development Bond

It is a long term bond. It is issued to perform the development works. Its maturity period is normally five years or more than five years. It can be used as collateral if holders need to take loan. If the holders keep their bond on collateral, they get normally 90% amount of total value. It has fixed and minimum interest rate. The payments of the interests are paid on semiannual basis. The incomes from these bonds are taxable. Development bond is purchased by institutional as well as individual investors.

National Saving Bond

National saving bond is also a long term bond. The maturity period of the National saving bond is normally five years. It is focused to the general public. The issuance of the National saving bond was initiated in order to mobilize savings from non-banking sector. So financial institutions, organization and individuals etc can purchase this bond. But commercial banks have no right to purchase National

saving bond. It has fixed interest rate and the interest is paid in semi annual basis. It is non taxable bond having high interest rate.

Special Bond

It is issued on special occasion. When the government falls short of funds for any special project or programs the government issued a special bond. The government issues special bond to those parties, to whom the government has to make payments. Instead of paying cash, the government issues special bonds as a substitute of cash repayment. The holders of this bond can also use it as collateral to fulfill their funds need. The holders can obtain only 50% cash, when they use it as collateral.

Citizen Saving Certificate

It is also a long term debt instrument. It has five years of maturity period. It has also a fixed interest rate and interest is paid semiannually. The income earn from public saving card is taxable. It cannot be used as collateral. It can be purchased only by Nepalese Citizens.

1.3 Statement of the Problem

Nepal started its planned development efforts with the first plan in 1950s. Due to the failure of the government plan implementation, the country has lagged far behind many of its neighbors. The country has a very low per capital income. The manufacturing sector contributes less than 10% of the GNP. The country is backward in terms of access to basic facilities to the population such as health, education, drinking water etc. Nepal stepped into its development programmes with greater reliance on external source rather than on mobilization on domestic sources. At earlier stages, most of the development assistance was in the form of grants of while a small portion was in the form of soft loans at concessional interest rates with long maturity period, generally around 25 years. As a result of

poor implementation, most of the development programs failed to achieve their desired target and the economy was unable to generate adequate resource for the financing to its future development activities. This led to greater reliance on borrowing with low availability of grants. The growing dependence on external debt and rising internal debt is likely to exert significant effect on the mobilization of resources by the government in the future. This is particularly true if the country fails to make best utilization of the borrowed resources in the expansion of its productive capacity such as physical and human infrastructure. In this regards, management of the domestic borrowing is one aspect worth analyzing.

Normally, the deficit in the budget is common on the budgetary practices in almost all the countries in the world. Borrowing is an important fiscal and monetary policy instrument through which the government attains various macroeconomic goals such as attainment of full employment, attainment of price level stability, equity in the distribution of income and wealth etc. The government can borrow externally from bilateral and multilateral sources while internal borrowings are made in the form of government bond such as treasury bills of short maturity, government bonds of medium term maturity and development bonds of longer maturity periods.

Within the internal debt, if the share of debt from banking sector is larger, it will have an impact on monetary system of the economy through increased liquidity and a decline in the interest rate. It will at the same time squeeze the available resources for investment by the private sector. A sound internal debt policy requires a balancing of debt from both the banking and the non-banking sector. Because of these reasons, there is a need for prudence in the use of internal borrowing as excess of internal borrowing beyond some limit will have adverse effects on the economy and may affect the capacity of the government to borrow in the future.

In this regards, there is a need to analyze the trend and composition of government borrowing. Such analyses have been done from time to time by several researchers. However, there is always a need to have an updated scenario of the trend of public borrowing for planners, policy makers and investors to make appropriate public debt management decisions. In addition, the investment behaviors of the general public towards the security market and government financial instruments in particular are also important about the government capacity to raise resources through public borrowing. This is also an indicator of people's perception towards government's fiscal policies and financial management. There is need for periodical assessment of the people's perception for government bonds. The present study aims to provide an up to date scenario of the trend of public borrowing in Nepal and peoples perception of government bonds among various categories of investors.

1.4 Research Questions

On the basis of above discussion, here are underline some specific research questions which will be designed to research.

- What is the status of Public Debt market in Nepalese securities market?
- What are the major obstacles for the public debt market?
- What is the contribution of different types of investors in government securities?
- What action should be taken to develop public debt market in Nepal?

1.5 Objectives of the Study

The main objective of the study is to analysis present condition of public debt of Nepal. The specific objectives of the study are:

- To examine the system and practice of public debt in Nepal
- To see the trend and structure of public debt in Nepal

- To see the attitude of investors towards the government securities
- To provide suggestions for making debt collection effective in Nepal

1.6 Significance of the Study

This study gives an idea of how government securities have been growing over years. This study is also to provide an idea of people's perception on public debt while making investment. The government issues are less risky issues so risk averter investors normally invest in the government securities. This study will prove helpful to the individual person, a group of people, and any institutions who wants to know about government issues.

1.7 Limitations of the Study

In the context of Nepal, data problem is acute in corporate and government level. Related sector still fill burden to provide required data of all necessary. There is not any systematic data base which makes it difficult to carry out on any research in Nepal. Due to limited time and resources this study has been limited in following factor.

- This study is based on published secondary data as well as primary data.
- This study is related on public debt only.
- Time and cost constraints are also limitations of this study.
- This study is limited to Nepalese context only.
- This study covers latest ten years data only.

1.8 Organization of the Study

This study is divided into five chapters.

Chapter-I: Introduction

The first chapter deals with the introduction that includes background of the study, introduction of the public debt, statement of the problem, objectives of the study and limitations of the study.

Chapter-II: Review of Literature

The second chapter is Review of Literature. It includes conceptual framework and review of previous research i.e. review of book, journals and unpublished thesis.

Chapter-III: Research Methodology

The third chapter explains the research methodology used in the research, which includes research design, population and sample, nature and sources of data, method of financial and statistical analysis.

Chapter-IV: Data Presentation and Analysis

The fourth chapter includes presentation and analysis of data using various financial and statistical tools. The major findings are also presented in this chapter.

Chapter-V: Summary, Conclusions & Recommendations

The fifth chapter is concerned with summary, conclusions and recommendations of the study.

CHAPTER - II

REVIEW OF LITERATURE

Review of literature is an essential part of all studies. Literature review is basically a “stock taking” of available literature in one’s field of research. Therefore review of literatures provides the background information about the area of study. The literature review section consists of two parts. One its conceptual framework, which helps to develop the theoretical concepts i.e. what is the public debt, debt securities, debt securities market, types of public debt etc and another is review of related studies, which includes review of journals, articles and review of thesis about public debt and related to terms to it.

2.1 Conceptual Framework

2.1.1 Debt Securities Market

The securities markets are integral part of any financial system. They act as financial intermediaries for debt and equity instruments. The securities markets comprise both money and capital market. Money market deal in short term debt instrument like treasury bills, inter bank deposits and commercial papers. Capital market deals in long term debt instruments as well as equities (*Kafle, 2005:25*).

Debt securities market is an essential part of capital market, where trading of debt securities are held. Debt securities market is important in channeling funds from unproductive people to productive one. Entrepreneur, who have ideas but do not have funds to establish, manage and operate the business, can collect the required funds by mobilizing the scattered public savings.

The market for debt securities are divided into two segments. One is primary market and other is secondary market. Primary debt securities market allows

issuance of new debt securities helping the issuer companies to raise funds. The success of the issue depends upon the public response. Trading among investors of already issued securities is said to take place in secondary market. Trading in secondary market does not affect the outstanding amount of securities; ownership is simply transferred from one investor to another (*Amatya, 2005:19-20*).

Debt securities market can be classified into two forms:

- **Government Debt Securities Market**

Government securities have great impact in the national economy by mobilization of needed capital. Government securities are issues in government debt securities market. Developed debt market helps to increase the tendency of saving & reduce the poverty (*Bhattarai, 2003:22*).

Government securities are issues to meet the financial requirement and to fulfill the deficit budget. The fund raise by the government from public is known as internal debt. Internal debt is issued to control inflation, to create infrastructure, to increase productivity and to generate wealth for critical situation. Moreover, new debt must be issued in order to get the necessary funds to pay off old debt that comes due (*Sharpe & Jeffery, 1989:391*).

Government securities are issued with various maturities short term, long term and intermediate term. All the banks, financial institutions, government offices, profit making organizations and individuals are the buyers of the government debt securities market. Government debt securities market is the way from where the government can utilize a sustainable part of voluntary saving for financing the development plan of public sector. The developed government debt securities market supports the overall financial system and corporate debt securities market (*Amatya, 2005:20*).

- **Corporate Debt Securities Market**

The market that deals on the debt securities issued by the corporation is known as the corporate debt securities market.

The Corporation has a choice between equity & debt securities, in meeting its needs for long term finance. The market that deals of the debt securities market issued by the corporation is known as the corporate debt securities market (*Kafle, 2005:8*).

Like the government, corporation also borrows money by issuing bond (*Bodie, et.al, 1999:403*). Corporate bonds are the means by which private firms borrow money directly from the public (1999:42). A corporate bond is a security representing a long term promise to pay a certain sum of money at a certain time or over the course of the loan, with a fixed rate of interest payable to the holder of the bond. The specific promises and details of the issue are written in the bond indenture (*Hampton, 1994:27*).

In the absence of the development of corporate debt security market, the only securities generally floated in the market are government securities and through them the government assembles the funds directly from the surplus spending units and via the financial intermediaries. So far the government has the virtual monopoly of the development of the security market and resort to security market by the government has been only in the form of borrowing mainly through the issuance of development bonds to meet the budgetary expenses (*Kafle, 2003:31*). Therefore corporate debt securities market has to be developed according to the same way with the other components of capital market within country.

2.1.2 Investment Bankers/Underwriters of Securities

The efficient financial market requires a number of financial institution, and the investment banking firm is one of the institution which acts as middleman in the distribution of new securities to the public and creates a primary markets. Therefore, the people or institutions are responsible for finding out investors for the initial public offering of securities sold in the primary market are called investment bankers. The investment bankers purchase primary issues from security issuers such as companies and government and then arrange to immediately resell these securities to the investing public.

Investment banker offers three basic services:

- **Advice Council**

Advising potential security issuer, whether an offering can be made or not at what price the security can be sold etc. Suggesting various ways to raise needed funds. Advising about mergers, acquisitions and refinancing operation

- **Underwriting**

Underwriting is the insurance function of bearing the risks of adverse price. Fluctuation during the period in which a new issue of securities is being distributed.

- **Distribution**

One of the major functions of the investment banker is marketing the new issue of securities. Investment banker is a specialist with a staff and organization to distribute securities and therefore, the capacity to perform the physical distribution function more efficiently and more economically than can an individual corporation (*Western and Copeland, 1992:892*).

In the process of underwriting & selling the securities, first the members of the issuing firm and the investment banker hold pre-underwriting contract, at which they determined the amount of capital to be raised, the type of security, price, issue date and any special features. When the investigations are completed, underwriting agreements are drawn up by the investment bankers. For this service investment bankers receive the difference or spread, between the price they pay for the security and the price at which security are resold to the public.

A security issue may be completely underwritten by an investment banker and the other members of the syndicate. If it is issuing corporations receives the public offering price less a stated percentage spread. The underwriters in turn sell the securities at the public price (or less) and may buy some of the securities themselves (*Sharpe et.al, 2001:75*).

2.1.3 Debt Securities

A debt security is an evidence of a debt. It is sold to an investor with the promise that it will be paid back with interest at the end of a specific period. Some debt securities are secured by collateral such as revenue of physical assets. Some are unsecured and backed only by the credit worthiness of the company or government unit.

In the area of risk, debt is favorable (relative to preferred or common stock) because it gives the holder priority both in earnings and in liquidation. Debt also has a maturity and is protected by the covenants of the indenture.

Characteristic of Debt Securities

All the debt securities do not have the same contractual features. Some common features are as follows:

- **Principal**

The face value or principal of a debt indicates the amount of money that must be repaid at maturity.

- **Priority to Assets and Income**

In the event of bankruptcy, debt holders have claim on the company's assets and earnings prior to that of the shareholders i.e. common shareholders as well as preference shareholders.

- **Fixed Interest Rate**

The interest rate on a debt is fixed and known. It is called the contractual rate of interest. Whether the company earns profit or suffers from losses, the company must be paid the pre-determined interest amount.

- **Security**

Debt securities are either secured or unsecured. A secured debt is secured by a lien on the company's specific assets. If the company defaults, the trustee can seize the security on behalf of the debt holders. When debt securities are not protected by any security, they are known as unsecured debt. The term debenture always means unsecured bond. For unsecured debt securities, it is difficult for the firm to attract investors to subscribe them.

- **Maturity**

Generally debt securities are issued for a specific period of time. So it has fixed maturity date. The maturity of debt indicates the length of time until the company redeems (returns) the par value to debt holders and terminates the debts.

- **Buy-Back (Call) Provisions**

This type of provision enable the company to redeem debt at a specified price before the maturity date. The call provision generally states the company must pay an amount greater than the par value of the bond; this additional sum is defined as the call premium.

- **Sinking Fund**

A sinking fund is cash set aside periodically for retiring debt security. By the sinking fund provision, there is certainty in paying debt by the firm after expiration of the date of loan. Particularly, when the firm faces temporary financial difficulty at the time of debt maturity, the use of the sinking fund eliminates such difficulties.

- **Refunding Provision**

Refunding is the process of retiring existing debt before maturity and issuing new debt. In other words, it is replacement of existing debt with new less costly debt. A redemption of debt can be accomplished through call provision.

- **Convertibility**

Debt also has the feature of convertibility into equity shares, at the option of debt holders.

- **Trustee**

To facilitate communication between the issuer and the numerous bondholders, a trustee was appointed to represent the bondholders. Any legal person, including a corporation, is considered to act a trustee. However the duties of the trustee are handled by a department of a commercial bank.

- **Indenture**

The long term relationship between the borrower and the lender of a long term promissory note is established in a document called an indenture. The indenture contains the terms of the bond issue as well as the restriction place on the company. The bond indenture can be a document of several hundred pages that discusses a large number of factors important to the contracting parties, such as:

- The form of the bond and the instrument
- A complete description of property pledged
- The authorized amount of the bond issue
- Detailed protective clauses, or covenants Provisions for redemption or call privileges

Advantages and Disadvantages of Debt

Advantages of Debt Securities

The specific cost of debt capital is less expensive than that of the equity and preferred stock. Debt provides flexibility in financial structure of the corporation. The company can issue debt or repay whenever required to make financial structure flexible. Creditors have no interference in business operations. The owners may extend the scope of their operation by using funds furnished by creditors and still maintain their position of control. The debt enables the firm to trade in equity. The interest paid on debt can be deducted as tax expenditure and while paying tax interest can be deducted as expenditure. In case of over capitalization the company can redeem the debt to balance its capital structure.

Disadvantages of Debt

The main disadvantage of the debt is unreliable source. Only well established companies can take the advantage of debt financing. Small companies and new companies have difficulty in raising the fund from their source. It is the permanent burden to the company because company has to pay interest to debt holders at a

fixed rate whether it earns profit or not. Debt is inappropriate in all situations, according to financial policy the debt ratio should not cross certain limit. If debt is taken more than this limit, the cost of the loan rapidly increases. Since most of the debt issue requires some security as mortgages, the firm's liability will increase. Debt is a fixed charge, if the earnings of the company fluctuate it may be unable to meet the charges (*Pandey, 2008: 25*).

From investor view point there are some advantages and disadvantages, while investing in debt securities.

Advantages

There is fixed interest rate on debt. So, the investors receive stable and definite income regularly. Investors can sell debt securities easily in the open market. Money invested in debt is secure because it is the debt on asset. Debt securities have a fixed maturity period. In the event of liquidation, debt securities have high order of priority.

Disadvantages

Debt holders do not carry the right to vote. The interest of some debt securities such as debenture is fully taxable. Debt holders do not get share in the company's prosperity, when the company earns huge profits (*Pandey, 2008:25*).

2.1.4 Debt Market Instruments

Documents used to raise the loan for short-term as well as long term are called debt market instruments. Among them debenture, bond, promissory notes, bill of exchange etc are the main debt instruments available in Nepalese debt market. A debt instrument is a long term contract under which a borrower agrees to make payments of interest and principal on specific date to the holders of the bond.

Western and Copeland categorized the long term debt into two parts. One is secured debt and another is unsecured debt. Secured long term debt can be also classified according to “the priority of claims”, “the right to issue additional securities”, and the scope of the lien. Unsecured debts include debenture, subordinated debenture. Income bonds and floating rate notes (*Western and Copeland, 1992: 963-967*).

A mortgage that has prior claims on assets and earnings are called senior mortgage. It has first claim over assets. So it is called priority claims. A second or third mortgage is a junior mortgage. Mortgage bonds can also be classified with respects to the right to issue additional obligations pledging already encumbered property. Under the right to issue additional securities, there are closed-end mortgage open-end mortgage. In the case of a closed-end mortgage a company cannot sell additional bonds (beyond those already issued) secured by the property specified in the mortgage. This mortgage provides security to the bond buyer. If the bond indenture is silent about mortgage, it is called an open-end mortgage. If the bond is issued with the lien granted on certain property is called scope of the lien (*Western and Copeland, 1992:963-967*).

Among the unsecured debt; debenture provides no lien on specific property as security for the obligation. Debenture holder, therefore are general creditors, whose claim is protected by property not otherwise pledged. The use of debenture depends on the nature of the firm’s assets and its general credit strength. A firm whose credit position is exceptionally strong can issue debentures; it simply does not need specific security. But if the credit position of a company may be so weak that it has no alternative to use of debentures all its property may already be encumbered (*Western and Copeland, 1992:963-967*).

Similarly, the subordinated debt has claims on assets after unsubordinated debt in the event of liquidation. It means in the event of liquidation or reorganization, the debentures cannot be paid until senior debt as named in the indenture has been paid. Therefore in order to attract the investors a straight subordinated debenture issues has to provide a yield higher than regular issue (*Western and Copeland, 1992:963-967*).

In case of Income bonds, if the earnings of the firm are sufficient to meet the interest obligations, then only a firm must pay interest on an income bond. However, the principal must be paid when due. Therefore income bonds provide flexibility to the firm. While talking on the issue of floating rate notes, it does not required specific security. It was developed to decrease the risks of interest rate volatility at high levels (*Western and Copeland, 1992: 963-967*).

In the view of Bodie, Kane & Marcus, Market can be classified into two parts. i.e. money market and capital market. Money market is a sub-sector of fixed income market. It consists of very short-term debt securities that usually are highly marketable. Repurchase agreements, Eurodollars bond, short term treasury securities, Bankers acceptance & commercial paper are major instrument of money market. The capital market is composed of long term borrowing instruments. This market includes treasury notes & bonds, corporate bond, mortgage securities and federal agency debt. Among these instruments federal agency debt is issued by some government agencies. Municipal bonds are issued by state and local governments and these are similar to treasury and corporate bonds except that their interest income is exempt from federal income taxation. Municipal bonds can be classified into two types. One is general obligation bonds, which are backed by the “full faith and credit” of the issuer and another one is revenue bonds, which are issued to finance particular projects and are backed

either by the revenues from that project or by the particular municipal agency operating the project (*Bodie et. al, 1999:38-40*).

They further explained about the International bonds, Junk bonds, Zero coupon bonds etc. International bonds can be divided into two categories i.e. foreign bonds and Eurobonds. Foreign bonds are issued by a borrower from country other than the one in which the bond is sold. The bond is denominated in the currency of the country in which it is marketed. In contrast to foreign bonds, Euro bonds are bonds issued in the currency of one country but sold in other national market (*B.K.M, 1999:406*). Likewise, Junk bonds are known as high yield bonds. It has relatively high risk or default risk (*B.K.M, 1999: 408*).

Chenney & Moses says that the debt instruments can be categorized by the level of default risk. The government securities included Treasury bills, Treasury notes and bonds. T-bills are viewed as the safest of all fixed income securities, it has least risk & lowest expected return, whereas the treasury notes have maturities of ten years or less and treasury bonds have maturities over ten years, both have more interest rate risk than T-bills. Similarly, federal agency and municipal securities have also a greater risk of default than treasury securities. The bonds issued by corporation are often grouped under the general category of corporate. Corporate, as a general class of bonds, have more default risk than government agency or municipal bonds and therefore offer higher returns (*Chenny and Moses, 1992:319-326*).

Van Horn (2000) also categorized the debt financing in different kinds, such are debenture, subordinated debentures, mortgages bond, income bonds etc. According to him “the term debenture usually applies to the unsecured bonds of a corporation. Investor looks to the earning power of the corporation as their security. Because these general credit bonds are not secured by specific property,

in the event of liquidation the holder becomes a general creditor. Although the bonds are unsecured, debenture holders are protected by the restrictions imposed in the indenture. Subordinated debentures represent debt that ranks behind debt senior to these debentures with respect to the claim on assets. In the event of liquidation, subordinated debenture holders usually receive settlement only if all senior creditors are paid the full amount owed them.” Similarly he defined the mortgage bond is not much popular among investors. In income bond, a company is obligated to pay interest on an income bond only, when it is earned (*Van Horne, 2000:512-513*).

2.1.5 Duration of Bonds

Macaulay’s Duration in 1930s, Fredrick Macaulay has developed a concept of duration. 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. Duration is directly related to time and inversely related to coupon and yield to maturity.

Duration is a function of term, coupon, maturity value and yield to maturity. Bonds with “low” coupons and “long” term will have durations greater than bonds with “high” coupons and “short” terms. Also as yield to maturity increases, duration will decrease. Therefore, duration is directly, related to price volatility because bonds with a longer duration will experience more price volatility as interest rates change (*Chenney and Moses, 1992:330*).

Macaulay’s duration can be defined mathematically as follows:

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

Where,

MD = Macaulay's duration

Y = Yield to maturity

T = Time period

C = Coupon rate

Duration is an indication of systematic risk for bonds. It is useful in analyzing & managing the risk of bond portfolios (*Bhattarai and Bajracharya, 2007:175*).

2.1.6 Return & Valuation of Debt Securities

The value of bond is sum of present value of the periodical interest payments and the par value that is due at the end of bond life. The bond value is a function of several factors presented bellows:

$$V_0 = f (F, P_m, N, T, K_d)$$

Where,

V_0 = value of bond

F = Face value or Par value

N = maturity period

I = Coupon interest rate

P_m = Market price of bond

K_d = Market interest rate (*Bhattarai and Bajracharya, 2007:175-178*)

The bond can be categories in three forms.

Redeemable / Coupon Bond

Redeemable bond has finite maturity period and the firm will pay fixed amount of interest and after the maturity period, the principal will be repaid. The value of bond is the present value of its interest payments plus the present value of its par

value. When bond or debenture has a finite maturity, the valuation formula for such type of bond can be express as follow.

$$V_b = \sum_{t=1}^n \frac{\text{Interest}}{(1+k_b)^t} + \frac{\text{Maturity value}}{(1+k_b)^n}$$

Where,

V_0 = Value of bond

K_b = the appropriate interest rate on the bond

N = number of years before the bond matures

t = time period

- **Zero Coupon Bond / Discount Bond**

A zero coupon bond is a bond that does not make interim interest payment and is sold with a large discount. Zero coupon bonds pay no interest but are offered at a substantial discount below their par values and that provide capital appreciation rather than interest income. The value of zero coupon bond be computed as follows.

$$V_b = \frac{\text{Face Value or Par Value}}{(1+YTM)^t}$$

Where,

YTM = Yield to maturity

T = time period

- **Perpetual Bond or Consol Bond**

A perpetual bond is the one that is never redeemed by the issuer; but the issuer pay interest for an indefinite period. The issuer is never redeemed to pay the par value of the bond holders. Therefore the value of perpetual bond is calculated by finding the present value of infinite series of interest payments.

$$V_0 = \frac{1}{K_b}$$

Where,

V_0 = value of bond

I = interest paid each year

K_b = the appropriate interest rate of bond (*Bhattacharai and Bajracharya, 2007:175-178*)

2.1.7 Yield to Maturity

The yield to maturity is defined as the interest rate that makes the present value of a bond's payments equal to its price. This interest rate is often viewed as a measure of the average rate of return that will be earned in a bond if it is bought now, and held until maturity (*Bodie et al., 1999: 417*).

Yield and bond prices are inversely related in computing the yield to maturity. Several important assumptions are made.

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

Therefore, the yield to maturity of a bond represents the annual rate of return that will occur if certain conditions are satisfied. The YTM can be calculated by using following equation by approximation formula method

$$AYTM = \frac{I + \frac{M - V_0}{n}}{\frac{M + 2V_0}{3}}$$

Where,

I = Coupon interest

M = Maturity or Face Value

V₀ = purchase price or value of Bond

2.1.8 Holding Period Return

Investors are often concerned about bond returns over a particular holding period. The holding period return equals income earned over a period (including capital gain or losses) as a percentage of the bond price at the start of the period. The holding period return can be calculated for any holding period (*Bodie et.al, 1999:422*).

The holding period return can be calculated as follows:

$$\text{HPR}_t = \frac{P_{t+1} - P_t + I_{t+1}}{P_t}$$

Where,

HPR_t = Holding period return for period t.

P_t = The beginning or purchase price of the bond

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

I_{t+1} = The coupon or interest received for period t (*Bhattacharai and Bajracharya, 2007:175-178*).

2.2 Best Practices and Legal Framework on Public Debt Management

2.2.1 Best Practices

The best practices of internal and external borrowings are mainly guided by the fiscal rules of the government of the particular country and fiscal legislation set for it. While addressing this question, of Fiscal Responsibility Legislation or Fiscal Rules, it is tried in following manner by observing the international practice, which defines the concept as a self-imposed budgetary constraint on Government by means of a state or law in terms of an indicator (or indicators) of overall economic performance.

For this purpose, while reviewing the contemporary literatures, normally, the indicators of fiscal responsibility or rules are found of three types:

- Deficit rules of the government
- Borrowing rules of the government
- Debt rules of the government

The Major Features of these Rules are

Under Deficit Rule a particular deficit indicator or a group of indicator are identified and targeted; borrowing rule prohibits borrowing from Central bank, the debt rule prescribes a limit on debt stock. It may be noted that fiscal policy rules tend to more heterogeneous and complex and very considerably across countries in terms of the target variable, institutional coverage and method of implementation. Nepal has also introduced such rule by fixing a cap for central bank borrowings from FY 2002/2003 through enactment of Nepal Rastra Bank Act, 2002.

2.2.2 Historical Background

The practicing of obtaining loan from general public has been exercised in developed countries from the centuries ago. Developed countries practiced public borrowings even from the 18th century and in a very systematic way. But in the case of Nepal, it is new one, which has not a long history.

Public debt has developed simultaneously with the needs of state development. Historically during the period of the World War the government borrowed the large amount of loans to meet its expenditures. After the first and Second World War large amount of loans were borrowed for the reconstruction and maintenance. In the previous time state only have to maintain the internal peace and prevent external disruption. But now every state should look after economic development and public welfare in addition to the previous work. Therefore, the public debt

became one of the most useful instruments to generating income to maintain the welfare state and economic development.

Public debt particularly in developing countries have a significant importance due to the increasing magnitude of budgetary deficits. So, knowingly or unknowingly the flow of debt will be inseparable from human civilization in the days to come. In case of Nepal, the borrowings were exercised only after the implementation of the plan periods. This was mainly because, people had no capacity and practice to provide the money as well as loan the government. It is difficult to point out the exact date from when Nepal began to exercise the practice of public borrowing.

In early days, there were various practices in various forms of public borrowings for reconstruction and development of road, bridge, temples and social infrastructures since Malla's regime. However, the scientific public debt management in Nepal had been felt during the implementation of first development plan in 1956. The objective was to meet the resource gap to enhance developmental activities.

During the time of Rana Bahadur Shah borrowed a large sum of money (about six million) from Indian merchant to meet internal expenses of the government. When the Prime Minister Jung Bahadur Rana came into power the development work was stopped in Nepal. They had collected the revenue for their own luxurious life. They didn't care about economic welfare of the people. Thus, one hundred and four years passed in this way.

After the democracy, the first five year plan was introduced in the year 1956. So, the process of development was started in Nepal since 1956 with the implementation of the first five year plan. In this plan, the entire development expenditure was financed from external sources because the amount raised from

internal source was not adequate even for meeting the requirement of regular expenditure.

Since the first plan period, the concept of deficit financing has been build up. Deficit financing, has the different meaning as according to its implementation. In developing country like Nepal, deficit financing is considered as a gap between the government revenue and expenditure, which is financed through borrowing from the people. But in developed country, through deficit financing, the idle saving of the people are mobilizes for increasing national production, income and employment. Budgetary deficit is termed as the total expenditure minus total receipt from existing source of revenue, foreign grants and loans in the budgetary structure as well as internal borrowing and cash balance has been considered as the sources to meet that budgetary deficit.

2.2.3 Legal Framework in Nepal

The fiscal rules and fiscal deficit of Nepal are determined by the budget speech of the government. The annual plans and programs are covered in the budget speech, which is also approved by the parliament. The budget speech also comprises of the amount of internal borrowings and foreign loans. For the internal debt component a separate act, named 'Act for raising of public debt' is passed each year. The act that determines the borrowing from the Nepal Rastra Bank is, Nepal Rastra Bank Act, 2002. The new Nepal Rastra Bank Act, 2002, section 75 has a provision for extending credit to Government of Nepal and provision relating to the purchase of Government bonds. The NRB Act promulgated in 1956 has not made such provision and also any restriction to the government to borrow funds from the Nepal Rastra Bank, but the new NRB act has incorporated prudent limits for the government borrowings from the central Bank. The Act states that" subject to limit, specified in the act, the bank may extend credit to Government of Nepal with a condition to repay within one hundred eighty days." For this purpose the

government should issue government bond after such specified date in prevailing market interest rate. And the act also specifies that" At no time the amount of overdraft provided by the bank to Government of Nepal shall be more than five percent of the revenue of Government in the preceding fiscal year. While computing such revenue income, the amount of borrowing, grants, or any other form of financial assistance or income received from the sale of property shall not be included while computing the revenue income. In this context, Nepal has begun to adopt fiscal disciplinary rule recently for government borrowings from the central bank. Some major acts, rules and by-laws formulated to strengthen the capacity of the financial sector are listed below:

1. Bank and Financial Institutions Debt Recovery Act 2002
2. Nepal Rastra Bank Act 2002
3. Public Debt Act 2003
4. Secured Transaction Act 2006
5. Public Procurement Act 2007
6. Bank and Financial Institutions Act 2006
7. Insolvency Act 2006
8. Company Act 2006
9. Competition Promotions and Market Protection Act 2006
10. Money Laundering Prevention Act 2008
11. Banking Frauds and Punishment Act 2008

By-laws and Regulations

1. Public Debt by-laws 2003
2. NRB Credit Information by-laws 2003
3. NRB Inspection by-laws 2003
4. Know your customer directives 2006
5. By-law relating to Insolvency 2008

6. Regulation relating to Prompt Corrective Action of Bank and Financial Institutions

There has been made some important legislative provisions, which are directly and indirectly concern on debt securities market of Nepal which are:

Prevailing Securities Legislation

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

Other Relative Acts

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

2.3 Views of Different Economists

The views of different economists at the different time periods on matter of public borrowing can be broadly presented as under:

Classical View

The classical view was practiced after 19th century and followed by their neoclassical successors. The classical authors were generally against public borrowing. They assumed that individual consumer and business firm employ

resources more efficiently. Actually, most classical authors were not against public borrowing. They favoured minimum public expenditure and favoured taxation than borrowing (*Singh, 2001: 360*).

The Reasons of their Favour for Taxation are as follows:

Debt financing means an increase in public debt. Since it is an easy method of obtaining income, government is likely to be extravagant and irresponsible. Consequently, public debt will become a definite burden on the economy. Payment of interest on public debt and refund of the principal will require additional taxation.

Deficit financing might produce currency deterioration and price inflation. It should, however, be kept in mind that the classical economists were not against all types of public debt. They approved public debt for productive purposes.

Keynesian View

It would be correct to say that all classical authors stood against public debt. In 1967, Adam Smith in his 'Wealth of Nations' and James Stuart propounded the view that public debt should function as the balance wheel of the economy. Keynes effected a truly significant revision in the theory of public debt. He did not accept the classical notion of a free enterprise economy which is self equilibrating at full employment level. He advanced the concept of under employment equilibrium resources in the private sector might remain unemployed for relatively longer periods if corrective action is not taken by the government. In a situation when resources are unemployed on a large-scale government employment of these resources does not necessarily deprive the private sector of anything. Thus, public borrowing need not necessarily be unproductive, inflationary and burdensome (*Singh, 2001:364*).

Many Keynesians carried this analysis to the other extreme and held the view that, if debts are internally held, there is nothing to worry about their size. Such a debt involves merely series of transfer payments and they cancel out for the economy as a whole. Hence the only concern should be about economic stability at high levels of income and employment.

A.P. Lerner maintains the theory that the government should borrow only when it wants to make people hold more bonds in place of money. This action will raise the rate of interest by lowering the value of bonds and will prove to be anti-inflationary. In the event of falling aggregate demand and shortage of funds for productive investment, government should lend to the private sector or increase its own expenditure to arrest the fall in real income and employment. The government may also borrow from the central bank to retire the debt held by the public (*Cited in Singh, 2001: 364*).

Post Keynesian View

During World War II and in the post war years, the size of public debt increased enormously. The post- Keynesian position accepts a large part of the modification of the classical debt theory as brought about by Keynesian economics. It emphasizes, however, the transfer and management aspects as well as the inter relationships between public debt and money supply (*Singh, 2001: 364*).

Many economists argue that borrowing today constitutes a burden for the future. A large public debt, if internally held, poses many problems in the economy. It complicates monetary policy and creates difficulties of management. Both classical and Keynesian economists agree that a distinction should be made between an internal and external debt. Internal borrowing is largely an act of expediency by a government when it prefers to finance its expenditure by taxation but finds it inconvenient to do so. In the event of seasonal fluctuations of

spending or revenue or errors in budget estimates, a government may resort to temporary borrowing. In case of an emergency it is better to borrow than to go for sharper increases in taxation.

According to Richard Goode, a better argument in form of internal borrowing should be avoid: borrowing to pay for government consumptions expenditures. Domestic borrowings is a use of national saving. “The inference is that future to restrict borrowing to the finance of investment will retard economic growth. A weakness of the argument is that not all outlays classified as investment actually contribute to growth, while some expenditures usually classified as government consumption promote growth (*Goode, 1986: 195*).”

2.4 Review of Articles

Regulatory and Institutional Framework for the Public Debt Management in Nepal and functions and procedures for the Public Debt Management in Nepal is a study report by Pascal (2005) who is an International Public Debt Management Specialist. The study highlights that the legal institutional framework for public debt management in Nepal are composed of specifies laws or acts without any coherence among them. Each one contemplates a specific issue of the debt management functions without any worry on the compatibility or coordination with the others.

There are two urgent steps to be taken in order to cope with this situation, one is at the executive debt management level, and the other is at the rules and regulations operational level. The report has made the following recommendations based on the analysis of the present debt management system in Nepal.

- A committee addressing all the sources of financing should be envisaged for a good planning of public indebtedness in Nepal. In this direction, a Public

Debt and Foreign Aid Coordination Committee (PDFACC) has been proposed.

- At the rules and regulations operational level, it is necessary to redefine very clearly the responsibilities and terms of reference of each one of the institutions involved, and an Organizational Framework with the functions manuals, procedures manuals and job descriptions for all these institutions.
- Even more, it would be also necessary to restructure the present set up for public debt management. It would be necessary to reallocate the responsibilities of a Debt Management Office among the different participants to the debt management activities in Nepal. This would be done by taking a functional approach by allocating well-defined and clear functions to each one of the participants.
- In Nepal, it needs to be done through the strengthening of existing Debt Management Unit (DMU) and coordinating the activities of different other units and agencies through a well defined and integrated functions in the umbrella Public Debt Act.

Bhattarai (2004) in his article "*Debentures are Welcome*" on journal *New Business Age* has stated *Bond market in Nepal* is very lean. Very few companies have issued bond in the market. However, since last few years, some positive signals can be seen in the Nepali capital market. Though the government bonds are not available in the stock exchange floor, corporate bonds are being made available". According to him, due to over subscription in recently issued corporate bonds, it can be predicted that more of corporate bonds will be expected to issue in the future, particularly from the banks to meet their higher capital requirement under NRB directives.

Shakya (2005) in his article "*Recent Development of Domestic Debt Market in Nepal*" on journal *Rastra Rin Khabarpatra* has summarized that the domestic debt

market in Nepal is undeveloped. There is a paucity of debt instruments, which makes market primitive. The prevailing mechanism for trading government debt securities are inefficient and unreliable as the authorities regulate the prices. These weaknesses enormously hamper not only the debt management practices but also monetary management process in 17 Nepal. Debt manger should therefore have an interest in developing market for government debt securities. The issuance of scripless securities, initiation of auctioning of long term government debt securities, implementation of market based pricing mechanism and issue of varied secures like insurance bonds, pension bonds, provided fund bonds, municipalities bonds and other special bonds would be the major achievements for strengthening the debt market in Nepal.

Timsina (2065) in her article, “*Structure of Domestic Debt in Nepal*”, on journal *Rastra Rin Khabarpatra* she concluded that the Debt financing creates a room for the domestic borrowing. Structure of domestic debt means the types of instruments used to mobilize the domestic debt. There are currently five types of instruments of domestic borrowing in Nepal. They are treasury bills, developments bonds, national saving certificates, citizen saving certificates and special bonds. The structure of domestic debt has great implications on macroeconomic stability and growth via interest rate effects.

The treasury bills discipline the government’s excessive borrowing behavior through interest rate response of the private sector. Similarly, through the market determined lower than coupon interest rate, government can take the loan at cheap cost through development bonds. Second, the degree of liquidity is associated with the marketability of government domestic debt. Third, the structure provides choice of portfolios to borrow for the government. Fourth, the structure (in terms of maturity) also provides the inner idea for studying the relationship of inflation tax and the conduct of monetary policy. Fifth, the structure of domestic debt

provides direction to the debt manager in ensuring government financing needs and its payment obligation. The portfolio mix and maturity structure of the domestic debt is most important in this regard.

2.5 Review Previous Research Work

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

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

Koirala (1997) in his thesis *Public Debt in Nepal*, he concluded that “the internal borrowing mobilization for development purpose has been fluctuating and the banking sector has dominated the total internal borrowing. Government should initiate policies to attract maximum borrowing from non banking sector. It is the most non-inflationary source of internal borrowing since it is simply transfer of idle saving from people to government for development purpose.

Acharya (1998) in his thesis *Burden of Public Debt in Nepal* stated there is similar return on the bonds and the securities as well as the rates of return on the fixed deposit of commercial banks. To attract the investors toward the debt securities, initially, the tax should be exempted, which will help to increase the return and also will help to attract some more investors.” According to him, the basic function of the debt securities market is to provide and allocate funds to firm with profitable investment opportunities and to offer an avenue of liquidity for individuals to invest current income or borrow against future income thereby achieve their preferred time pattern of consumption. Because investing involves uncertainty, capital markets also provide a means of transferring risk among the parties to these transactions.

Khanal (2000) in his thesis *Public Debt in Nepal; A study of its structure and Burden from 1974/75 to 1007/1998* summarized that internal public debt has played a significant role in financial resources for development expenditure as well as in growth of money and capital markets, and it facilitates the effective implementation of monetary policy. He further concluded that the system of public debt as one of the best ways of financing development expenditures of government which helps control inflation and to mobilize inter-financial resources in the productive sector of the country’s economy. He recommended that government development purpose and excessive dependency upon foreign assistance for development program should be reduced and it should be continued to the desired extent.

Sharma (2001) studied on *Public Debt System and Practice in Nepal*. His objectives are to overview the system and practice of public debt in Nepal, to understand the attitude of investors towards the government securities. The study found that the investors towards government securities and their educational background is completely independent to each other. Both educated and

uneducated people are equally interested on government securities. The study also concluded that both poor and rich people are interested towards government securities. These mean that the government is efficacious to draw the attention of rich and poor, educated and uneducated people whom the government sells its securities, which are the means of borrowing the loan internally. The study also draw the conclusion that the people who have not sufficient time to run the private enterprise and who are not dexterous to grab the opportunity in the market interested on government securities. He also concluded that the person with academic background of economics, finance and management are more aware to the government securities.

Poudel (2002) in his thesis *A Study on Government Securities Practice in Nepal* summarized that government securities is issued to meet short term and long term financial requirement. The government expenditure through public debt is quite beneficial to the nation if used productively. But a large public debt may create problems in the economy in the future. He further given in his findings that, Nepal has been suffering capital shortage since the first budget speech. Most people use their idle funds on government securities rather than behaving as investors. Among them majority are service holders and very few of them are retired people. The people of rural area are less aware to the government securities. Both poor as well as rich, and educated as well as uneducated people are interested towards government securities. He concluded that Nepalese investors are attracted towards government sectors. Most of the investors of Nepal are risk averter and they need less risky investment. Lastly he recommended that, people pride themselves on their financial contribution to the nation, if there are suitable debt securities to them. Therefore government should develop various methods to influence the business and private individuals to buy more government securities.

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

Karki (2010) in his thesis *Status of Debt Securities Market in Nepal* concluded, Nepalese debt securities market is still at infant sate. Government debt securities market is slightly at maturity state in comparison to corporate debt securities market. So, that emphasis should be given in the development of corporate debt securities market and if it is done, corporate debt securities market will grow up very soon because there are some positive signals felt by researcher such as declining interest rate on deposit of commercial banks, growing participate of banking sector in issuing debentures. Researcher also come into conclusion that there are a number of problems due to which debt securities market of Nepal is not growing smoothly. Mainly the problems are investor's increasing attraction towards common stock, lack of public awareness, limited supply of quality bonds, difficult process of issuing debenture, high preference in purchasing banking sector's debentures and low preference in other sectors debentures, political

instability, unsystematic government debt securities market, lack of large business organization, insufficient 86 legal provision and few issuances of corporate debt securities in spite of encouraging public response.

Dahal (2009) in her thesis *A Study of Development of Securities Market of Nepal* summarized, securities market plays a pivotal role in mobilizing savings and channeling them in productive purposes and many more like providing liquidity on securities so that one can minimize the risk and maximize the returns. The study on the securities market performance reveals that there is no synchronization among different securities market performance indicators, but it is true that they almost have depicted an erratic trend during the observed period. This indicates the unstable and poor performance of securities market. Relative to the overall economy, the size of securities market is very small and the liquidity of securities also is poor. These facts suggest that the Nepalese capital market now is passing through a bearish situation. The growth and performance of Nepalese securities market, even after the introduction of new mechanism in 1993/94, are not satisfactory though it is improving. The growth of these financial institutions was complemented by the establishment of the Nepal Stock Exchange. In 1993, the Securities Exchange Act was amended. The Securities Exchange Center was converted into the Nepal Stock Exchange for securities trading by private brokers and the Securities Exchange Board was established for oversight functions as a regulatory body. This amendment also permitted private sector market intermediaries and set the operating guidelines for intermediary functions such as broking, market making, issue management, and portfolio management. The economic environment which provides the main stimulus for a healthy growth of the capital markets has also influenced this market quite considerably.

In this way, there are various studies conducted by different researchers. Nepal as an under developed nation, industrialization of the nation is the main thing for the

development of nation. To direct the nation towards industrialization, it is necessary that capital market should function well. That means its equity and debt markets are well existed and functioning well. But in case of Nepal, the debt market of corporate bodies is limited in its existence. So, the reason for its limited existence is a matter of curiosity. Therefore the present study is focused on the present status of Nepalese debt securities market.

CHAPTER - III

RESEARCH METHODOLOGY

This chapter is related with the research methodology in the entire aspect of study. Research methodology is defined as the systematic technique adopted by a researcher in studying or finding solution to a problem, through which the researcher systematically collect, record, analysis, interprets and report on information about various facts of a phenomenon under study. Research methodology is a way for systematically solving the research problem. It indicates the method and process employed in the study. The chapter implies the research design. Population and sample of the study nature and sources of data and analysis of data.

3.1 Research Design

Research design is a purposeful scheme action proposed to be carried out in a sequence during the process of research focusing on the management problem to be tackled. It must be a scheme of problem solving through proper analysis, for which systematic arrangement of managerial efforts to investigate the problem is necessary. It defines the task of a research from identifying a managerial problem and problem area to report writing with the help of collection, tabulation analysis and interpretation of data. A basic aspect of research design, therefore, is setting up the research so as to allow logical conclusions to be drawn (*Goode and Hatt; 1952: 74*). A good research design adopts the steps of identification of management problem, restating the management problem as the research problem, formulating a hypothesis, identifying the types of data to be collected, specifying the method of data collection and analysis, estimating the expected result and comparing it with the company's expectation, finalizing a systematic scheme for proceeding with the project including survey, analytical framework and report

writing. In order to conduct this study, descriptive and analytical research has been adopted. Descriptive research design has been followed for conceptualization of the problem. Analytical research design has been followed to analyze the present situation, relations among the different economic indicators relating to public debt.

3.2 Nature and Sources of Data

The study is based on secondary data as well as primary data. The major sources of secondary data are magazines; website, and official publication, annual report of the Nepal Rastra Bank and Ministry of Finance. Some other sources of secondary data are published data by National Planning Commission, central bureau of statistics and Center for Economic Development Administration (CEDA) Security board of Nepal. Several working paper of Nepal Resident Mission of Asian Development Bank and other concern Newspaper, Publication and website.

The primary data has been collected by making questionnaire survey among and conducting interview to the various groups of investors, intellectuals, officers of conducting interview to the various groups of investors, intellectuals, officers of finance companies etc. Their views and responses in their regards have been properly tabulated, presented and analyzed as per the objectives of this research work.

3.3 Data Collection Procedure

The main sources of information of this study are based on published secondary data mainly the budget speeches economic surveys. List of other sources are given below:

- Documents provided by Nepal Rastra Bank
- Current issues of Nepal Rastra Bank
- Articles and other related materials published in Newspapers

- Related Web sites
- Related theses and documents
- Other related Books
- Publications of Central Bureau of Statistics (CBS)
- Various Economic Survey Reports, Ministry of Finance, GON
- Reports of Financial Comptroller Office.

3.4 Method of Data Collection

The different types of financial and statistical tool have been used in this study. The tools of analysis consist of various analytical instruments. The primary and secondary data are analyzed based on various financial and statistical tools. The financial tools of the analysis consists total internal debt analysis. In statistical tools, correlation coefficient have been used. Chi-square test is used to test level of significance. presentation is made in the form of tables, graphs, charts and figures.

3.5 Statistical Tools and Mathematical Relations used for the Study

Financial Tools

The data has been analyzed by using simple statistical tools and mathematical relation to find out the various components of economic indicators. For this study, following types of mathematical relations are derived for the data analysis.

- **Annual Growth Rate of Deficit, Internal and External Borrowings**

To analyze the general trend in deficit, internal borrowings, and external borrowings the growth rate is calculated for the study period by using mathematical relation, Annual growth rate of deficit, internal borrowing and external borrowing of particular

$$FY = \frac{\text{Value of Current Fiscal Year} - \text{Value of Last Fiscal Year}}{\text{Value of Current Fiscal Year}}$$

- Growth of Public Debt and Its Composition on percentage and its average. First of all Total Debt is calculated by using formula,

$$TD = \text{Value of ED} + \text{Value of ID}$$

Then, growth of Total Debt, External Debt and Internal Debt are calculated separately

- Growth Rate of Internal Debt and its Components and its average. Composition of Internal Debt for every Fiscal Year is calculated by using the mathematical relation,

Total ID= Treasury Bill (TB) + Development Bond (DB) + National Saving Certificate (NSC) + Citizen Saving Certificates (CSC) + Special Bonds (SB).

- Percentage share of Debt Instruments on Internal Debt.

For calculating the percentage share of debt instrument on Internal Debt,

$$\text{Total Internal Debt} = \text{TB \%} + \text{DB \%} + \text{NSC \%} + \text{CSC \%} + \text{SB \%}$$

$$\text{Value of TB \%} = \frac{\text{Value of TB}}{\text{Total ID}}$$

Likewise, percentage value of DB, NSC, CSC and SB are calculated

- Pattern and Ownership of Internal Debt Instruments in percentage. To know the pattern and the ownership of Internal Debt instruments basically Nepal Rastra Bank, Commercial bank and other Institutions including Individuals are calculated using mathematical relation,

Total ID= NBR% + CB% + Other Institutions including Individuals%.

- Total Debt, Internal Debt and External Debt to GDP Ratios

For calculating the Debt to GDP ratios, GDP for the particular year are used separately. The ratios TD/y, ID/y, ED/y are calculated,

Where,

$$Y = \text{GDP Value}$$

- Per Capital Debt

Per capital Total Debt (TD) = Per capital Internal Debt (ID) + Per capital External Debt(ED).

$$\text{Per capital ID} = \frac{\text{Value of Internal Debt (Rs.)}}{\text{Population in thousand}} \times 100$$

- The Ratio of External Debt Outstanding to Export

The ratio of external debt outstanding to export is calculated by

$$\text{EDO/X} = \frac{\text{Value of External Debt Outstanding for Certain Fiscal Year}}{\text{Value of Export for Same Fiscal Year}}$$

- The Internal Debt Service (IDS) Ratio

The value of IDS ratio is calculated using relation,

$$\text{DSR} = \frac{\text{Internal Debt servicing for certain fiscal year}}{\text{Value of PS for same fiscal year}}$$

Primary Surplus(PS) = Revenue Receipt- Recurrent Expenditure

- The External Debt Service (EDS) Ratio

$$\text{EDSR} = \frac{\text{Debt Servicing on External Debt}}{\text{Value of Export(X)}}$$

Debt servicing on ED = Payment of Principal on ED + Payment of Interest

Statistical Tools

The (χ^2) test (pronounced as chi-square test) is one of the simplest and most widely used non-parametric test in statistical work. The symbol (χ^2) is the Greek letter chi. The (χ^2) test was first used by Karl person in year 1990. The quantity (χ^2) describes the magnitude of the discrepancy between theory and observation. It is defined as:

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

This chapter deals with the presentation and analysis of data collect from various primary and secondary sources.

4.1 Introduction

Public debt management has become an important component in fiscal management. Nepal is raising public debt since 1962 because until 1961/1962 Nepal remained almost a debt free country. The accumulation of debt was started from 1963. The size of the debt both internal and external was modest during the second plan. Thereafter it is increasing year by year. The need of public debt arises when domestic savings fell short of investment requirements. The saving investment gap had not been favorable in Nepal since long time. On the other hand, the revenue receipt of the economy did not cover the public expenditure. To meet the gap, the government has practiced to raise loans from external as well as internal sources. At FY 2007/08, Government of Nepal has total amount of outstanding debt of 366.56 billion that consist of 249.96 billion as an External debt (multilateral: 24.03 bill and bilateral: 225.93 bill) and 116.60 billion as an Internal debt. The following text will analyze the extent of these deficits and the debt position of the country (*Poudel, 2009: 49*).

4.2 Logic Behind Practicing the Public Debt

It has been found that in almost developing countries used to raise public debt to finance developmental activities of the country. The country needs resources to finance the developmental projects and building social and economic infrastructures. The internal recourses mobilization in the developing countries is limited, especially; through revenue collection it is extremely limited without the

growth of private sector involvement in the economic activities. Private sector seeks favorable environment to grow and adequate infrastructure and market. Without building such infrastructures, private sectors cannot grow. Therefore, governments of developing countries make deficits budget to create infrastructure and the budget deficit is financed through public debt. Within the plan periods, there are targets, which are represented by the each year budget program. In Nepalese case, there is huge deficit in national investment, which is required to meet by additional resources and is collected through internal and external resources. That's why; the public debt accumulation is in increasing trend. In recent condition, preparing new constitution, state restructuring process and overall peace building process demands huge amount of public fund and Undoubtedly major portion of public fund depends upon public debt.

4.3 Volume of Public Debt and it's Composition

Nepal's experience in Public debt is fairly recent in comparison of other developed countries. But the stock of Public debt is increasing very fast in Nepal. The stock of public debt comprises of internal debt and external debt. Nepal experienced internal debt in 1962 where as external debt in 1963/64. In Nepalese case, the first foreign creditor was USSR and UK. Nepal's total debt position was increase by 1.6 times within the 10 years period.

Table: 4.1
Public Debt and Its Composition

(Rs. in Million)

FY	Total Debt (TD)	External Debt (ED)	Internal Debt (ID)	Growth of TD %	Growth of ED %	Growth of ID %
2058/59	264312.2	190691.2	73621	-	-	-
2059/60	281552.7	200404.4	81148.3	6.52	5.09	10.22
2060/61	306259.3	220125.6	86133.7	8.78	9.84	6.14
2061/62	310997.5	223433.2	87564.3	1.55	1.50	1.66
2062/63	322734.3	232779.3	89955	3.77	4.18	2.73
2063/64	318945.7	219641.9	99303.8	-1.17	-5.64	10.39
2064/65	345207.7	233968.6	111239	8.23	6.52	12.02
2065/66	337502.5	216628.9	120874	-2.23	-7.41	8.66
2066/67	392825.1	249965.4	142860	16.39	15.39	18.19
2067/68	419184.1	273607.3	145577	6.71	9.46	1.90
Average				5.39	4.33	7.99

Source: Annex - I

Figure: 4.1
Public Debt and Its Composition

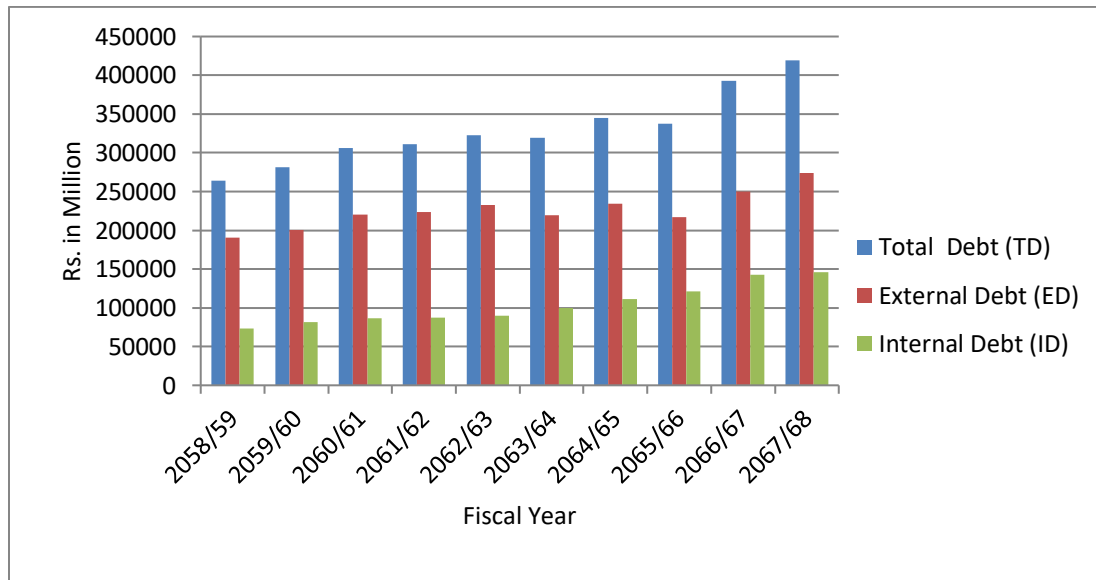
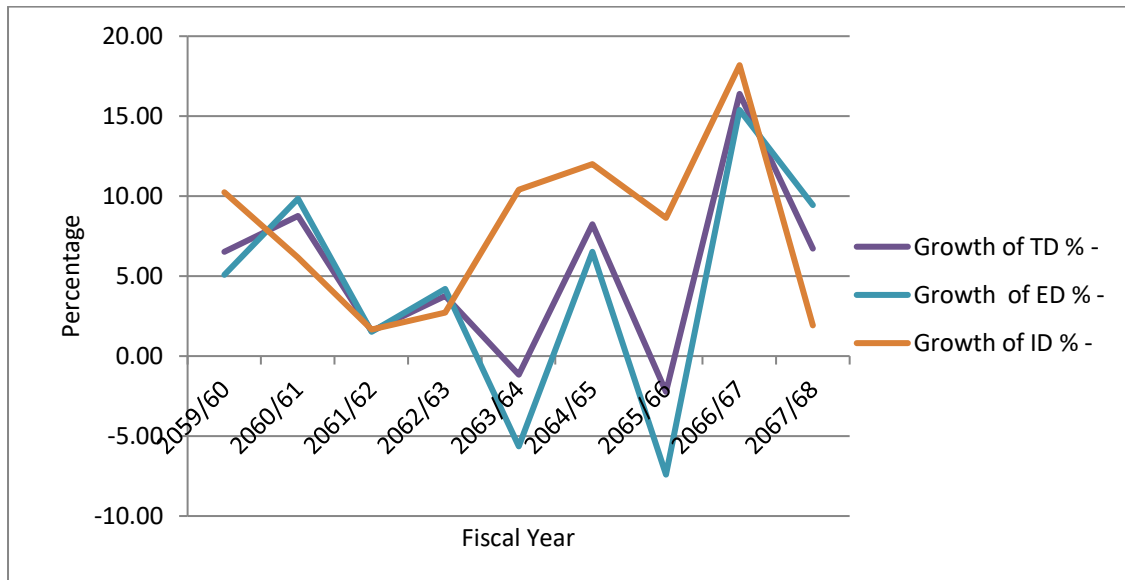


Figure: 4.2
Growth Rate of Total, Internal and External



The above table and figure shows that the total debt position is Rs. 264312.2 million in 2058/59, which increased to Rs. 419184.1 million in FY 2067/68. Similarly the external and internal debt positions are increased by 1.43 times and 1.98 times respectively during the study period of 10 years. The total external debt is Rs. 190691.2 and the total internal debt is Rs. 73621 million in FY 2058/59 that increased to Rs. 273607.3 million and Rs. 145577 million in FY 2067/68. While observing the growth rates, total debt is increased by on an average of 5.39 percent per annum. Similarly, the annual average growth rate of external debt and internal debt are 4.33 percent and 7.99 percent within the study period. The tables below shows that the growth rates of external debt are higher in the beginnings of the study period and become lower in the later periods where as the growth rates of internal debt are higher in the beginning, lower in the middle and again begin to be higher during the last years. The table also shows the extent of total debt, external debt and internal debt positions of the study period on the annual basis. Similarly it also provides the information on how these debt stocks are increasing over the periods.

4.4 Analysis of Internal Debt and its Composition

4.4.1 Total Internal Debt and its Components

The practice of systematically raising of internal debt in Nepal started in Nepal in FY 1961/62. After the enforcement of Public debt Act 1962, the first issue is made in 1962 through issuance of Treasury bill amounting Rs. 7 million. The next instrument of public debt was Development Bond that is issued in 1963/64 amounting to 131.0 million. The government started to borrow by issuing National Saving Certificate since 1984, worth Rs. 5000 million that year. Now the government raises the internal debt by using various types of instruments such as Treasury Bills, Development Bonds, Special Bonds, National Saving Bond and Citizen Investment Certificates.

Table: 4.2

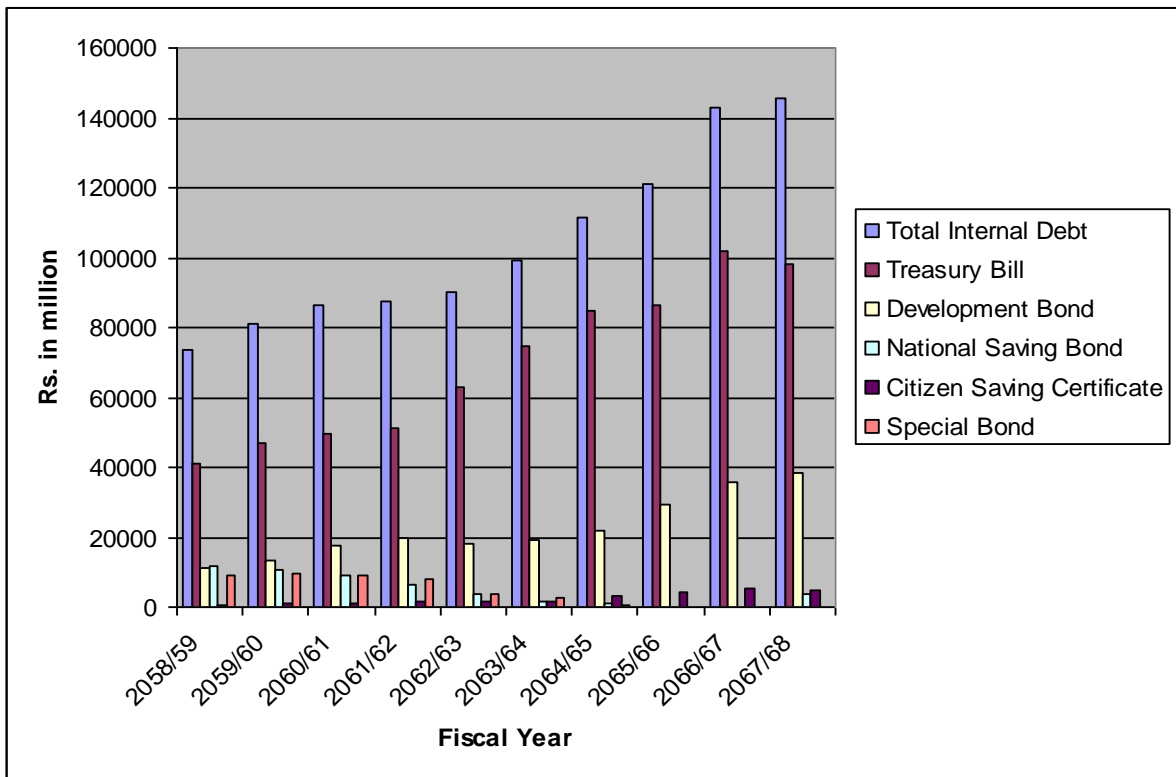
Internal Debt and its Components

(Rs. In million)

FY	Total Internal Debt	Treasury Bill	Development Bond	National Saving Bond	Citizen Saving Certificate	Special Bond
2058/59	73621	41106.6	11090.7	11536.3	628.1	9259.3
2059/60	81148.3	46844.9	13090.7	10659.9	931.1	9621.7
2060/61	86133.7	49429.6	17549.2	9029.8	1178.9	8946.2
2061/62	87564.3	51383.1	19999.2	6576.8	1428.9	8176.3
2062/63	89955	62970.3	17959.2	3876.8	1678.9	3469.8
2063/64	99303.8	74445.3	19177.1	1516.9	1391	2773.5
2064/65	111239.1	85033	21735.4	1116.9	3014.4	339.4
2065/66	120873.6	86515	29478.5	216.9	4433.6	229.6
2066/67	142859.7	102043.7	35519.4	0	5126.9	169.7
2067/68	145576.8	98268.3	38519.4	4000	4626.9	162.2

Source: Annex - II

Figure: 4.3
Internal Debt and its Components



Above table and figure shows that the practice of systematically raising of internal debt in Nepal started in Nepal in FY 1961/62. After the enforcement of Public debt Act 1962, the first issue is made in 1962 through issuance of Treasury bill amounting Rs. 7 million. The next instrument of public debt is Development Bond that is issued in 1963/64 amounting to 131.0 million. The government started to borrow by issuing National Saving Certificate since 1984, worth Rs. 5000 million that year. Now the government raises the internal debt by using various types of instruments such as Treasury Bills, Development Bonds, Special Bonds, National Saving Bond and Citizen Investment Certificates. Basically, there are two types of instruments for internal borrowings. These are also called money market instruments and capital market instruments. Treasury bill is money market instrument and it is also used in open market operations by the central bank.

Treasury bills have maturity of less than one year. Normally, treasury bills are issued for a period of 28 days and 91 days; however, sometimes government issues it for 182 days, and 364 days too. All the other government bonds are capital market instruments as these have maturity period of more than one year. These long-term bonds have maturity period of 3 to 20 year's period. Generally, National Saving Bonds and Development Bonds have maturity period of 3 to 7 years. Special Bonds have the maturity periods as determined by the government. The table provided below exhibits the composition of instruments on internal debt. The instruments are Treasury Bills (TB), Development Bonds (DB), National Saving Certificates (NSC), Citizen Saving Certificates (CSC) and Special Bonds (SB). Among these instrument CSC is the newest one, which is introduced in FY2058/59 to raise the borrowing from the general public. This instrument is not issued for the organizations and institutions. The table provided below shows that the internal debt has increased from Rs. 73621 million that of FY 2058/59 to Rs. 145576.8 million in FY 2067/68. Treasury bills and development bonds are the major components on internal borrowings. The internal debt raised through issuing treasury bills is 41106.6 million in FY 2058/59, which has increased by 2.39 times by FY 2067/68 and has stood, at Rs. 98268.3 million. The proportion of Development Bond has increased by 3.47 times during the study period where as the proportion of National Saving Certificate and Special Bonds is decreased. Since last four years, the outstanding of special bonds has begun to decrease due to transferring the borrowings from central bank other sectors and redemption of bond by the government.

4.4.2 Growth Rate of Internal Debt and its Components

The annual average growth rates of internal debt for the study period from FY 2059/60 to 2067/68 are 7.19 percent. Among the instruments used for raising internal debt, the growth rates of Citizen Saving Certificate outstanding are very high which has stood at 26.61 percent per annum which is presented as below:

Table: 4.3

Growth Rate of Internal Debt and its Components

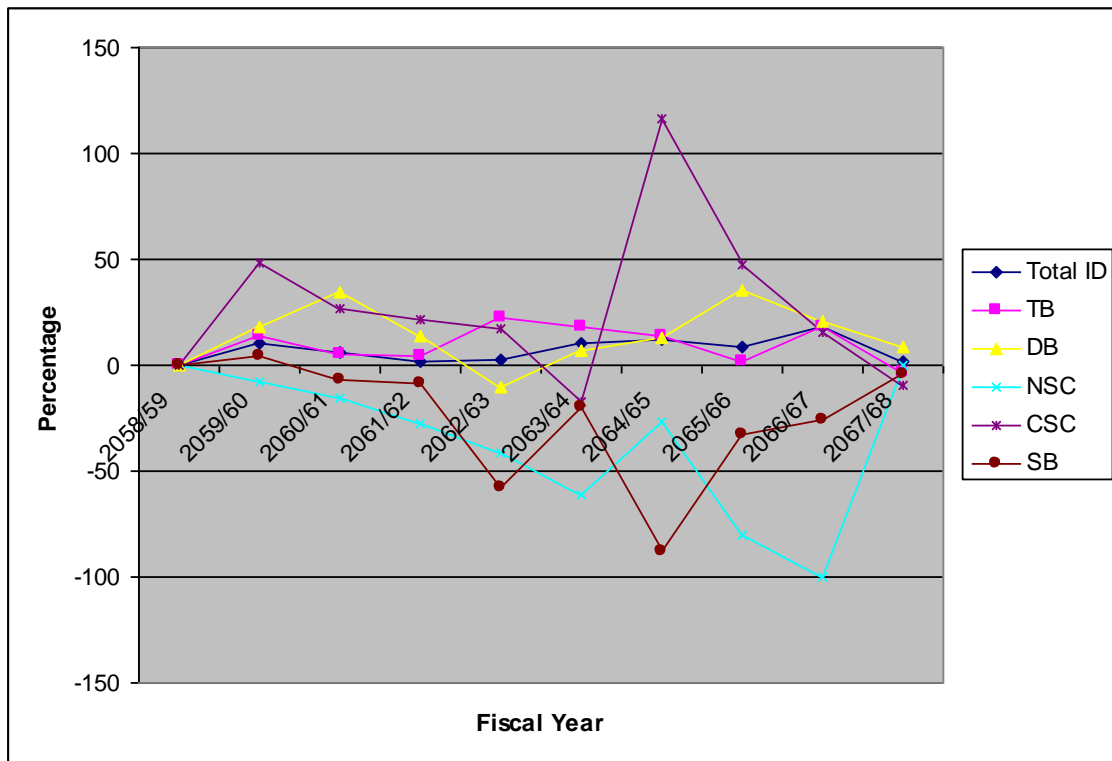
(In percentage)

FY	Total ID	TB	DB	NSC	CSC	SB
2058/59	-	-	-	-	-	-
2059/60	10.22	13.96	18.03	-7.60	48.24	3.91
2060/61	6.14	5.52	34.06	-15.29	26.61	-7.02
2061/62	1.66	3.95	13.96	-27.17	21.21	-8.61
2062/63	2.73	22.55	-10.20	-41.05	17.50	-57.56
2063/64	10.39	18.22	6.78	-60.87	-17.15	-20.07
2064/65	12.02	14.22	13.34	-26.37	116.71	-87.76
2065/66	8.66	1.74	35.62	-80.58	47.08	-32.35
2066/67	18.19	17.95	20.49	-100.00	15.64	-26.09
2067/68	1.90	-3.70	8.45	-	-9.75	-4.42
Average	7.19	9.44	14.05	-35.89	26.61	-24.00

Source: Calculated from table-2 and Annex III

Figure: 4.4

Growth Rate of Internal Debt and it's Components



Above table and figure shows that the average growth rates of outstanding of TB and DB are 9.44 & 14.05 percent per annum for the study period. Likewise, the annual average growth rate of National saving certificate and Special Bond are -35.89 and -24 percent. Banks and financial institutions are the major holders of Treasury bills, development bonds and special bonds. Therefore, the fund raising composition of instrument has not been balanced between the individuals and institutional sectors. Normally, individuals buy and hold the instrument until maturity but banks and institutions liquidate it when the rate of interest rises in the capital market. Long-term bonds are advantageous to the government when the low interest rate can be booked for longer periods and short term bonds are advantageous when there is a continuous fall in the interest rate structure. The interest rates now in the market have fall down to lower level.

Therefore, to have the cost advantage on borrowings the government needs to reorient it policies by raising loans for longer periods. The growth rates of treasury bills and development bonds show that government needs more focused interventions in instruments to raise the public debt from general public and longer period instruments.

4.4.3 Share of Debt Instruments on Total Internal Debt

The share of the components of internal debt is changing over the years. The share of short-term instruments like Treasury Bill on total Internal Debt outstanding was 56 percent and the rest 44 percent was covered by long-term instrument like Development Bonds, National Saving Certificates and Special Bonds in FY 2058/59. Later on the, the Treasury Bills have been dominating in the structure of total outstanding of Internal Debt. In FY 2067/68, TB had share of 66 percent and 34 percent was covered by rest of other instruments. Treasury Bills are most liquid instruments in the market. There is secondary market in the NRB to liquidate it at any office day for banks and financial institutions. Therefore, there is liquidity risk

to the NRB towards the government borrowings. There is another liquidity risk for the government also, that when commercial banks will have enough opportunity to lend in higher rates and will find other investment opportunity, then they will not buy the Treasury Bills in a big volume like today. In such a case there will be a possibility of difficulty in raising cash through borrowings in a short period of time in low interest rates. The share of each instrument of internal debt outstanding is present in the table below:

Table: 4.4
Share of Debt Instruments on Internal Debt

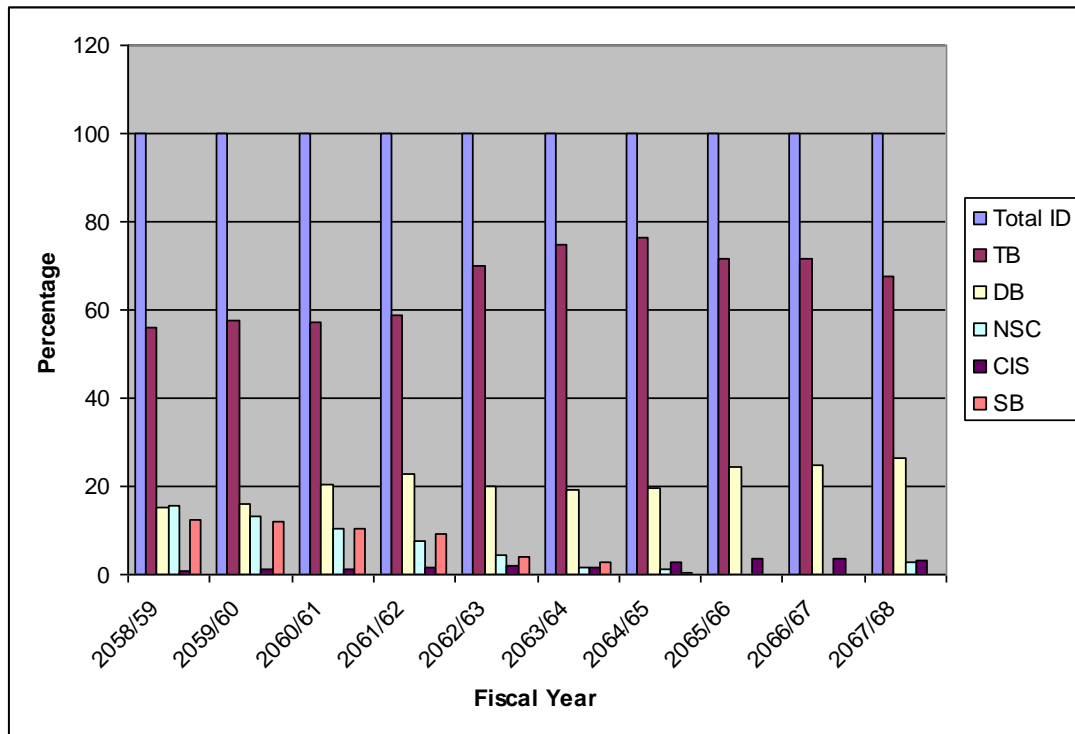
(Percentage on Total ID)

FY	Total ID	TB	DB	NSC	CIS	SB
2058/59	100	55.84	15.06	15.67	0.85	12.58
2059/60	100	57.73	16.13	13.14	1.15	11.86
2060/61	100	57.39	20.37	10.48	1.37	10.39
2061/62	100	58.68	22.84	7.51	1.63	9.34
2062/63	100	70.00	19.96	4.31	1.87	3.86
2063/64	100	74.97	19.31	1.53	1.40	2.79
2064/65	100	76.44	19.54	1.00	2.71	0.31
2065/66	100	71.57	24.39	0.18	3.67	0.19
2066/67	100	71.43	24.86	0.00	3.59	0.12
2067/68	100	67.50	26.46	2.75	3.18	0.11
Average	100	66.15	20.89	5.66	2.14	5.15

Source: Calculated from table-2 and Annex IV

Figure: 4.5

Share of Debt Instruments on Internal Debt



4.4.4 Pattern and Ownership of Internal Debt Instruments

Various types of Government bonds are issued to raise the internal debt. For this purpose, Government of Nepal, has issue many kinds of bonds in the market. In Nepalese context, government has issued Treasury Bills, National Saving Certificates, Development Bonds, Special Bonds. Until last few years back, government has a target to raise loans from the banking and non-banking sectors. Now such targets have been waived out. During those periods, Treasury Bills and Development Bonds were used to borrow from the banking system where as National Saving Certificates was used to borrow from the non-banking system. The implication of borrowings from banking system and non-banking system is different. Borrowing from the banking system may have credit crunch in the economy but such effects will not happen if the funds are borrowed from the hands of public.

The pattern of ownership of government bonds is changing over the years. However, the Nepal Rastra Bank is trying to dispose its bond holdings in the market, it has been able to achieved partial success in this regard. It will also be worthwhile to mention here that, NRB needs to holds the government bonds for many purposes. NRB needs to hold the government securities for monetary policy implementation for which Treasury Bills are used. On the other hand, some times it becomes necessary to the central bank to buy the bonds due to under-subscription by the market in the primary issue. Another component is secondary market operation of government bonds. In this process government bills and bonds are purchased by the NRB from the market makers and performing REPO trade. This type of holding can be considered as investment portfolio. The other event is securitization of government overdraft taken from NRB.

Generally, the monetary policy is executed through open market operation (OMO). For this NRB uses to buy and sale of Government Treasury Bills. On the other hand, NRB is also holding Special Bonds that have been accumulated through securitization of government overdrafts in the past and this type of bonds are in low interest with limited marketability. Especially the holdings of these types of non-marketable bonds have not contributing to off-loading efforts of NRB.

The detail of the total outstanding in FY 2067/68, Nepal Rastra Bank held Rs.20.08 billion (20.08 percent), commercial banks held Rs.71.95 billion (57.17 percent) and other non-bank institutions and private sector held Rs.24.84 billion (22.75 percent). On analyzing domestic borrowing by instruments, 67.50 percent was Treasury Bills, 26.46 percent Development Bonds, 2.75 percent National Savings Certificate, 3.18 percent Citizen Savings Certificates and 0.11 percent Special Bonds.

Table: 4.5

Pattern and Ownership of Internal Debt Instruments

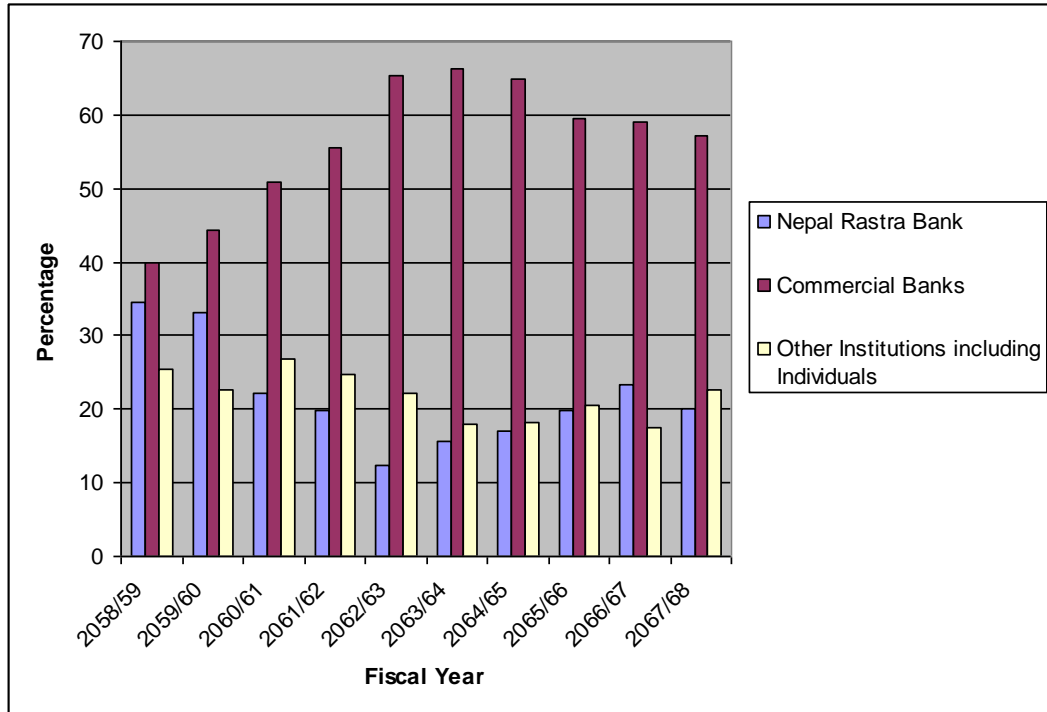
(In Percentage)

FY	Nepal Rastra Bank	Commercial Banks	Other Institutions including Individuals	Total
2058/59	34.64	39.88	25.48	100
2059/60	33.06	44.22	22.72	100
2060/61	22.22	50.85	26.93	100
2061/62	19.93	55.45	24.62	100
2062/63	12.28	65.44	22.28	100
2063/64	15.74	66.3	17.96	100
2064/65	17.01	64.85	18.14	100
2065/66	19.92	59.53	20.55	100
2066/67	23.39	59	17.61	100
2067/68	20.08	57.17	22.75	100

Source: Annex – V

Figure: 4.6

Pattern and Ownership of Internal Debt Instruments



The table provided above depicts that on the ownership pattern of government bonds was 34.64 percent with the NRB in FY 2058/59, which decreased to 20.08 percent in FY 2067/68. The commercial banks have begun to show their interest in purchasing the government bonds. Commercial banks were holding only 39.88 percent of government bonds in FY 2058/59, which was increased to 57.17 percent in FY 2067/68. The oscillations in the proportion of such holding also depend on the monetary policy of the central bank. The provisions of higher statutory liquidity ratios, open market operations and introduction of NRB bonds have significant effects on the holding pattern of treasury bills and government bonds for commercial banks. So, in recent years, ownership pattern shows that the commercial banks holdings are increasing significantly. However, the ownership pattern of individuals towards government bonds is increasing; the ratio on overall position is still negligible.

4.5 Analysis of Level of Indebtedness

Level of indebtedness shows extent of debt burden of the economy. In this connection there are many indicators available to analyze the indebtedness of a country.

4.5.1 Position of Internal and External Indebtedness

Nepal remained almost debt free country till 1961/62. The outstanding of debt begin since 1963. The size of debt both internal and external was modest during the second plan period. Due to the low size of debt no debt-servicing obligation were traced in 1960s and also up to mid 1970s. Even at the end of the 1970s total internal debt was less than one percent of the GDP. The level of internal debt and external debt stood at Rs. 73621 million and Rs. 190691.2 million in 2058/59. The amount increases and become Rs. 145576.8 million and Rs. 273607.3 million in 2067/68. The following table summarizes the Level of indebtedness of Nepal and its trends onwards to have a broad outlook.

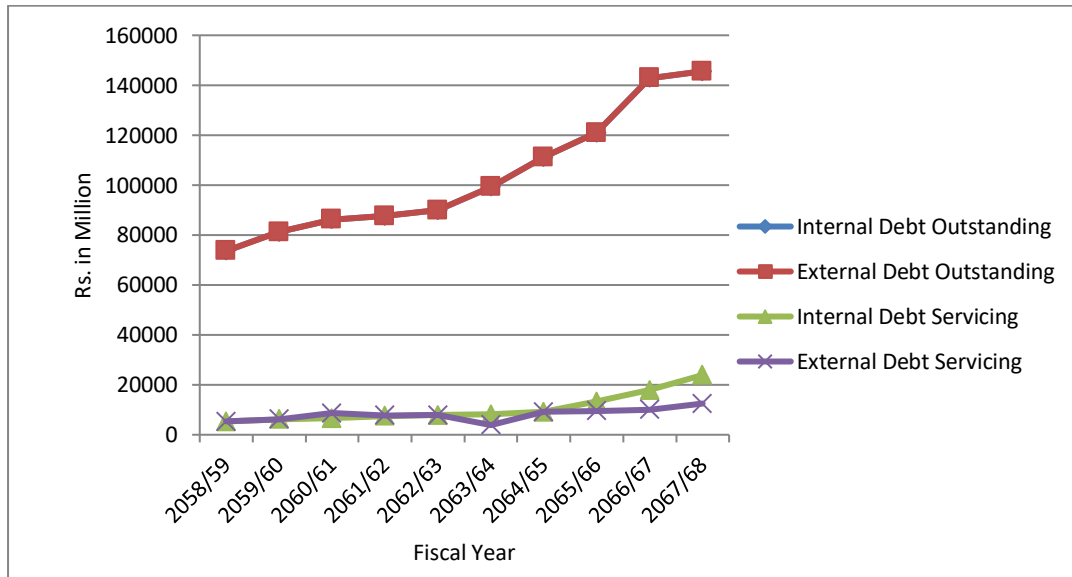
Table: 4.6
Indebtedness of the Country

(Rs. in Million)

FY	Internal Debt Outstanding	External Debt Outstanding	Internal Debt Servicing	External Debt Servicing
2058/59	73621	190691.2	5321.4	5265.2
2059/60	81148.3	200404.4	6201.4	6206.7
2060/61	86133.7	220125.6	6567.5	8642.6
2061/62	87564.3	223433.2	7519.2	7690.3
2062/63	89955	232779.3	7908.9	7907.9
2063/64	99303.8	219641.9	8100.0	3880.3
2064/65	111239.1	233968.6	9151.4	9151.3
2065/66	120873.6	216628.9	13321.8	9594.5
2066/67	142859.7	249965.4	17846.6	10005
2067/68	145576.8	273607.3	23913.5	12496

Source: Annex - VI

Figure: 4.7
Indebtedness of the Country



4.5.2 The Trend in Internal Indebtedness

Table: 4.7

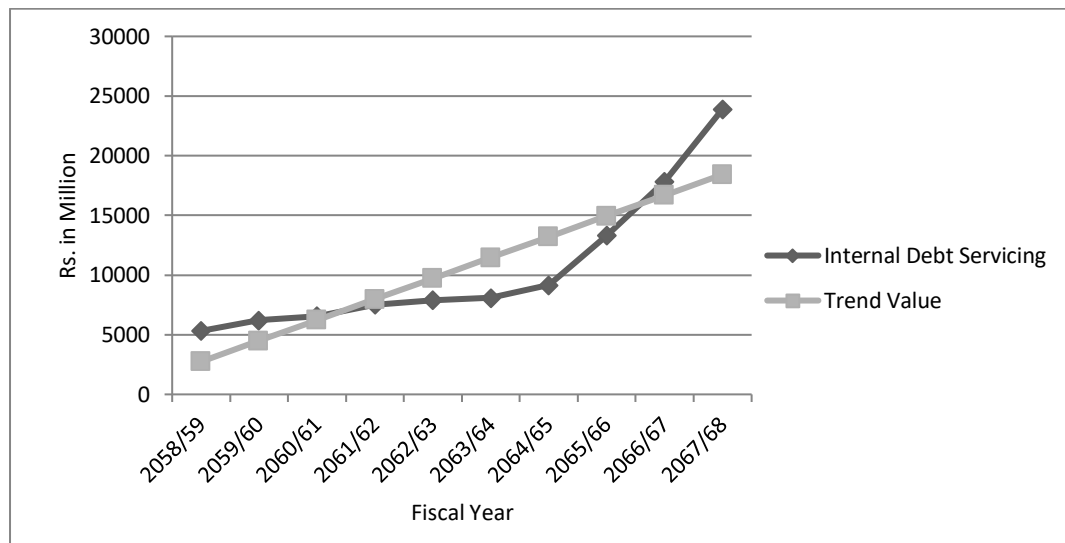
Trend Value of IDS

FY	Internal Debt Servicing	Trend Value
2058/59	5321.4	2738.68
2059/60	6201.4	4482.34
2060/61	6567.5	6226
2061/62	7519.2	7969.66
2062/63	7908.9	9713.32
2063/64	8100	11456.98
2064/65	9151.4	13200.64
2065/66	13321.8	14944.3
2066/67	17846.6	16687.96
2067/68	23913.5	18431.62

Source: Annex VII and Annex XIV

Figure: 4.8

Trend Value of IDS



From the above table 4.7, it is evident that internal debt is in increasing trend. The value rises from Rs. 73621 million on 2058/59 to Rs. 145576.8 million in 2067/68. The principal and interest payments up to the end of 2058/59 constituted a small size of Rs. 5321.4 million as compared to the Rs 23914 million of 2067/68. The

magnitude of the debt within the period was increased about four times during the entire period. From the above table 4.8 it seems that trend of IDS is in increasing trend. It was Rs. 2738.68M in FY 2058/59 which reached up to Rs. 18431.62M in FY 2067/68.

4.5.3 The Trend in External Indebtedness

Table: 4.8

Trend Value of EDS

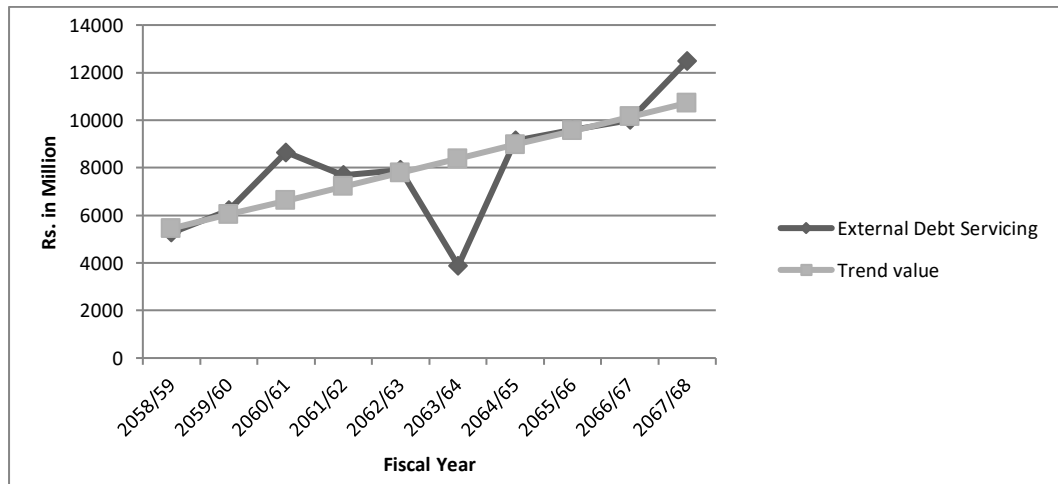
(Rs. In Million)

FY	External Debt Servicing	Trend value
2058/59	5265.2	5444.54
2059/60	6206.7	6031.08
2060/61	8642.6	6617.62
2061/62	7690.3	7204.16
2062/63	7907.9	7790.7
2063/64	3880.3	8377.24
2064/65	9151.3	8963.78
2065/66	9594.5	9550.32
2066/67	10005	10136.86
2067/68	12496	10723.4

Source: Annex - XV

Figure: 4.9

Trend Value of EDS



Though the volume of external debt was increased during the period, the external debt outstanding was Rs. 190691.2 million and it rose up to Rs. 273607.3 million within a span of 10 years, which is around 1.5 times the figure recorded at the end of FY 2067/68. During the periods, the magnitude of external loan has continued to increase every year leading to greater external indebtedness. But in the FY it is decreased to Rs.3880.3M. The amount of external debt has stood at Rs 273607.3 million in the end of FY 2067/68. The trend of EDS is in increasing trend. It was RS. 5444.54M in FY 2058/59 which reached to Rs.10723.4M in FY 2067/68.

4.6 Debt to GDP Ratios

Total Debt to GDP ratio is commonly used indicator to measure the indebtedness of a country. These ratios can be further segregated into internal debt to GDP ratio and external debt to GDP ratio. For the detail analysis, the GDP figure can be taken as nominal GDP at current market price and also on real terms. All of these types of ratios have been calculated and presented in the table below for the in depth analysis purpose. The table provided below exhibit that all types of debt to GDP ratios are increasing very fast throughout the study period of 10 years.

4.6.1 Total Debt to GDP Ratio

Total debt includes both the internal debt and external debt. Total debt to GDP ratios is fluctuating during the 10 years. It was 67 percent in 2056/57, which become 45 percent in 2065/66. This shows that the current domestic production of the economy is enough to cover only 45 percent of the debt obligation. So, from the table it is concluded that the Total debt to GDP ratio is in decreasing trend during the last couple of years than that of earlier years.

4.6.2 Internal Debt to GDP Ratio

Internal debt is one of the components of total debt. Internal debt to GDP ratios is seems to be more or less stabilized throughout the study period of 10 years.

Internal debt to GDP ratio was 15 percent in FY 2056/57 which become 14 percent FY 2065/66. Therefore, this trend exhibit that the growth rates of internal debt is more or less in the line of the increase in the nominal growth in the GDP

Table: 4.9

Total Debt, Internal Debt and External Debt to GDP Ratios

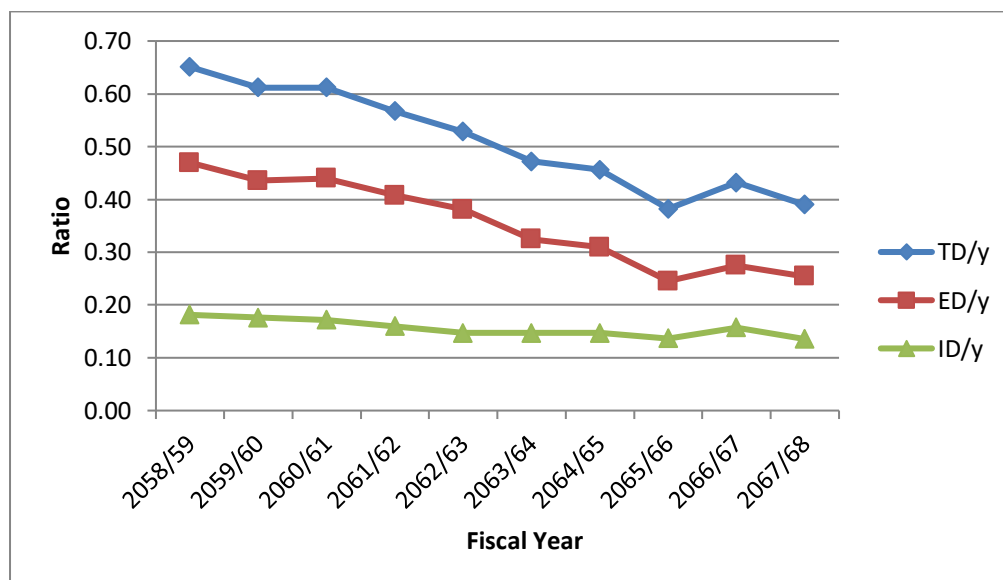
(Ratio)

FY	TD/y	ED/y	ID/y
2058/59	0.65	0.47	0.18
2059/60	0.61	0.44	0.18
2060/61	0.61	0.44	0.17
2061/62	0.57	0.41	0.16
2062/63	0.53	0.38	0.15
2063/64	0.47	0.32	0.15
2064/65	0.46	0.31	0.15
2065/66	0.38	0.25	0.14
2066/67	0.43	0.27	0.16
2067/68	0.39	0.25	0.14

Source: Annex - VIII

Figure: 4.10

Total Debt, Internal Debt and External Debt to GDP Ratios



Above table and figure shows that internal debt to GDP ratio was 15 percent in FY 2056/57 which become 14 percent FY 2065/66. Therefore, this trend exhibit that the growth rates of internal debt is more or less in the line of the increase in the nominal growth in the GDP

4.6.3 External Debt to GDP Ratio

External debt is another major component of total debt. This is major component because the ratio of ED is higher than that of similar internal debt ratios. The table provided above depicts that ED/y was 52 percent in FY 2056/57. The value of those ratios become 31 percent in FY 2065/66. These figures show that there is more gap in ED to nominal GDP ratios.

4.6.4 Per Capital Debt

The per capital debt is increasing over the years except in the year 2061/062. The table provided below depicts the population, per capital internal debt, per capital external debt and per capital total debt of Nepal.

Table: 4.10
Per Capital Debt

(In Rs.)

FY	Population in Thousand	Per Capital TD Rs.	Per Capital ED Rs.	Per Capital ID Rs.
2058/59	22632	11678.69	8425.73	3252.96
2059/60	23151	12161.58	8656.40	3505.17
2060/61	23680	12933.25	9295.84	3637.40
2061/62	24222	12839.46	9224.39	3615.07
2062/63	24777	13025.56	9394.98	3630.58
2063/64	25300	12606.55	8681.50	3925.05
2064/65	25900	13328.48	9033.54	4294.95
2065/66	26400	12784.19	8205.64	4578.55
2066/67	27000	14549.08	9257.98	5291.10
2067/68	28900	14504.64	9467.38	5037.26

Source: Annex - X

Figure: 4.11
Trend Per Capita in Debt

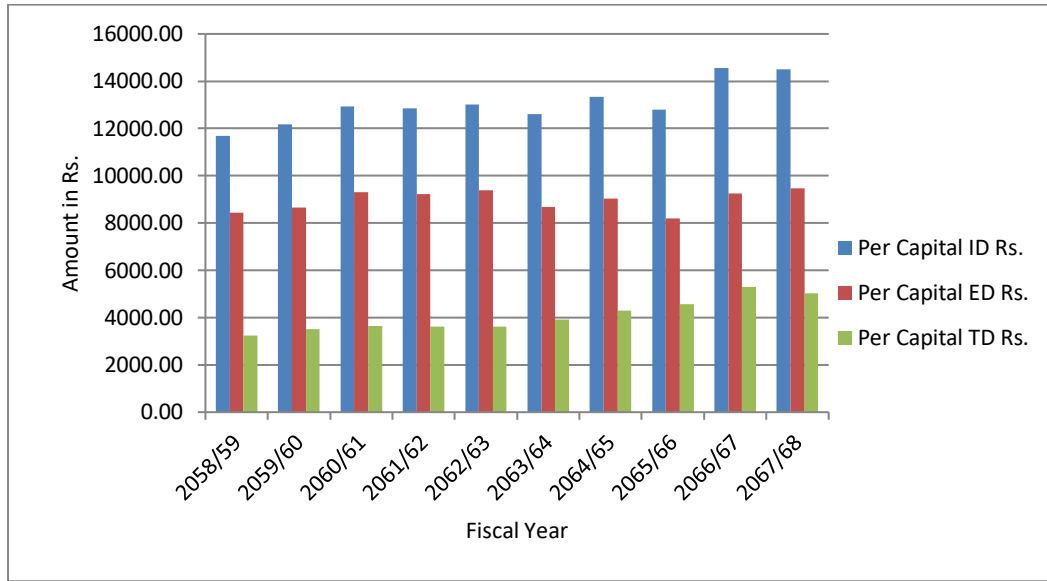
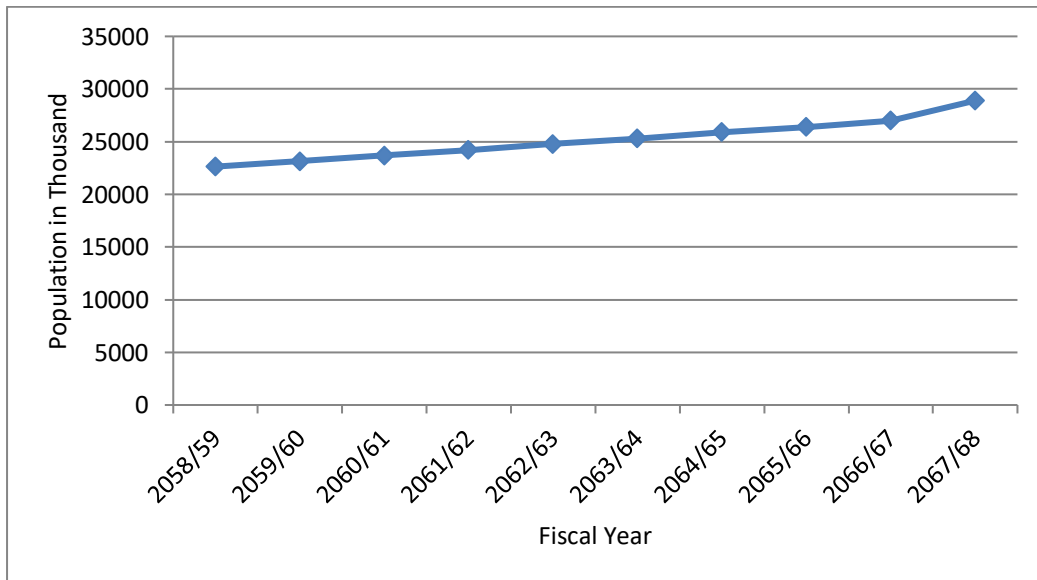


Figure: 4.12
Population is Increasing Trend



At the end of FY 2058/59, Nepal's per capita debt burden was Rs. 11678.69. Out of this Rs. 3252.96 was towards internal debt and Rs. 8425.73 towards external debt. During the years of the study period, it increases by around Rs. 3000. The amount of per capita internal debt has reached at Rs. 5037.26 on FY 2067/68. The

per capital external debt alone has increased by 1.12 times and reach at Rs. 9467.38 and per capital internal debt was increased by 1.54s times with in the 10 years period. Accordingly, the total debt per head of Nepalese people has reached at Rs. 14504.64 by FY 2067/68.

4.7 The Ratio of External Debt Outstanding to Export

This is a stock concept in measuring level of indebtedness. This ratio indicates that to what extent the borrower country has been able in the past to command an inward net inflow. High value of the debt outstanding to export definitely shows the increasing trend and a high level of indebtedness. The high values on debt outstanding to export for different years implies that the earnings of the foreign currencies from the export is not enough to cope up with the increasing borrowing of capital from abroad. The ratio of external debt out standing to export for the period of FY 2056/57 to FY 2065/066 is provided below.

Table: 4.11

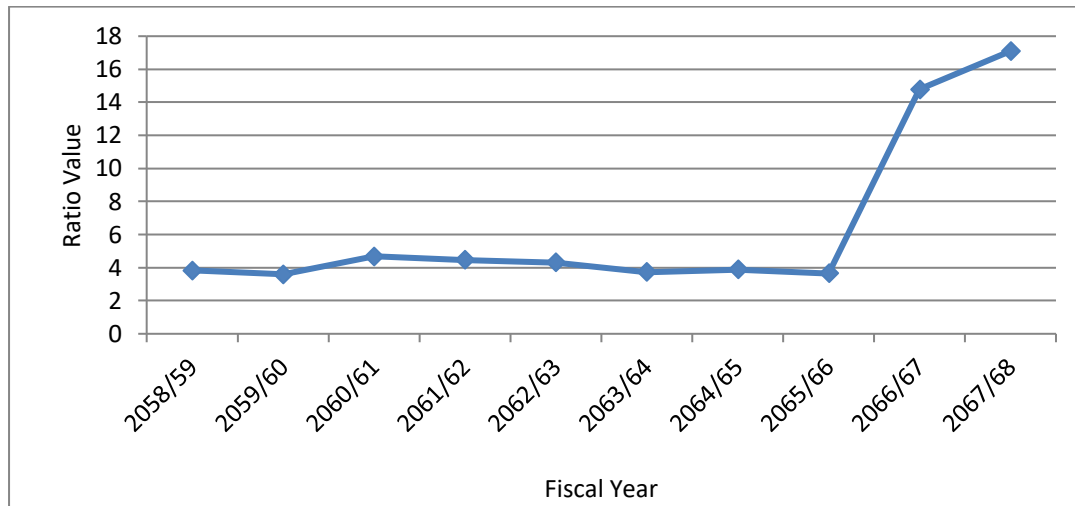
Ratio of External Debt Outstanding to Export

(Rs.in Million)

FY	External Debt Outstanding (EDO)	Export (X)	EDO/X
2058/59	190691.2	49822.7	3.83
2059/60	200404.4	55654.1	3.6
2060/61	220125.6	46944.8	4.67
2061/62	223433.2	49930.6	4.47
2062/63	232779.3	53910.7	4.31
2063/64	219641.9	58705.7	3.74
2064/65	233968.6	60234.1	3.88
2065/66	216628.9	59383.1	3.65
2066/67	249965.4	16897.5	14.79
2067/68	273607.3	15999.6	17.1

Source: Annex - XI

Figure: 4.13
EDO/X



There is consistent rise in the outstanding of external debt and the volume of export earnings; the ratio has been varied from years to years. EDO/X was 3.83 in 2058/59 and reach the value of 17.10 in the year 2067/68. In comparison to the beginning of the study period and also with the highest level of FY 2067/68, the capacity to repay the debt from the export earnings is decreasing in the economy.

4.7.1 The Internal Debt Service (IDS) Ratio

Internal debt service ratio has been calculated through dividing the amount of internal debt service by primary surplus. Internal debt service is the sum of principal and interest payments of a year. Similarly, the primary surplus is the excess amount of revenue receipt of the government over the regular expenditure of a year. This measures the capacity of the government to serve the internal debt from the revenue without cutting the development expenditures. Lower level of the ratio especially below one is desirable to be maintained in the economy. Most importantly, the lower and decreasing trend of such ratio is desirable as this signifies that the government has enough primary surpluses in the increasing level to serve the internal debt. If there is no debt service obligation such ratio will fall

up to zero and if the primary surplus is not enough to cover the debt service it will be above than one. If the revenue is not enough to cover even the regular expenditures the primary surplus will be negative and hence the ratio will also be negative. The table provided below provides information on the extent of internal debt service, primary surplus and internal debt service ratio.

Table: 4.12

Internal Debt Service Ratio (IDSR)

(Rs. in million)

FY	Debt Servicing on ID (IDS)	Revenue Receipt	Recurrent Expenditure	Primary Surplus	IDSR= IDS/PS
2058/59	5321.4	42893.7	35579.1	7314.6	0.73
2059/60	6201.4	48893.6	45837.3	3056.3	2.03
2060/61	6567.5	50445.6	48863.9	1581.7	4.15
2061/62	7519.2	56229.8	52090.5	4139.3	1.82
2062/63	7908.9	62331.0	55552.1	6778.9	1.17
2063/64	8100.0	70122.8	59017.7	11105	0.73
2064/65	9151.4	72282.1	64580.7	7701.4	1.19
2065/66	13321.8	87712.1	74139.8	13572	0.98
2066/67	17846.6	107622.1	88355.5	19267	0.93
2067/68	23913.5	143482.9	119380.4	24103	0.99

Source: Annex - XII

Figure: 4.14

Trend in Debt Servicing on ID

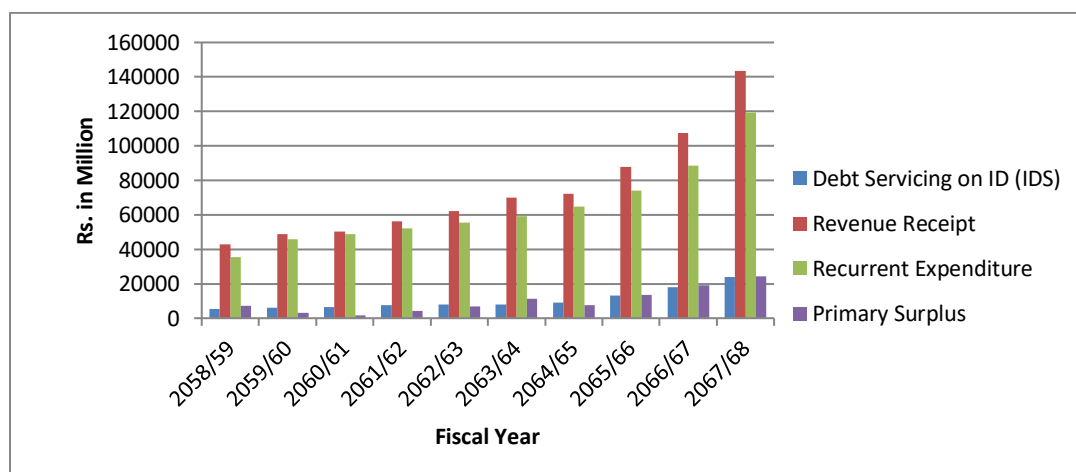
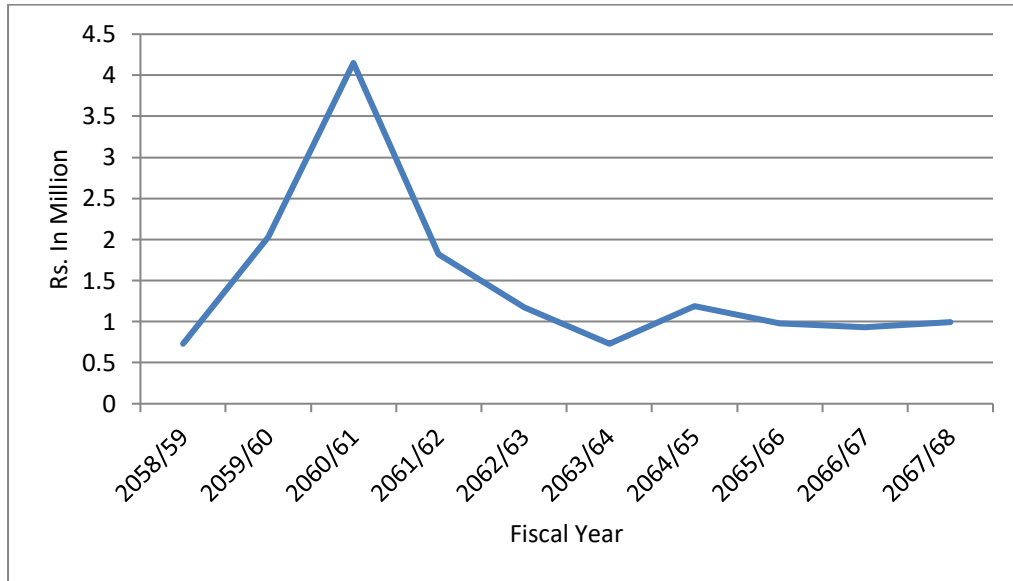


Figure: 4.15
IDS_R = IDS/PS



The table above shows that the internal debt servicing is increasing each year. Within the study period of 10 years it has increased by four times from Rs. 5321.4 million of FY 2058/59 to Rs.23913.5 million in FY 2067/68. However, the primary surplus was also increased by 3.3 times, from Rs 7314.6 million of the year 2058/59 to Rs. 24103 million in the year 2067/68. At the beginning of the study period, debt servicing and primary surplus both were increasing. This type of trend has depicted that the capacity to serve the debt was deteriorating at the beginning. After the year 2062/63 primary surplus has been decreasing. This type of situation has compelled the government to serve the debt either by cutting down the development expenditures or raising additional external/ internal debt to serve the debt.

4.7.2 The External Debt Service (EDS) Ratio

Table: 4.13

External Debt Service Payments

(Rs. in Million)

FY	Payments of Principal on ED	Payment of Interest on ED	Debt Servicing on ED (EDS)	Export (X)	EDS/X
2058/59	3625.3	1639.9	5265.2	49822.7	0.11
2059/60	4684.6	1522.1	6206.7	55654.1	0.11
2060/61	4936.4	3706.2	8642.6	46944.8	0.18
2061/62	5668.7	2021.6	7690.3	49930.6	0.15
2062/63	5765.5	2142.4	7907.9	53910.7	0.15
2063/64	2793.4	1086.9	3880.3	58705.7	0.07
2064/65	6987.4	2163.9	9151.3	60234.1	0.15
2065/66	7538.8	2055.7	9594.5	59383.1	0.16
2066/67	7859.6	2145.3	10005	59266.5	0.17
2067/68	10122.0	2374.3	12496	67247.1	0.19

Source: Annex XIII

Figure: 4.16

External Debt Service Payment

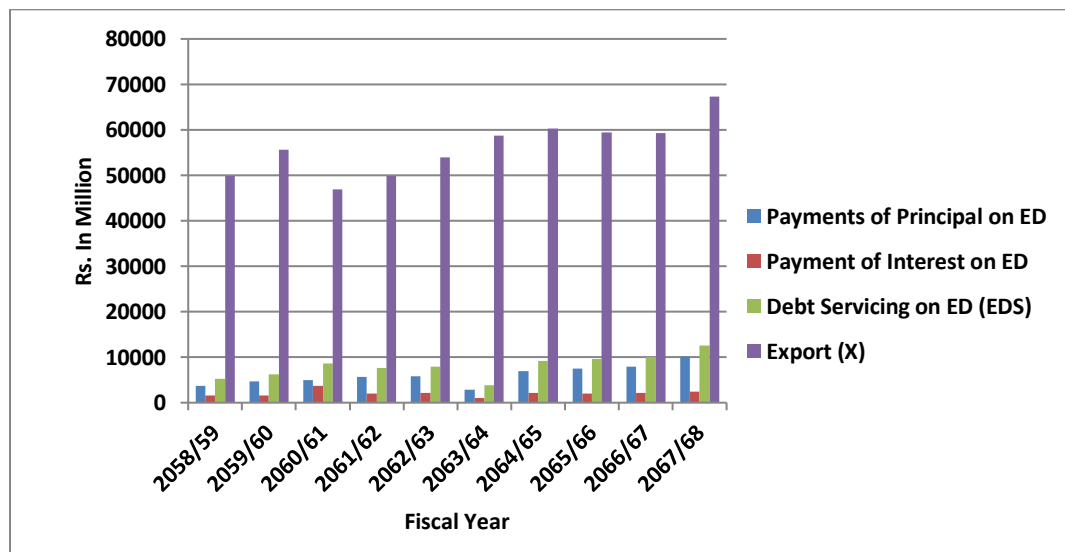
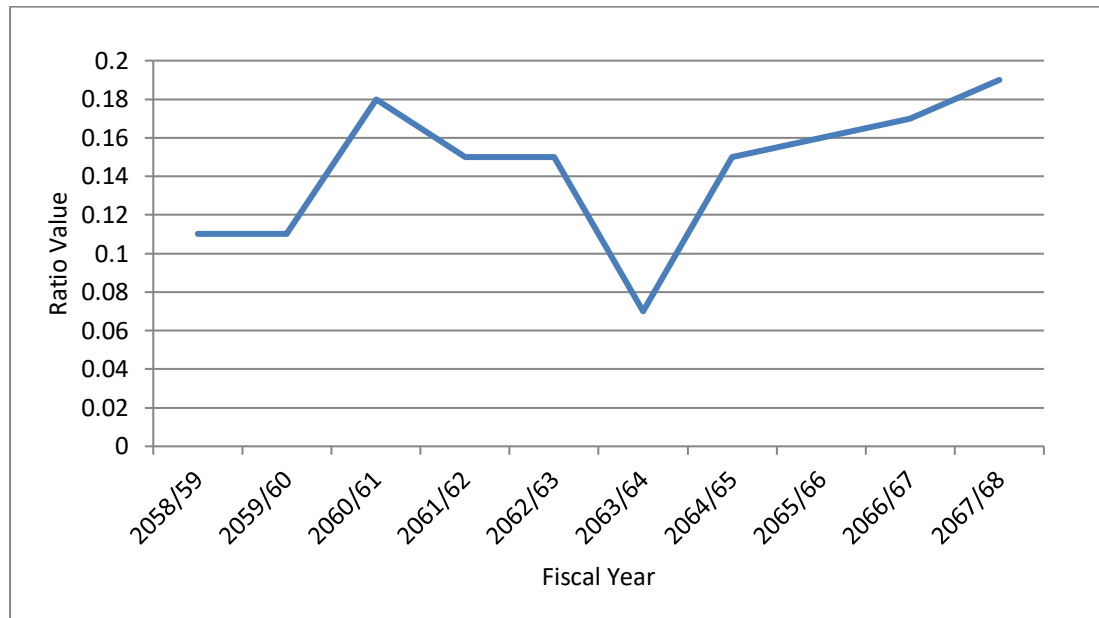


Figure: 4.17
EDX / X



External debt service payments ratio is a commonly used indicator to measure the borrower's debt service obligation in relation to export earning. This ratio explains the extent of debt service in terms of current export earnings. External debt service (EDS) to Export (X) is increasing over the period. The ratio of EDS to X was 11 percent in FY 2058/59, and 19 percent at 2067/68. This suggests that now 19 percent of export earnings are being spent over for serving the external debt. The higher the level of the ratio of debt service provides little room to the government to retain the export earning for additional capital formation. In this context, it can be said that external debt service obligation is increasing in the economy. The government's external debt service burden is in the high level in relation to the performance of the economy. Unless and until the export does not increase in proportionate to the external debt service obligation, the government will have been within the turbulent situation in the years to come.

4.8 Presentation and Analysis of Primary Data

This section includes the analysis of primary sources of data collect through the questionnaire survey to achieve the objectives of the study set in chapter one. The questionnaire has been distributed to 30 individual investors offering various professions. The individual investors represented by the respondents are the businessmen, service holders in several organizations such as staff of banks, financial institutions, government officers and employee of other organization as well as private service and other persons such as lecturers, students from finance and economics background.

The information were collected from all the categories comprised, businessmen, service holder and other. Each group of the investors are categorized on the basis of their monthly income group, their perception of which types of government securities are highly subscribed in the market and their interest on government securities. The date were classified on the basis of the factors that induce investors to invest in government securities, the main reason for investing in government securities, the default risks they perceived on the investment in on government securities in terms of payment of principal and interest and their perception on difficulty in collecting interest and principal. The date were also analyzed to find out the reasons for the sales of government securities, perceived situations of uncertainty to invest on government securities, the kind of funds used to purchase government securities, the reasons for full subscriptions of government securities and their perception on utilization of collected fund through the government securities. The major findings of the survey are as follows:

Table: 4.14

Profession wise Distribution of Investors

Profession	No. of Respondent	
	No.	%
Business Man	8	26.67
Service Holder	15	50
Student & Other	7	23.33
Total	30	

Source: Annex - XVI

Investors are classified in four major groups i.e. Businessmen, Service holders and Others. Information was collected among individual respondents about current professions. Out of total 30 participating respondents who were questioned about the category they belong to, 26.67 percent claimed that they belonged to businessman, 50 percent declared themselves as the service holders and remaining 23.33 percent said that they belonged to other category i.e. students, campus lecturers etc.

Table: 4.15

Distribution of Respondent on the Basis of their Monthly Income Level

Income Level \ Profession	0- Rs. 10000		Rs. 10000- Rs. 20000		Rs. 20000- Rs. 40000		Above Rs. 40,000		Total
	No.	%	No.	%	No.	%	No.	%	
Business Man	-	-	2	16.67	2	25	4	66.67	8
Service Holder	-	-	7	58.33	6	75	2	33.33	15
Student & Other	4	100	3	25	-	-	-	-	7
Total	4	100	12	100	8	100	6	100	30

Source: Annex - XVI

Information was collected among individual respondents, groupings on the basis of their professions and their monthly income to enhance the analysis of perception about government securities on the basis of income level. Regarding

the income level, 13.33 were found with monthly income below than ten thousand rupees per month. The major respondents (i.e. 40 percent) were found with monthly income between Rs. 10,000 to Rs. 20,000. Out of total respondent 26.67 percent were found having monthly income between Rs. 20,000 to Rs.40, 000, while 20 percent were said that they were earning monthly income above Rs. 40,000.

Table: 4.16

Interest to Buy the Government Securities on the Basis of Profession

Profession\ Interest	Business Man		Service Holder		Student & Other		Total
	No.	%	No.	%	No.	%	
Less Interested	5	62.5	6	40	2	28.58	13
Moderate Interested	1	12.5	4	26.67	1	14.28	6
Highly Interested	0		2	13.33	0		2
Non Interested	2	25	3	20	4	57.14	9
Total	8	100	15	100	7	100	30

Source: Annex - XVI

With respect to interest to buy the government securities on the basis of their profession, major businessmen (i.e.62.5 percent) were found less interested and totally indifferent to buy government securities, whereas 12.5 percent businessman were found moderate interested on it. It is interesting that, nobody in businessmen group were found highly interested.

Regarding the interest of service holders' highest number of service holders (i.e. 40 percent) was found less interested to buy the government securities and only 13.33 percent found highly interested on it. 26.67 percent and 20 percent respondents were found moderate interested and not interested respectively to buy government securities.

In other category, out total respondents, highest portion (57.14 percent) of investors found not interested to buy the government securities, whereas 28.57 percent were highly interested on it. Remaining 14.29 percent were found moderate interested and nobody were found highly interested to buy government securities.

Table: 4.17
Perception of Government Securities

Profession\ Govt. Securities	Business Man		Service Holders		Student & Other		Total
	No.	%	No.	%	No.	%	
Treasury Bills	6	75	9	60	4	57.14	19
Development Bonds	-		2	13.33	1	14.28	3
National Saving Certificate	1	12.5	2	13.33	1	14.29	4
Citizen Saving Certificate	-		-		-		-
Special Bonds	1	12.5	2	13.34	1	14.28	4
Total	8	100	15	100	7	100	30

Source: Annex - XVI

When the businessmen were questioned about their perceptions on the types of government securities that are highly subscribed in the market, most of them (75 percent) opined that treasury bills are highly subscribed in market, whereas 12.5 percent were found in favour of special bonds and National saving certificate. They were not found interested on development bond and citizen saving certificate.

In other category, out of total respondents, 59.11 percent, opined that treasury bills are highly subscribed in market, and in other securities equal 13.63 percent. Nobody shows their view in Citizen Saving Certificate.

Table 4.18**Main Reasons for Investing in Government Securities**

Profession\ Risk	Business Man		Service Holders		Student & Other		Total
	No.	%	No.	%	No.	%	
Risk Less	5	62.5	10	66.67	5	71.42	20
Lack of other investment opportunities	2	25	3	20	1	14.29	6
Other Reason	1	12.5	2	13.33	1	14.29	4
Total	8	100	15	100	7	100	30

Source: Annex - XVI

With respect to reasons for investing in government securities, out of total respondents in businessmen, 62.5 percent, 25 percent and 12.5 percent invest their fund considering as risk less investment, lack of other investment opportunity and other reason respectively.

Regarding the reasons for investing in government securities, most of service holders (66.67 percent) viewed that they invest on it considering as risk less investment, whereas 20 percent and 13.33 percent invest their fund considering as lack of other investment opportunity and other reason as zero liquidity risk respectively.

The reasons for investing in government securities by other respondents, it is found that 71.44 percent, 14.28 percent and 14.28 percent invest their fund considering as risk less investment, lack of other investment opportunity and zero liquidity risk respectively.

Table 4.19

Difficulty in Collecting Interest and Principal Repayment

Profession\ Difficulty	Business Man		Service Holders		Student & Other		Total
	No.	%	No.	%	No.	%	
Due to long process	5	62.5	7	46.67	3	42.85	15
Complex Procedure	1	12.5	3	20	2	28.57	6
No difficulty	2	25	5	33.33	2	28.58	9
Total	8	100	15	100	7	100	30

Source: Annex - XVI

Regarding the perception on difficulty in collecting interest and repayment of principal, the most of the businessmen (i.e. 62.5 percent) expressed that they have felt difficulty due to long process in this regard, whereas 25 percent and 12.5 percent businessmen reported that they have no difficulty at all and difficulty due to complex procedure respectively. With respect to the perception on difficulty in collecting the interest and principal Repayment of service holders, most of them viewed that they have felt problem. 46.67 percent have felt difficulty due to long process and 20 percent due to complex procedures. Where as 33.33 percent felt no difficulty at all.

When the same questions was asked to other persons, 42.86 percent reported that they have felt difficulty due to long process, 28.57 percent felt both difficulty due to complex procedures and not felt any problem at all.

Table 4.20**Reasons for Selling Government Securities**

Profession\ Reasons	Business Man		Service Holders		Student & Other		Total
	No.	%	No.	%	No.	%	
To meet household requirements	1	12.5	5	33.33	3	42.85	9
To grab opportunity	4	50	6	40	2	28.58	12
When stock is overpriced	3	37.5	4	26.67	2	28.57	9
Total	8	100	15	100	7	100	30

Source: Annex - XVI

With respect to the reasons for selling the government securities, when the businessmen were questioned about the reasons for selling the government securities, most of them (i.e. 50 percent) to grab alternative investment opportunity, whereas 37.5 percent, and 12.5 percent used sell when stock is overpriced and to meet the household requirement respectively.

When the same question was asked to service holders, most of them (i.e. 40 percent) used to sell it to grab alternative investment opportunity, whereas 33.33 percent and 26.67 percent used to sell it to meet household requirement and when the stock is overpriced respectively.

Whereas the other persons, most of them (i.e. 42.86 percent) used to sell it to meet the household requirement, whereas for both to sell it to grab alternative investment opportunity and when the stock is overpriced is equal i.e. 28.57 percent.

Table 4.21**Low Participation in Investment of Government Securities**

Profession\ Reasons	Business Man		Service Holders		Student & Other		Total
	No.	%	No.	%	No.	%	
Lower rate of return	3	37.5	7	33.3	3	42.86	13
Compels rules & regulations	3	37.5	6	40	3	42.86	12
Other factor	2	25	2	13.33	1	14.28	5
Total	8	100	15	100	7	100	30

Source: Annex - XVI

With respect to the low participation in investment of government securities, business men considered equal 37.5 percent at of lower rate of return and complex rules and regulations to be followed as the important reason and 25 percent due to other factors respectively.

The service holders considered lower rate of return 46.67 percent, complex rules and regulations to be followed, 40 percent and 13.33 percent due to other factors for the low participation of general investors in government securities.

When the other persons were questioned about it, 42.86 percent is in both lower rate of return and complex rules and regulation to be followed considered and 14.28 percent showed other factors

Table 4.22**Types of Funds used to Purchase Government Securities**

Profession\ Funds	Business Man		Service Holders		Student & Other		Total
	No.	%	No.	%	No.	%	
Profit	8	100	0	-	0	-	8
Residual amount	0	-	12	100	4	57.14	16
Loan	0	-	3	-	3	42.86	6
Total	8	100	15	100	7	100	30

Source: Annex - XVI

Regarding the types of fund used to purchase of government securities, it is found that all (i.e. 100 percent) businessmen invested in this sector out of their profit obtained from the business.

Similarly majority of service holders (i.e.80 percent) opined that they have invested in government securities from the residual amount, whereas 20 percent and opined that they have invested in government securities from the loan.

When the other persons questioned the same matter, it is found that major (i.e. 57.14%) have purchased government securities through the residual amount, whereas 42.86 percent have invested in government securities from loan and others.

Table 4.23

Reason for Full Subscription of Government Securities

Profession\ Reasons	Business Man		Service Holders		Student & Other		Total
	No.	%	No.	%	No.	%	
Convenient to purchase & sell	2	25	4	26.67	2	28.57	8
Good investment sector	3	37.5	5	33.33	2	28.57	10
High Marketability	2	25	3	20	2	28.58	7
Lack of information of other investment sectors	1	12.5	3	20	1	14.28	5
Total	8	100	15	100	7	100	30

Source: Annex - XVI

With respect to the reason for full subscription of government securities, the businessmen viewed in different ways. Out of total number of them 25 percent, 37.5 percent, 25 percent and 12.5 percent respectively viewed the government securities as convenient to purchase and sell, good investment sector involve low risk, high marketability and lack of information of other investment sectors respectively.

Among the service holders, highest respondents (33.33 percent) opined that the reason of full subscription of government securities is good investment sector involve low risk, whereas 26.67 percent and remaining 40 percent equally viewed it as , convenient to purchase and sell, high marketability and lack of information of other investment sectors respectively.

When the other persons questioned same question, equally 28.57 percent considered it as convenient to purchase and sell, good investment sector involve low risk and high marketability. Where as 14.29 percent considered it because of lack of information of other investment sectors.

Table 4.24

The Perception on the Utilization of Collected Fund from the People

Profession\ Perception	Business Man		Service Holders		Student & Other		Total
	No.	%	No.	%	No.	%	
Utilized	1	12.5	3	20	2	28.57	6
Unknown	3	37.5	5	33.33	2	28.58	10
Unutilized	4	50	7	46.67	3	42.85	14
Total	8	100	15	100	7	100	30

Source: Annex - XVI

With respect to the perception on the utilization of collected fund from the people through the different government securities, most of businessmen (i.e. 50 percent) viewed that it is unutilized, whereas 12.5 percent and 37.5 percent were found utilized properly and unknown about the utilization of collected fund respectively.

Regarding the perception of service holders, most of them (i.e. 46.67 percent) viewed that the fund collected through the government securities has been unutilized, whereas the rest 20 percent and 33.33 percent were found utilized and unknown about the utilization of it respectively.

When the other persons were questioned, most of them (i.e. 42.86 percent) were found unutilized, whereas 28.57 percent viewed that it is utilized properly and unknown about the utilization equally.

Table 4.25
Distribution of Respondent by Income Level

Perception of Risk	Investor with the Monthly Income				Total
	Below Rs. 10,000	Rs. 10,000 – Rs. 20,000	Rs. 20,000 - Rs. 40, 000	Above Rs. 40,000	
No Risk	3	10	5	4	22
Moderate & other	1	2	3	2	8
Total	4	12	8	6	30

Source: Annex - XVI

4.8.1 Test of Hypothesis

Formulation of Hypothesis

Null Hypothesis (H_0): There is no significant difference between the perception of investors towards the income & risk of Govt. Securities

Alternative Hypothesis (H_1): There is significant difference between the perception of investors towards the income & risk of Govt. Securities

Level of Signification

The level of signification is 5%

Calculation of Expected Frequencies

Expected Frequency (E) = Row Total (RT) * Column Total (CT) / Total Sample size (N)

$$E (3) = \frac{22 \times 4}{30} = 2.93$$

$$E (1) = \frac{8 \times 4}{30} = 1.07$$

$$E(10) = \frac{22 \times 12}{30} = 8.80$$

$$E(2) = \frac{8 \times 12}{30} = 3.2$$

$$E(5) = \frac{22 \times 8}{30} = 5.87$$

$$E(3) = \frac{8 \times 8}{30} = 3.2$$

$$E(4) = \frac{22 \times 6}{30} = 4.4$$

$$E(2) = \frac{8 \times 6}{30} = 1.6$$

Table 4.26
Calculation of Chi-square (X^2)

Observed Frequency (O)	Expected Frequency (E)	(O-E)	(O-E)²/E
3	2.93	0.07	0.0017
1	1.07	-0.07	0.0046
10	8.8	1.2	0.1636
2	3.2	-1.2	0.45
5	5.87	-0.87	0.1289
3	2.13	0.87	0.3553
4	4.4	-0.4	0.0364
2	1.6	0.4	0.1
O = 30	E = 30		1.2405

Test Statistic

Calculated Value of $X^2 = 1.2404$

Degree of freedom (df)

$$=(R-1) (C-1)$$

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

$$= 1 \times 3$$

$$= 3$$

Now,

Tabulated value of X^2 at 5% level of significance for 3 df is 7.82.

Decision:

Since the calculated value of Chi-square is lower than the tabulated value of Chi-square (i.e. $1.2405 < 7.82$). So, H_0 is accepted.

Hence,

There is no significant difference between the perception of investors towards the income & risk of Govt. Securities

Table 4.27

Distribution of Respondent by their Professions

Attitude	Profession			Total
	Businessman	Service holders	Other persons	
No Risk	5	10	5	20
Moderate & Other	3	5	2	10
Total	8	15	7	30

Formulation of Hypothesis

Null Hypothesis (H_0): There is no significant difference between the attitude of Professional Investors on the risk of Govt. Securities.

Alternative Hypothesis (H_1): There is significant difference between the attitude of Professional Investors on the risk of Govt. Securities.

Level of Significance

The level of Significance = 5%

Calculation of Expected Frequencies = Row Total \times Column Total / Total Sample Size

$$E(5) = \frac{20 \times 8}{30} = 5.33$$

$$E(3) = \frac{10 \times 8}{30} = 2.67$$

$$E(10) = \frac{20 \times 15}{30} = 10$$

$$E(5) = \frac{20 \times 8}{30} = 5.33$$

$$E(5) = \frac{20 \times 7}{30} = 4.67$$

$$E(2) = \frac{10 \times 7}{30} = 2.33$$

Table 4.28

Calculation of X^2

Observed Frequency (O)	Expected Frequency (E)	(O-E)	(O-E) ² /E
5	5.33	-0.33	0.0204
10	10	0	0
5	4.67	0.33	0.0233
3	2.67	0.33	0.0408
5	5	0	0
2	2.33	-0.33	0.0467
O = 30	E = 30		0.1312

Test Statistic

Calculated Value of $X^2 = 0.1312$

Degree of Freedom (df)

$$= (r-1)(c-1)$$

$$= (2-1)(3-1)$$

$$= 1 \times 2$$

= 2

Tabulated Value of χ^2 at 5% level of Signification for 2 df is 5.99.

Decision:

Since the calculated value of Chi-Square is lower than the tabulated value of Chi-Square (i.e. $0.1312 < 5.99$) at 5 percent level of significance for 2 degree of freedom. So, H_0 is accepted.

Hence,

There is no significant difference between the attitude of Professional Investors on the risk of Govt. Securities.

4.9 Major Findings

From the analysis of data collected from various secondary sources. Following findings can be made.

- The overall public debt of Nepal in 2067/68 has stood at 40 percent of nominal GDP. According to study, per capital debt for every Nepalese people is Rs. 14504.64.
- At present, up to FY 2067/68, Government of Nepal has total amount of outstanding debt of 419184.1 million that consist of 273607.3 million as an External debt and 145576.8 million as an Internal debt.
- The composition of public debt (internal and external) has not maintained properly. It is 65 percent of external debt and 35 percent of internal debt. Higher the percentage of external debt has a higher risk of changes in the rates of foreign exchange as well as interest cost associated to it.
- The level of debt has been increased by 1.58 times within the study period, while observing the annual growth rates of public debt, it has been found that

the total debt has increased 5.39 percent per annum; external debt by 4.33 percent and internal debt by 7.99 percent.

- From the study it has been found that there are few instruments to raise the internal debt in Nepal. These instruments consist of Treasury Bills, National Saving Certificates, Development Bonds, Citizen Saving Certificates and special bonds. Nepal Rastra Bank has made sectoral allocation of debt as their nature and would be raised through banking and non-banking system. Under this practice Treasury Bills and Development Bonds were targeted instruments for raising debt from banking system and saving bonds from non-banking system. The proportions of Treasury Bills and Development Bonds have stood at 94 percent and other instruments at 6 percent only. The value of TB is almost 67.50 percent and the annual average growth rate of TB, DB, NSC, CSC, SB are -3.7, 8.45, 0, -9.75, -4.42 % respectively.
- The ratio of External Debt Outstanding (EDO) to Export is 17.10 which implies that earnings from export is not enough to cope up with the increasing borrowing of capital from abroad.
- The internal debt-serving ratio (IDSR) is volatile. Within the study period of 10 years it has increased by five times. The value was 99 percent for the year 2067/68; Though, it was least than that of last six years, this type of situation has compelled the government to serve the debt either by cutting down the development expenditures or raising additional external/ internal debt to serve the debt.
- External debt service (EDS) to Export (X) is increasing over the period. The ratio of EDS to X was 11 percent in FY 2058/59, and 19 percent at 2067/68. This suggests that now 16 percent of export earnings are being spent over for serving the external debt. The higher the level of the ratio of debt service provides little room to the government to retain the export earning for additional capital formation.

CHAPTER - V

SUMMARY, CONCLUSIONS & RECOMMENDATIONS

5.1 Summary

Almost all developing countries have adopted government budgetary system as a tool is accelerating the pace of economic growth. This is considered essential to raise the standard of living of the majority of people at the shortest possible time. The process of government budgetary system was initial in Nepal with down of democracy in 1951. Nepal has a long history of deficit budgetary system. The first budget 1951 of Nepal was the deficit budget. Since the first budget, each and every budget shows the deficit, till now.

Nepal is facing the problem of financing ever-increasing resource gap because government expenditure is increasing rapidly, easier but government revenue is not increasing in the same pace. The widening resource gap in resent year has been cumulative effect of the deficiencies in the investment areas and the continued absence of government's fiscal norms.

For a developing country like Nepal. The external and internal borrowing increasing more rapidly. Increasing trend of public borrowing, debt servicing obligations are also increasing rapidly but debt servicing capacity of the country has not been increasing with the same pace. Nepal is in early stage of development, the widening resource gap itself would not have been a matter of serious concern, if it was related to growth and investment leading to capacity expansion in the economy but he situation has been quite adverse and so Nepal facing the problem ever increasing financial resource gap. So, It is necessary, to

know the condition and trend of internal debt as a major source of finance for development activities. This study is attempting to investigate role of public debt in Nepal. A brief historical perspective has also been taken in to consideration while studying public debt and its proportion with fiscal deficit, internal & external debt, GDP, revenue, expenditure etc, since the fiscal year 2056/57 to 2065/066. The main bases of the analysis of this study are financial and statistical tools.

The domestic resources are not sufficient to promote the rapid development of the Nepalese economy. The external assistance (loan and Grants) play all obvious function in the development force for financial resources. Concerning foreign assistance grants have big role to play in salving the resources gap in the country's budgetary expenditure.

To examine the attitude and preference of investors towards the government securities, the views and perception of 45 individual from different profession, income group have been gathered and analyzed. Their perception on several aspects of government securities transaction have been questioned and analyzed. To test the significance of responses of individual respondents, chi square test is tested at 5 percent level of significance.

Several researches have been conducted on the issue of government securities, practice, and perception of the investors. The results of this study have revealed that the public borrowing is growing rapidly. In the government borrowing, the internal debt covers the significant portion at present. The average annual growth rate of total debt is 9.21 percent, which consist of treasury bills, development bonds, national saving bonds, citizen saving certificate and special bond from Nepal Rastra Bank. Based on major findings of this study, conclusion with workable recommendation has been offered.

5.2 Conclusions

Public debt is not utilizing effectively in Nepal. Because it is not contributing to increase productivity in the economy. The increasing rate of national income and GDP is lower than the rate of increase in total public debt. Internal borrowing and debt servicing obligation are increasing trend but debt servicing capacity of the country has not been increase with the same pace. During the review period, average annual growth rate of revenue is low as compared with the debt and debt servicing obligation. This shows our debt servicing capacity is very poor to sustain increasing debt servicing obligation.

Regarding the attitude and preference of the investors towards the government securities, general investors are found tremendously positive toward the government securities. The general investors prefer to invest on government securities because of the low risk on this investment and unavailability of other investment opportunities.

Because of insufficient revenue resources to meet the deficit budget, lack of regular commitment of foreign and donor agencies on development of the country, it can be assumed that the growth of internal debt in Nepal in coming years will be increased in same pace.

From the study, it is concluded that the outstanding public debt of the country is in increasing trend and there is an urgent need to focus on the situation because Nepal could not attain higher economic growth during the decades of planned development efforts. The country's economic indicators are not satisfying. In the last decade, the whole economy is affected by political instability and armed conflict. Aftermath of political changes, Nepal has now entered into federal

republican state, So, in addition to paving the way for economic development through high and sustainable economic growth, there is an urgent need to take immediate and long run measures to expand economic activities in order to fulfill peoples' heightening aspirations. Preparing new constitution, peace building and state restructuring process demands the high level of public fund and there is no doubt that it put pressure on the government for resource mobilization and ultimately it increases the quantum of public debt whatever it may be internal or external debt. As the public debt management is not a isolated concept and affected by overall situation of the country, it is necessary to mobilize investment internally and externally by strengthening financial institutions by guaranteeing rule of law, smoothening service and delivery and establishing a transparent and effective administrative mechanism which will definitely increase the efficiency and effectiveness of public debt management practices and heighten the economic condition of the country.

5.3 Recommendations

On the basis of the study, following recommendations are listed below:

- To maintain the level of public debt in prudent limit, fiscal discipline rules are being more important to be introduced in Nepal and the level of debt outstanding should be fixed by some type of legislation framework suitable to the existing situation of the economy.
- To maintain fiscal stability, there should be a tolerable limit to fix the level of fiscal deficit because one of the major causes of raising debt is budget deficit. The best practices suggest that the fiscal deficit should be maintained within 1 to 3 percent of the GDP. In Nepal it is around 4 percent
- The debt to GDP ratios of Nepal is not in favorable condition to continue the same trend in the years to come, if such types of growing debt to GDP ratios will be continued in the future, the country may have to face the debt trap

situation. Therefore, there should be a continuous review on the existing level of debt and set a long-term debt management planning and strategies by the government.

- To maintain the level of debt the government should always monitor the following three types of indicators to be always favorable: The real GDP growth should always be higher than the real interest rates of internal debt. The growth in internal debt should always be lower than the growth of nominal GDP. Primary surplus should be maintained each year to serve the additional debt service obligation.
- The composition of public debt does not exhibit properly towards external and internal debt combination. On total debt outstanding, 69 percent is external debt and 31 percent is internal debt. Servicing of external debt has a risk of changes in the rates on foreign exchange as well as interest cost associated to it. In the foreign exchange market, Nepalese currency has been continuously depreciated over the years. In this situation, the loss of exchange rate has been higher than that of interest costs of the internal debt obtained from the domestic market. Servicing of External debt takes the money out of the economy as well. Therefore, government should seek more internal debt than that of external debt in case of need so long as practicable.
- There is a need to allocate best possible amount of resources for the capital outlay and give special priority to control unproductive and wasteful expenses. This will give a positive boost for the economic expansion and help to create sustainable base for the realization of higher economic development.
- Growth in the debt leads to a sharp increase in the debt service payments. Ultimately, it further weakens the public sector's ability to serve its internal and external debt. In such a situation, the government will be forced to cut down the investment in development infrastructures. Therefore, the level of debt to be raised each year should be based on the growth of revenue and

GDP as well. The new areas of raising revenue need to be explored and existing areas need to be enhanced. Unless and until there is not a rise in the level of revenue or possibility of increment in the level of revenue, additional debt should be maintained in a tolerable limit.

- As there is continues increase in the external borrowing, it requires to maintain the debt service obligation, Nepal has to increase the exports because foreign currency is needed to serve the external debt obligation. If export will be enhanced and imports will be contained in the tolerable limit, additional dependency on the external borrowings can be minimized. Therefore exploring of new exportable items in the comparative and competitive edge, the launching of export promotion schemes and initiatives are in urgent need. If the export will increase, it will enhance the capacity of the country to serve the external debt obligation in the future.
- To avoid the debt-servicing burden and also to cope up with the existing level of fiscal deficit, government should try to get more grants as far as possible. This effort, however, depends upon the policy of the donor country but the government also should maintain such an external policy that the more grant should be received rather than external loans.
- The services delivery by the tax administration to the taxpayers needs to be improved as per the need of the time. Revenue leakages through the rampant and illegal practices need to be controlled. Efforts should be made towards full atomization of tax administration, simplifying income tax procedures and reducing tax exemption limit.
- As the revenue mobilization is based on the efficiency of tax administration, effectiveness and professionalism, imparting the training for the human resources to effect structural changes in the tax administration seems inevitable.
- The promulgation of fiscal disciplinary rules/laws and their enforcement mechanism are in urgent need.
- The maintenance of up to date data, integrated information system, effective accounting system, one window policy, trade harmonization environment etc. for

donor and investors are especially needed and it must be based on Paris Declaration.