CHAPTER-I
INTRODUCTION

1.1 Background of the Study

The overall development of the nation depends upon the uplifting of the national economy which in turn depends upon the nature of its infrastructure. One of the basic elements in achieving self reliant growth of the economy for sustaining desired level of economic development is an accelerated rate of infrastructure development. Telecommunication has been identified as one of the three basic infrastructures apart from Power and Roads, which is needed for the socio -economic development. Investment in telecom sector has multiplier effects. It is considered that every rupee invested in telecommunication sector generates three fold effects in the nation's GDP. Telecommunication is the pre-requisite for other dimension of development and it plays an important role for other industries. Information and the facilities for accessing, processing and disseminating it in electronic form have become strategic resources as important as and, labors and capital. Thus telecom has dual role as both a traded product and service and as a facilitator of trade in other product and services. Moreover Telecommunication can have a dramatic impact on achieving specific social and economic development objectives.

In fact the development of telecommunication is not only vital for IT based industry but it has wide effect on entire economy of the country. Realizing the facts, Nepal Government has also recognized that the provision of world class Telecommunication infrastructure is the key to rapid economic and social development. For bringing telecommunication as the major infrastructure of development, government has implemented national communication policy (1992). Introduction of liberalized economic policy in Nepal has gradually facilitated the private sector investment as a result multinational companies also showed their presence. At this context, to speed up the process of telecommunication development, The Telecommunication

Act; 1997 was brought into action which has created the competitive atmosphere in telecom industry which resulted the private sector investment in the telecommunication industry. As size and sector of telecommunication grew up to IT,

Telemedicine, e-governance, e-commerce, e- education etc the government brought the telecommunication policy; 2004 to address the entire telecommunication sector.

At this point of time, there is various telecom based company which are actively doing their business. The major telecommunication service providers are Nepal Doorsanchar Company Limited, United Telecom Limited (UTL) and Spice Nepal (P) Ltd. Other small Players are STM Sanchar (P) Ltd and Global Plus. UTL is in the business of fixed basic telephone and limited mobility mobile telephone of wireless technology whereas Spice Nepal has the business of Mobile telephone. Both UTL and Spice Nepal have the focus in urban area only. STM has got the license to perform the business of V-Sat Telephone of 534 VDCs of eastern development region where as Global plus has been establishing Tele-centers in various part of Mustang District.

Nepal Doorsanchar Company Limited is popularly known with its name as Nepal Telecom as a trade mark. In Telephone service, Nepal Telecom is the key market player as it holds about 64% of total no mobile phones and 89 % of total no of Fixed Telephones.(NTA-MIS-2064, Jestha) It offers various services like Basic telephone, Mobile telephone, Internet, email, ISDN, Leased line etc. The primary objective incorporated by Nepal Telecom is to provide reliable and affordable telecommunication services in every nook and corner of the country. It has been expanding the services in urban as well as rural area to fulfill the socio -economic development objectives. Nepal Telecom is the member of International Telecommunication Union (ITU). It has been able to provide its telephone

services with STD and ISD services in all the 75 districts of the country. It has 221 Public Switch Telephone Network (PSTN) exchanges in 72 districts and has covered 2727 VDC with Telephone service and exerting its best effort to cover remaining VDC, where its Telephone service is not accessed. Total Telephone line distribution till Ashadh 2064 BS is 1521224. The installed capacity of PSTN telephone line is 649539 on the other hand the organization is working hard to build the one million capacity of CDMA based Fixed as well as mobile telephone and 3.5 million of GSM based Mobile telephone within few years. The company has the telephone density of 5.76 per 100 people which one year ago was 4.4. Average revenue per line per year it generates is Rs 4136. (MIS-2064; Jestha). There are 14411 internet users and 3878 e-mail users subscribed from the company. There are 3424 International Telephone circuits in operation and domestic microwave channels available are 4584E1. Similarly Optical SDH-E1 link are in the figure of 1693 which are owed by the company. East west Optical Fiber link is considered as information super high way and is expected to bring about IT revolution in the country. Nepal Telecom has high contribution in the total revenue of the nation which is about 4.2 % of total national revenue. Considering the fact. The Company has got the felicitation of „Commercially Important Person" (CIP) from the government. The major portion of the total revenue of the company is from International Subscriber dialing. These days due to fall in ISD tariff and illegal use of Voice over Internet Protocol, there is high fluctuations in the trend of International revenue. Other services provided by Nepal Telecom in various parts of the country are Telegram, Telex, PCC, IVR, IN, HCD, V- SAT, ISDN, Inmersat etc which too have their own importance in revenue generation and serving the people for their information and communication needs. The quality of service it has produced is considered to be of international class as the company uses the latest technology of the reputed International brands. The tariff of service it offers is considered to be of high rational as compared to the other Telecommunication operators of the Asian region.

Though the company was registered in Magh 2060 BS in office of the company registrar the company has got the formal inception in Baisakh 2061 BS after all the assets and liabilities of then Nepal Telecommunications Corporation (NTC) were transferred to it by formal notice of the government in gazette. Nepal Telecommunications Corporation was state owned enterprise established in 2032 BS to provide telecommunication in the nation. Before its establishment the telecommunication service were managed and distributed by Telecommunication Development Board both as an operator and authority, a government body under the ministry of communication. The main reason behind the changing of status of „Nepal Telecommunications Corporation", a state owned enterprise as a public utility concern to "Nepal Doorsanchar Company Limited (Nepal Telecom)" as a limited company is to transfer the government investment in the organization to the private sector. This was happened according to the policy of economic liberalization that the government has adopted. Nepal Telecom is just a hypothetical company as its entire ownership is yet held by government in the name of state owned entities. The change of organization status gave it autonomy to some extent though there is still interference of government in decision making process. The company is on the process of issuing share to the public and expected to enjoy full autonomy after its share disbursement to private sector.

The capital structure of Nepal Telecom consists of only equity capital and at present Nepal Telecom has the authorized capital of Rs 25 Billion allocated to 250 million shares of each Rs100 Par. Issued and paid up capital is Rs 15 Billion.

The company at its top most level has a seven member Board of Director (BOD). Chairman is secretary of Ministry of information and Communication; Members are representatives from Ministry of information and communication, Ministry of Finance, Ministry of Law, Justice and

Parliamentary affairs and Citizen Investment Trust. Other members are Managing Director and representative from employees (Article of memorandum-2). Senior Management Committee is the second in hierarchy which is headed by Managing Director and constitutes senior executives of the company. Managing Director performs as a Chief Executive Officer (CEO). Under the Head Office there are 20 departments 4 directorates. The regional directorates are performing as fully fledged Profit centers. Total approved Post in NT are 6,984 but the total no of working manpower at present is 5,708 out of which 880 are Officers and 4,828 are of Assistant level.(MIS-2064;Asadh).

Industrialization and Information revolution has brought the globalization which is considered as the economic, technical and political integrations of the people in world. This in reality made the world as a global village. At the 21"st century people in one corner of the earth is affected by the activities in another corner. Globalization made trade facilitation around the world. In this context Nepal could not be alone without affiliating to the global Trade forum of World Trade Organization (WTO), hence became the member of World Trade Organization in 2004. Now Nepal is the member of other regional economic blocks BIMSTEC and SAARC. To become successful in present global environment of the business, organizations should be able to face the global competition in quality and cost of the product. In this context Nepal has adopted the liberalized economy and hence giving up the ownership of state owned enterprises gradually by participating private sector in the ownership. The Government is promoting the private sector by various means which facilitated the investment of private sector, as a result there are various players doing their business in Telecommunication Industry as well.

In this context Nepal Telecom is facing competition in its services and seems to face stiff competition in future. Despite the competition rose, the demands of NT services are high but the company is not able to meet the customers demand due to various constraints like government intervention, slow procurement procedure, management style, work culture, mismanagement of resources etc.

Despite the various shortcomings the company plays vital role in achievement of desired level of national development goal by fulfilling the need of reliable dimension of infrastructure development.

Role of Nepal Telecom

- To fulfill the need of distance communication
- To add a reliable dimension of infrastructure development
- To introduce emerging technology of communication
- To enhance economic development of nation
- To minimize the digital divide by serving in rural area

1.2 Statement of the Problem

Nepal Telecom as a state owned enterprise has involved in providing the cost effective and people friendly telecom services in the nation since long time. The organization has enjoyed monopoly in the telecom market and got policy privilege during long period. The scenario has completely changed after recent entry of telecom operators in the market. As those companies are involved in business of various telecom services the natural monopoly enjoyed by Nepal telecom tends to be ended. In the emerging liberalized policy that the government should not involve in the profit motive business except the sensitive affairs and facilitating jobs, private and multinational companies were established in the various part of the nation. Similarly the public enterprises were made private by making them private company or public limited company. In this scenario, Nepal Telecom a state owned enterprise is going to issue it "s share to the public as a public limited company. In this context the analysis of financial health of Nepal Telecom as a largest business enterprise in Nepal would have great deal of importance to the various stakeholders.

Nepal Telecom as a state owned enterprise; it is complicated to assess the efficiency with its socio economic development goals but every organization should have sound financial health to be efficient in the utilization and

management of the resources. Proper collection, utilization and management of the fund are financial management. To make assurance of the strong financial operation of the company, the empirical analysis called financial performance analysis can have the great importance.

As most of the organization depends heavily upon the external and internal information, industrialization without proper access of telecommunication is difficult to imagine. Nepal is on the process of industrialization and people have the demand of new and new technology and telecommunication is now thought to be basic requirement in urban area and important means of development in rural sector. In this context, there is high demand of NT services and it does have a little market competition. Despite the fact NT has not seen efficient to fulfill the demands.

The Balance sheet shows the huge amount of cash and bank balance lying idle. Volume of sundry debtors seems to be very large. Various studies related to the NT pointed out the problem of its outstanding debt collection and high liquidity position. Further suggestion is that NT management should estimate immediate required funds and either invest the entire excess fund in marketable securities, or use that fund in refunding debt as the interest it pays for loan for capital investment is less than the rate of earning in liquid fund. Studies have shown that the return on total assets is not so good.

Thus the problem toward which this study is directed is assessment of financial operation of Nepal Telecom. So, the present research tries to solve the following research questions:-

- What are sources of long term financing on Nepal Telecom?
- If assets utilization in Nepal Telecom is efficient?
- What is the position of Nepal Telecom to meet the current obligations?
- Is the company providing fair rate of return?

Financial analysis may not provide exact answer to these questions but it does indicate what can be expected in the future.

1.3 Objective of the Study

Objectives of the study are guidelines by which the study can be conducted in a systematic manner. The main objective is to assess the strengths and weakness of Nepal Telecom. The specific objectives are:

- To analyze the financial performance of Nepal Telecom through financial analysis.
- To foresee the future trend of different financial ratios.
- To study the relation between sales with total cost, sales with GDP and Investment with profit.
- To offer the Package of suggestions to improve the financial performance of Nepal Telecom

1.4 Significance of the study

Analysis of financial performance is a crucial part of financial decision making process of business enterprise. Poor financial management affects adversely on liquidity, turnover and profitability. It is required to measure the financial position of the enterprise periodically in order to ensure smooth function of an enterprise. Financial analysis assists in identifying the major strengths and weakness of a business enterprise. It indicates whether a firm has enough funds to meet the obligation, a reasonable accounts receivable collection period, an efficient inventory management policy, sufficient plant property and equipment and adequate capital structure, all of which are necessary if a firm is to achieve the goal of maximizing shareholder's wealth. Financial analysis can also be used to assess a firm's viability as an ongoing enterprise and to determine whether a satisfactory return on investment is being earned for the risks taken.

Nepal Telecom is an enterprise of great national concern. It has to face stiff competition in near future as private players are already entered and

there is open door to further enter. The government is going to participate to the private sector in its ownership. So the concerned parties are looking over its performance with keen interest. As a state owned enterprise it has the obligation of socio economic development with its profitability concern. So the insight over financial position of Nepal Telecom; leading telecommunication service provider in the nation will be useful to provide information to stakeholders and draw attention of concerned management regarding what can be done for further strengthening the financial position. Further it will be important for the following groups and individuals.

- Present and perspective customers
- Present and perspective investors
- Policy making authority
- Further researchers
- Government
- ICT based companies

1.5 Limitation of the study

There will be some limitations while undergoing this study. The main limitations of the study will be:

- This study is based on the 5 years financial reports.
- Only the financial aspect and financial structure analysis shall be made with bird eyes view, the other area such as Marketing, Human Resource, Research and Development aspects are also the combined input to measure the overall efficiency.
- Secondary data are collected from annual reports of the concerned enterprises,

  so the study suffers from all those limitations that are associated with these reports.
- The study makes the analysis of financial performance of Nepal Telecom; it may not be applicable to any other enterprise.
- There is time and budget limitation.

1.6 Organization of the study

The study is divided in the following five chapters as prescribed by the university.

Chapter I : Introduction

Chapter II : Review of Literature

Chapter III : Research Methodology

Chapter IV : Presentation and Analysis of Data

Chapter V : Summary, Conclusion and recommendations

First Chapter focuses on general background of the study. It deals with major issues to be investigated along with general background of the study, statement of problem, objective of study with organization of the study. This chapter signifies the rational of this study.

Second chapter deals with conceptual consideration and review of related literature which provide a framework with the help of which the study has been accomplished. In this chapter major empirical works has been also discussed.

Third Chapter is devoted to methodological approach employed in this study. This chapter includes research design, nature and sources of data, population and samples, method of analysis and definition of key terms.

The fourth chapter deals with the techniques used in analyzing the collected data and its presentation in the descriptive and analytical manner. This chapter also deals with the strengths, weakness, opportunities and challenges faced by Nepal Telecom.

The fifth chapter consists of summary, conclusion, and recommendation of the study.

CHAPTER-II
REVIEW OF LITERATURE

The review of literature basically highlights the existing literature and research work related to the present research being conducted with the view of finding out what had been already explained by the authors and researchers and how the current research adds further benefits to the field of research. This review of literature had been classified into three subgroups as follow.

- Theoretical review
- Review of related articles/journal/booklets
- Review of related dissertations

2.1 Theoretical review

Finance is concerned with those activities related to money. Previously finance was limited for procurement of long term fund. Due to industrialization, technological innovations and intense competition, there has been a vast change in the philosophy of management. Likewise the discipline of financial management has undergone an unprecedented change. "Financial management is that managerial activity which is concerned with planning and controlling of the firm's financial resources (Pandey; 2004:31).

Evaluation of financial performance is a study of overall financial position of any organization. It is closely related to the decision making. In the modern context, it gives vital support for the investment decisions, financing decisions and dividend decisions. Financial performance analysis is undergone with the help of periodically made financial statements of the firm.

2.1.1 Financial statements

The Financial Statements are the means of presentation of a firm's financial condition and basically consist of two types of statements - The Balance Sheet & Income Statement. These are prepared to report the overall

business activities as well as financial status of the firm for a specified period to its stakeholders. These contain

Summary of information regarding financial affairs that is organized systematically. The top management is responsible for preparing these statements. “The basic objective of financial statements is to assist in decision making. The analysis and interpretation of financial statements depend on the nature and type of information available there in”. (Panday; 2004: 31)

Hence financial statement refers to any formal and original statement that discloses the financial information related to any business concern during a period. The income statements and balance sheet usually prepared at the end of each financial year show the firm"s position.

A**) Balance Sheet**

Balance sheet is one of the basic financial statements of an enterprise. It is also called the fundamental accounting report. As the name suggests, the balance sheet provide information about financial standing or a position of a firm at a particular point of time usually end of the financial year. It can be visualized as a snapshot of the financial status of a company (Khan and Jain; 1993:13).

Balance sheet summarizes the assets, liabilities and owner"s equity of a business at a moment of time, usually at the end of the financial year. Balance sheet is a financial statement, which contains information regarding different capital expenditures made on purchase of assets on particular date and information regarding various sources of funds acquired by the business concern to finance these assets and also the different sources of capital and liabilities at that particular point of time.

B) **Income Statement**

Income statement is designed to portray the performance of the business

firm for specific period of time i.e. for a year or month or quarter. The business revenues and expenses resulting from the accomplishment of the firms operation are shown in the income statements. It is the “Scoreboard” of the firm‟s performance during particular period of time. It shows the summary of revenues, expenses and net income or loss of a firm for a particular period of time. Income statement also serves as a true measure of the firm‟s profitability. (Khan and Jain; 1993:15).

2.1.2 Financial Analysis

Financial analysis is the process of determining financial strengths and weaknesses of a company by establishing strategic relationship between the components of a balance sheet and profit and loss statement and other operative data (Pandey; 1999:96)

In the word of Myer, "'Financial statement analysis is largely a study of relationship among the various financial factors in a business as disclosed by a single set of statements and a study of the trends of these factors as shown in a series of statement.”(Myer; 1961:4)

Financial statement analysis involves the use of various financial statements. These statements perform several things. First, the balance sheet summarizes the assets, liabilities and owner's equity of a business at a moment in time, usually the end of a year or a quarter. Next, the income statement summarizes the revenues and expenses of the firm over a particular period of time, again usually a year or quarter. While the balance sheet represents a snapshot of the firm's financial position at a moment in time, the income statement depicts a summary of the firm's profitability over time. From these two statements certain derivate statements can be produced, such as statement of retained earnings, a sources and uses of funds statements and a statement of cash flows etc. (Van Horne; 1996:56)

"Financial analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing relationship between the items of the balance sheet and profit and loss account. (Pandey; 2004:560).

Analyzing financial statements is a process of evaluating relationship between component parts of financial statements to obtain a better understanding of a firm's position and performance. (Metcalf; 1976:157)

In the words of Raymond P. Neveu, "Financial statement analysis allows managers, investors and creditors as well as potential investors and creditors to teach conclusion about the recent and current status of a corporation" The checking of financial performance in a business deserves much attention in carrying out the financial position. It also requires to retrospective analysis for the purpose of evaluating the wisdom and efficiency of financial planning. Analyzing of what has happened should be of great value in improving the standards, techniques and procedures of financial control involved in carrying out finance function.

The four basic statements contained in the annual report are the balance sheet, the income statement the statement of the retained earnings and the statement of cash flows. Investors use the information contained in these statements to form expectations about the future levels of earnings and dividends and about the risks of these expected values. Financial statement analysis generally begins with the calculation of a set of a financial ratios designed to reveal the relative strength and weakness of a company as compared to other companies in the same industry, and to show whether the firm's position has been improving or deteriorating over time. (Weston; 1996:306) Financial analysis is that sort of calculation which is done with the help of annual report. And the annual report would contain the essentials for such analysis. So the data retrieved from the annual report is indispensable for the financial analysis.

It is both an analytical and judgmental process that helps answer questions that have been properly posed. Therefore, it is means to end. Apart from the specific analytical answer, the solutions to financial problems and issues depend significantly on the views of the parties involved, the related importance of the issue and on the nature and reliability of the information available. (Helfert; 1992:2)

Financial appraisal is a scientific evaluation of profitability and financial strength of any business concern. Financial appraisal is the process of scientifically making a proper, critical and comparative evaluation of the profitability and financial health of a given concern through the application of the techniques of financial statement analysis. A complete financial analysis and interpretation of financial statement involves the assessment of past business performance, an evaluation of the present condition of the business and the predictions about the future potential for achieving expected or desired results.(Jain;1996:36- 37)

The analysis and interpretation of financial statement depicts the actual position of a firm regarding the objectives of that firm within a specified period of time. "Financial appraisal is a process of synthesis and summarization of financial and operative data with a view to get an insight into the operative activities of a business enterprise. It is a technique of X-raying the financial position as well as progress of a concern" as observed by Robert H. Wessel.

According to Man Mohan "The main function of financial analysis is the pinpointing of the strengths and weakness of a business undertaking by regrouping and analysis of figures contained in financial statements by making comparison of various components and by examining their contents. This can be used by financial managers as the basis to plan future financial requirement by means of forecasting and budgeting procedures."

"Financial statement analysis involves a comparison of firm"s performance with that of other firms in the same line of business which often is identified by the firm's industry classification. Generally speaking, the analysis is used to determine the firm's financial position in order to identify its current strengths and weakness and to suggest actions that might enable the firm to take advantage of the strengths and correct its weaknesses."(Weston; 1996:78)

"Financial analysis is used primarily to gain insight into operating and financial problems confronting the firms with respect to these problems. We

must be careful to distinguish between the cause of problem and symptom of it. It is thus an attempt to direct the financial statements into their components on the basis of purpose in the one hand and establish relationships between these components and between individual components and totals of these items on the other. Along with this, a study of various important factors over the past several years is also undertaken to have clear understanding of changing profitability and financial condition of the business organization."(Hampton; 1998:99)

Thus, Jain says "Much can be learnt about business performance and financial position through appraisal of financial statements, the appraisal or analysis of financial statements spotlights the significant facts and relationship concerning managerial performance, corporate efficiency, financial strength and weakness and credit worthiness that would have otherwise been buried in a maze of details."(Jain; 1996:37)

2.1.3 Objectives of Financial Analysis

Financial analysis enables us to explore various facts related to the past performance of business and predicts about the future potentials for achieving expected results. Major objectives of analysis of financial statement are to assess various factors in relation to the business firm as presented below.

- The present and future earning capacity or profitability of the concern
- The operational efficiency of the concern as a whole, and of its various parts or departments.
- The short-term and long-term solvency of the concern.
- The comparative study regarding to one firm with another firm.
- The possibility of developments in the future making future forecasts and preparing budgets.
- The financial stability of business concern,
- The rea1meaning and significance of financial data, The long term liquidity of its fund.

2.1.4 Need of Financial Analysis/ Financial Statement Analysis

The need for the analysis of financial statement arises in order to address the following questions. (Pradhan; 2000: 47-48)

- How was the firm doing in the past? Was there any problem? If so, in what Area?
- How it is doing at present? Is it doing better compared to the past performance, competitors and industry average? Is there any problem at present? If so, in what areas?
- What about the future? Is there any likely problem on the way in the future? What will its position be in the future?
- What corrective actions can be taken now to solve the problems and improve the performance? How will the recommendation of any course of actions or changes in the policy or practice help solve problems and improve the company's position?
- What are the expected results of recommendations? Are there any improvements?

2.1.5 Significance of Financial Analysis

Significance of analysis lies on the objectives of financial analysis of any firm. The facts discovered by the analysis are perceived differently by different groups associated with the concern. The facts and the relationships concerning managerial performance, corporate efficiency, financial strengths and weaknesses and credit worthiness are interpreted on the basis of objectives in the hand.

- Such analysis leads management of an enterprise to take crucial decisions regarding operative policies, investment value of the firm, internal financial control system and bargaining strategy for funds from external sources. (Agrawal; 1993:582)

  The parties that are benefited by the results or conclusion drawn from the analysis of financial performance can be numerated as (Srivastava;1993:58-59)

- ❖ Top Management
- ❖ Creditors
- ❖ Shareholders
- ❖ Economists
- ❖ Labor Unions

A) Top Management

The responsibility of the top management is to evaluate:

Are the resources of the firm has been used effectively and efficiently? Is the financial condition of the firm sound enough? On the basis of past facts, firms can anticipate their future. Hence, top management can measure the success or failure of a company's operations, determine the relative efficiency of various departments, process and products appraise the individual's performance and evaluate the system of internal audit.

B) Creditors

The creditors can find out the financial strength and capacity of the borrower to meet their claims. Trade creditors are interested in the firm"s ability to meet their claims over a short span of time. The suppliers of long term debt focus upon the firm"s long term solvency and survival. A lending bank through and analysis of these statements can decide whether the borrower retains the capacity of refunding the principal and paying interest in time or not.

C) Shareholders

The shareholders, who have invested their money in the firm' s shares are most concerned about the firm's earning. They evaluate the efficiency of the management and determine about the necessity for the change. In large company the shareholder's interest is to decide whether to buy, sell or hold the shares. They wish to buy the shares in case of sound performance of the firm where as they simply intend to hold the shares in the condition of satisfactory

performance. But they are hurried to sell the shares in case of poor performance.

D). **Economists**

To diagnose the prevailing status of business and economy, economists analyze the financial statements (of any firm). The government agencies analyze them for the purpose of price regulation; rate setting and similar other purposes.

E). **Labor Unions**

Productivity is the synonym of well-motivated labors. Labor unions are interested in rights and benefits of labor to enhance the moral of labors. For further motivation they expect increase in wages, fringe benefits and so on. These benefits are affected by the company's profitability condition. Therefore the union assesses the financial condition of the firm to determine whether the firm is in the situation or not to make such facilities available.

2.1.6 Process of Financial Analysis

Financial analysis basically financial statement analysis, is a technique of answering various questions regarding the performance of a firm in the past, present and the future on the basis of past performance. The analysis recommends the steps to be taken by financial managers while undergoing the assessment of financial position. The questions, that as elucidated above create the need to follow certain steps such as first identification and analysis of problem in order to come up with appropriate recommendations, and then to project the expected results and examine them if there are improvements before implementing such recommendations.

2.1.7 Types of Financial Analysis

In the words of Man Mohan "The nature of financial analysis differs according to the purpose of the analyst. A distinction may be drawn between various types of financial analysis either on the basis of material used for the same or according to the modus operandi of the analysis"

A.) According to material used

1. **External Analysis**

It is made by those who do not have access to the detailed records of the company. This group, which has to depend almost entirely on published financial statements, includes investors, credit agencies and governmental agencies regulating a business in a nominal way.

2**. Internal Analysis**

The internal analysis is accomplished by those who have access to the books of accounts and all other information related to the business. While conducting this analysis, the analyst is a part of the enterprise he is analyzing. Analysis for managerial purpose is the internal type of analysis and is conducted by executives and employee of the enterprise as well as governmental and court agencies which may have major regulatory and other jurisdiction over the business.

B. According to Modus Operandi Analysis

1**. Horizontal Analysis**

When financial statements for a number of years are reviewed and analyzed, the analysis is called horizontal analysis. As it is based on data from year to year, rather than on one date or period of times as a whole, this is also known as dynamic analysis.

2. **Vertical Analysis**

It is frequently used for referring to ratios developed for one date or for one accounting period. It is also called static analysis. Besides, the types of

financial analysis on the basis of material used and modus operandi, S.P Jain and K.L. Narang have categorized on the basis of objective of the study.

C) According to Objective

1. **Long Term Analysis**

This is made in order to study the long term financial stability, solvency and liquidity as well as profitability and earning capacity of a business concern. For the long run success of a business concern, this analysis helps in the long term financial planning.

2. **Short Term-Analysis**

This is made to determine the short-term solvency, stability and liquidity as well as earning capacity of the business. This analysis is helpful for short term financial planning.

2.1. 8 Techniques of Financial (Statement) Analysis

The fundament of the analytical technique is to simplify or reduce the data under review to the understandable terms. There are various tools and techniques of financial statement analysis, each of which is used according to the purpose for which the analysis is carried out. The widely used techniques are as follows:

a. Ratio Analysis
b. Du Pont System of Financial Statement Analysis
c. Common Size Analysis
d. Funds Flow Analysis
e. Cash Flow Analysis

a. Ratio Analysis:

Ratio analysis has been used as a major tool in the interpretation and evaluation of financial analysis. The term ratio refers to the numerical quantitative relationship between the two items/variables. A ratio is calculated by dividing one item of the relationship with the other base. In financial analysis, a ratio is used as a yardstick for the evaluation of financial

performance of the firm. "The analysis of financial ratio involves two types of comparison. First, the present ratio may be compared with the past and expected future ratios for the same company and second, the method of comparison involves comparing the ratios of one firm with those of similar firm or with industry averages at the same point, in time. Such comparison gives insight into the financial performance of the firm." Ratio analysis is widely in use. It may not give the entire picture of an enterprise. Ratios themselves are not conclusion. They are only the means. The Ratios are calculated from data available in the financial statement of an enterprise. The Ratio completed from the available data are numerical, there should not be the tendency to regard them as a precise portrayals of a firm true financial status. For some firms, accounting data may closely approximate economic reality, for others, it is necessary to go beyond the figures in order to obtain their financial condition of performance.

Types of Ratios

Different Ratios can be calculated from the available data in the financial statement. Broadly Ratios are classified in four groups. They are:

a) Liquidity ratios
b) Capital structure/leverage ratios
c) Activity ratios
d) Profitability ratios

a) Liquidity Ratio

Liquidity refers to the ability of enterprises to pay its current liabilities. Liquidity implies the utilization of such funds of the firm which are idle or in very little amount. A proper balance between the two contradictory requirements i.e. liquidity and profitability are required for the efficient financial management. The more current assets associated with high liquidity and low profitability and vice versa. The less current Ratio and quick Ratio are the most widely used ratios for the general purpose to measure the liquidity position of an enterprise.

b) **Capital structure/leverage ratios**

The Capital Structure/Leverage Ratio is associated with the long -term solvency of an enterprise. The long -term creditors would judge the soundness of a firm on the basis of long term financial strength measured in terms its ability to pay the interest regularly as well as repay the installment of principal due to dates or in one lump sum at the time of maturity. Leverage Ratios show how much of an enterprise's fund are financed by debt & equity. These Ratios also show the prospects for future financing.

The Capital Structure Ratio indicates the soundness of capital structure of an enterprise. It can be calculated on two ways. The first approach is to examine what proportion of borrowed capital occupies the capital structure i.e. calculated the Debt to Total Capital Ratio. The second approach is to examine the number of times the interest earned covered by earnings and to calculate the fixed charges covered by earnings.

c) Activity ratio

An Activity Ratio may be defined as the test of relationship between sales and various types of Activity Ratios. Activity Ratios are employed to evaluate the efficiencies with which the firm manages and utilizes its assets. These Ratios are also called Turnover Ratios because they indicate the speed with which the assets are being covered or turned over into sales. So Activity Ratios presume that there exists an appropriate relationship between sales and various assets. The more important Activity Ratios for general -urpose analysis are Inventory Turnover Ratio, Total Assets Turnover Ratio, Fixed Assets Turnover Ratio, Capital Employed Turnover Ratio etc.

d) Profitability Ratio

Profitability is very important aspect of management of any enterprise. It shows the overall performance of an enterprise. The Profitability Ratios are calculated to measure the operative effectiveness of an enterprise. Besides management of the company, creditors and owners are interested in the Profitability Ratios of the firm.

Profitability Ratios can be calculated on the basis of either sales or investment. The important Profitability Ratios, calculated in relation to sales are Net Profit Margin, Gross Profit Margin, and Operating Expenses Ratio etc. Similarly, the important Profitability Ratios, calculated in relation to investment are Return on Shareholders' Equity, Return on Capital Employed, and Return on Fixed Assets etc. Together these Ratios indicate the firm's efficiency of operation. (Panday, 1998:133).

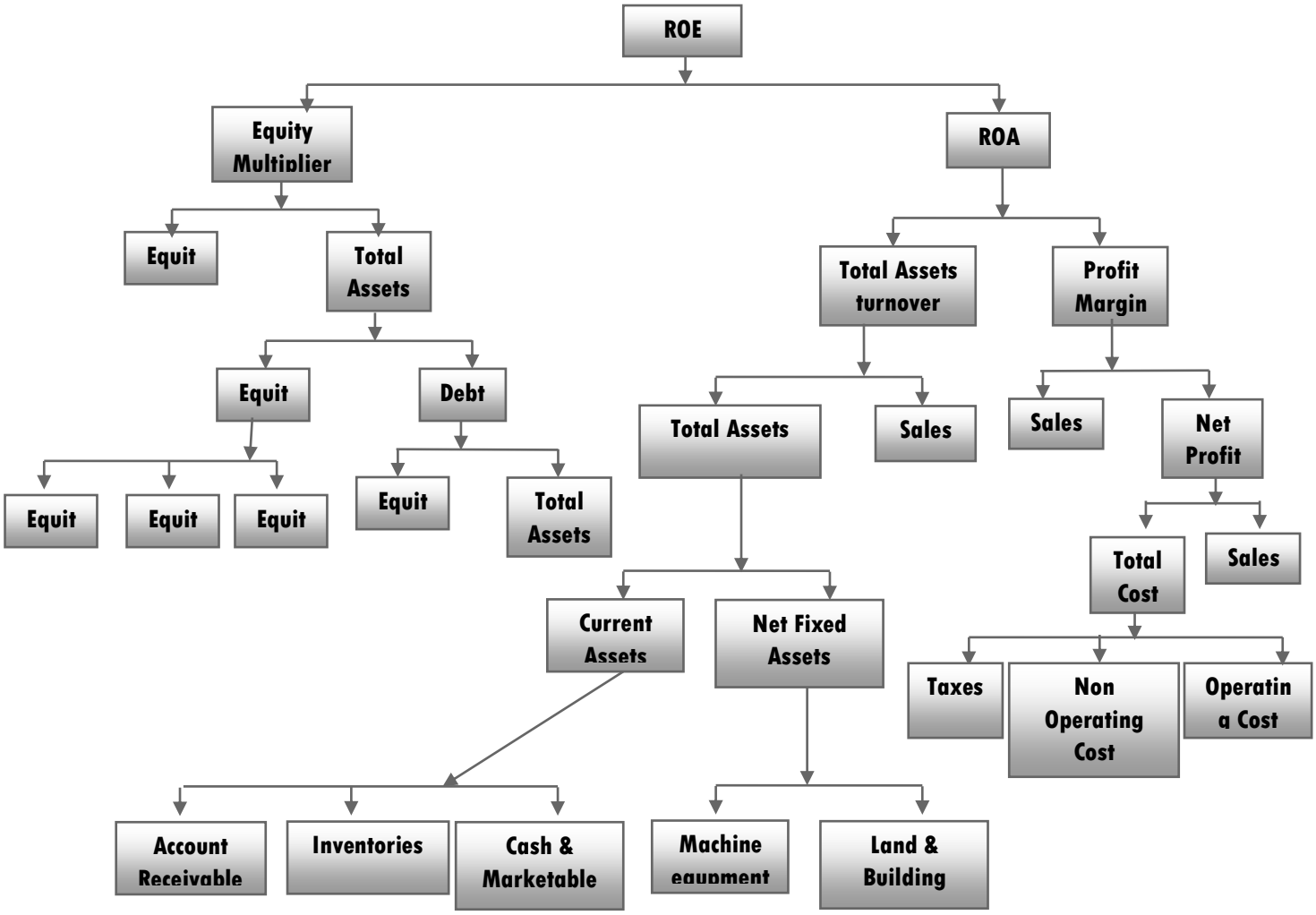
b. Du Pont System of Financial Statement Analysis:

"The Du Pont system is designed to show how the profit margin on sales, the assets turnover ratio and the use of debt interact to determine the rate of return on equity."(Weston & Copeland 1996:307)

The Du Pont system of financial statement analysis is developed by the financial experts of the Du Pont Company by putting together the effects of profitability, investment and the equity ratios. The approach is based on the relationship among the three basic areas of the firm such as (i) cost controlling area (ii) Assets management area and (iii) Financial leverage area. The directed to address the concern of the shareholders; hence its main focus is on the return on equity (ROE). The ROE is analyzed in terms of the factors that directly affect the ROE. The factors such as costs, assets utilization and leverage ratio are the grounds on which several test are made to see how the ROE is affected by such factors. The following modified Du Pont Chart presents the relationship among these factors and ROE.

FIGURE

Chart of Du pont system of Financial Analysis



For a business firm, the return on assets (ROA) is the rate of return on the total investment that includes both equity and debt capital. The ROA does not reflect the actual rate of return to equity holders. What reflects the return for stock holders is the return on their money (i.e. ROE), which is generally higher than the ROA. Thus ROA is an overall measure and reflects the overall performance of the company. The Du

Pont system addresses the concerns of stockholder and focuses on ROE.
Du Pont equation defines ROE as a product of ROA and equity multiplier and ROA as a product of profit margin and total assets turnover.
The Du Pont equation is as follows:

ROE= ROA x equity multiplier

= profit margin x total assets turnover x equity multiplier

= (Net profit/sales) x (sales/total assets) x (total assets/ equity)

c. Common Size Analysis

The common size analysis is another technique of analyzing the items of financial statement on relative terms. Under this method, the percentage of every item in the income statements and balance sheets is carried out for past several years to determine the performance trend of each item during the period under analysis. After analyzing the rising, falling or constant trend of efficiency in the business operation one can make comparison with the industry average or competitors.

The common size analysis is carried out for a period of one or more. The income statement items are divided by sales and expressed as a percentage of sales. The balance sheets items are divided by total assets and expressed as percentage of total assets. These percentages for a company are compared with the standard measures such as percentages calculated in the same manner industry and the competitors.

Thus, the comparison shows the company's performance relative to competitors as well as compared to it own past record.

d. Funds Flow Analysis

Funds flow analysis is the statement of changes in financial position of any organization that determines only the sources and used of fund between two dates of balance sheet. It is prepared to uncover the information that financial statements fail to describe clearly. It describes the sources from which funds were derived and used to which these funds were put.

The statement is prepared to summarize the changes in assets and liabilities resulting from financial and investment transactions during the period as well as those changes occurred due to the changes in owner"s equity. It also uncovers the way of using financial resources during the period by the firm.

Method of preparing funds flow statement depends essentially upon the sense in which the term 'fund" is used. There are three concept of fund: cash concept, total resources concept and working capital concept. According to cash concept, the word fund is synonymous with cash. Total resources concept refers total assets and resources as fund. The term' fund" represents only to working capital on the stated last concept However, working capital concept of fund has gained wide acceptance as compared to the other concepts. Therefore any transaction that increases the amount of working capital is taken as source of fund while conducting funds flow analysis. Any transaction that decreases working capital is treated as application. But, any transaction that affects current liabilities or current assets without resulting any changes in working capital is not taken as sources or use.

e. Cash Flow Analysis

This statement is carried out to know clearly the various items of inflow outflow of cash. It is different from funds flow analysis in the sense, the analysis relates to the movement of cash rather than the inflow and outflow of working capital.

It deals the causes of changes in cash position for the period of two balance sheets date in brief. At the time of preparing cash flow statement, only cash receipt from debtors against credit deals are considered as the source of

cash. Similarly, cash purchases and cash payments to suppliers for credit purpose are regarded as the uses of cash. The same holds true for expenses and incomes outstanding and prepaid expenses are not to be considered under this analysis.

2.1.8 Limitations of Financial Analysis

Financial performance analysis is of great significance for investor, creditor, management, economist, and other parties having interest in business. It helps management to evaluate its efficiency in past performance and takes decision relating to the future. (Jain, 1989 -33) However, it is not free from drawbacks. Its limitations are listed below.

(a) Historical nature of financial statements:

The basic nature of statements is historical. Past can never be a precise and can never be perfectly helpful for the future forecast and planning.

(b) No subject for judgment:

Financial analysis is a tool to be used by experts, analysts etc. to evaluate the financial performance of firm. That's why it may lead to faulty conclusion if used by unskilled analyst.

(c) Reliability of figures:

Reliability of analysis depends on reliability of the figures of the financial statements under scrutiny. The entire working of analysis will be vitiated by manipulation in the income statement, window dressing in the balance sheet, questionable procedures adopted by the accountant for the valuation of fixed assets and such other facts.

(d) Single year analysis is not much valuable:

The analysis of these statements relating to single year only will have limited use and value. From this, one cannot draw meaningful conclusion.

(e) Result may have different interpretation:

Different users may differently interpret the result derived from the analysis. For example, a high current ratio may suit the banker but it may be the cause of inefficiency of the management due to under-utilization of fund.

(t) Change in accounting methods:

Analysis will be effective if the figures derived from the financial statements are comparable. Due to change in accounting methods the figures of current period may have no comparable base, and then the whole exercise of analysis will become futile.

(g) Pitfall in inter-firm comparison:

When different firms are adopting different procedures, records, objectives, policies and different items under similar heading, comparison will be more difficult. If done, it will not provide reliable basis to assess the performance, efficiency, profitability and financial condition of the firm as compared to the whole industry.

(h) Price level change reduces the validity of analysis:

The continuous and rapid changes in the value of money, in the present day, economically also reduces the validity. Acquisition of assets at different level of prices make comparison useless as no meaningful conclusion can be drawn from a comparative analysis of such items relating to several accounting periods.

(i) Selection of appropriate tool :

There are different tools of analysis available to the analyst. The tools to be used in a particular situation depend on skill, training, intelligence and expertise of the analyst. If wrong tool is used, it may lead to wrong conclusion. This may be harmful to the interest of business.

2.2 Review from Articles \ Journal

Acharya (1999), in his article „Present status of NTC and privatization", suggested to utilize its fund rather that accept high interest bearing loans for capital investment, since the rate of earning in liquid fund is less than the rate of interest it pays for the loan.. In another article, again has suggested utilizing its internal resources. He concluded, "It has become possible to maximize profit utilizing internal resources with minimum cost. On the other hand, liquidity position of the corporation is quite high as it keeps capacity to pay off whole debt at once if the circumstances so required."

Neupane (2006), "Increasing bad debt: matter of thinking" in his articles, pointed out some facts about the bad debt and doubtful debt of Nepal Telecom during 2055/56 BS to 2059/60 B S.

He found the amount of doubtful debt is in increasing trend and Bad debt is in fluctuation trend. He concluded the following reasons;

- There is no clear cut strategies and vision to recover bad debt in time. There is lack of inter office coordination to collect receivables.
- It has seen that there delay payment by government offices which has enhanced others to make delay payment or remain unpaid.
- There is lack of motivation to employees as they feel recovery of bad debt is a risky job.
- In some cases, there is unauthorized use of telephone service and organization has no effective control mechanism.

A study on the performance of PEs of Nepal was conducted by the Management Consultant Company. In the study it was concluded that the assets management, in general Current Assets Management in particular were weakest point in Nepalese PEs.

It was pointed out that financial performance of the PEs was poor and indicated management of the resources. The report also pointed out that because of the lack of operational objectives, application of the long run planning, use of modern management tools. Capital budgeting and efforts towards cost control had not seen made so far. The study thus pointed that there was poor current assets management and management of resources in PEs of Nepal thereby causing poor financial performance.

Shrestha, (2001) "Analysis of capital structure of selected enterprises" pointed out that majority of corporations in our country had large amount of government investment and they possess huge amount of assets. He also pointed out that the existing assets were not fully utilized in many corporations. As for example, according to him, it was found that there had been large amount of construction materials remaining without use in NTC, underutilized assets and holding of useless assets by NTC and so on. It"s the fund concept as effective system of conversion was what out corporate managers must think to change their traditional view of funds as "cash to cash" transaction

Upadhaya, (2007) in his article "Five years financial projection of Nepal Telecom" published in 3 rd Anniversary Souvenir 2007. He highlights Nepal Telecom have to invest on modern technology in time and optimum utilization of the technology so as to guide for the high return on investment. Only investing on modern technology may not be sufficient to get the required return on investment its optimum utilization is must other wise the investment in new technology cannot give the return. Investment in modern new technology may turn riskier for the company. He had analyze past five year financial data of NTC and tried to project the financial future of the company. He found that the operating profit of NTC is slightly increasing this is due to decreasing of operating expenses. Study shows that NTC is successful to manage cost efficient. Return on assets is about 26% this means Company is able earn 26% profit in terms of total assets. He projects the future five years financial performance of NTC by using regression analysis, judgmental approach.

According to his projection growth rate on return will remain around 4.69%.

Strategic plan of 7th phase of NTC-2002 based on the analysis of the period 1996-2000, has drawn attention upon the investment environment of NTC as follow.

- Total income is increasing
- Liquidity is also increasing
- NTC has got sufficiently good fund for investment.
- There is high possibility of external funding to NTC as it has strong base to pay the loans back on due time.

2.3 Review of Related Dissertations

There are few researches that have been made in the areas of financial performance of NTC. Most of the researches have not been fully able to explain the financial condition of this organization. Thus an attempt has been made to review the available thesis, which is relevant to this study. Most research works have been done in the areas of manufacturing. But there are few in the areas of public utilities.

Adhikari (1995), on his unpublished thesis "An Evaluation of financial Position of Nepal Telecommunications Corporation" the main objectives of the study are: -

- To highlight the different aspects of NTC.
- To analyze, examine and interpret the financial position of NTC by using various techniques.
- To give workable recommendation, if there are weaknesses inherent in the corporation.

The Main Findings were

- **Liquidity position**

There is no serious liquidity problem in NTC. The current Ratio of NTC is 1.15 times. The current assets of NTC are greater than current liabilities in each fiscal year. It shows the better liquidity position of NTC. But it does not mean

that there is not any liquidity problem in NTC. The current Ratio is affected by the huge amount of sundry debtors. The coefficient of orrelation between current assets and current liabilities is 0.99 04 and the probable rror of the correlation is .0089. This means that both the variables are positively correlated and the corporation has been following a uniform policy to finance current assets and current liabilities.

❖ **Utilization of Fixed Assets**

NTC has invested the huge amount in purchasing the fixed assets but the revenue generating ability is very low in comparison to investment, which is only 0.04 times. This shows that there is no effective utilization of fixed assets in generating revenue.

❖ **Utilization of Total Assets**

There is increasing trend in the size of total assets but it is not significant. The total assets turnover ratio is very low. On an average, the total assets turnover ratio is only 0.22times. Therefore, it can be said that the management of NTC is not able to utilize the assets properly.

❖ **Receivables Management**

From the analysis of financial statement, we know that sundry debtors are the most sensitive sector for the management of NTC. In an average, the collection period is 132 days. Only in two fiscal years, the collection period is below the average debt collection period and in other three years the collection period is highly greater than the standard debt collection period. Because the receivables are taking long period to be collected, there is very low debtor's turnover ratio. Therefore, it can be inferred that the firm is not adopting proper receivables management policy. When referred to NTC management, it has set 90 days as standard collection period.

❖ **Return on Total Assets**

It is already mentioned that NTC has been operating under the profit position

over the five years study period. But return on total assets percentage shows poor performance. On an average, NTC is able to earn only 3.88% rate of return on total assets. This shows the very low profitability position. In the first four fiscal years, it has not even been able to cover the average rate of return on total assets. But it has shown some improvements in the last fiscal year of the study period. In most of the fiscal years, the return is very low in relation to total assets. It means return has not increased as increment in the investment of assets.

Adhikari shows major issues and gaps as follows:

- There is no effective utilization of assets in NTC.
- NTC has been seriously facing the problem of outstanding debt collection. In each fiscal year, the collection period is too long in comparison to the allowed collection period.
- Profit earned by NTC is not sufficient to make it self-reliance in its activities.
- Increment of cost in each fiscal year is another important issue of NTC. It is not adopting the cost control tools and techniques.
- NTC is not able to fulfill the requirement of funds from the successful operation of the corporation's activities. It has been taking considerable amount of loan to fulfill the requirement of funds.

Another hottest issue is that NTC is not conducted under the business principle. The idea of privatization is coming into the telecommunication sectors boost. But NTC is not in a position to meet the competition with the private sectors

Aryal (1999), has submitted the Thesis entitled "Working Capital Management in Nepal Telecommunication Corporation"
Objectives of the study were;

- To appraise working capital of NTC with respect to cash, receivable and inventory management.
- To know how far NTC is being able to utilize its current assets properly.
- To evaluate the credit policy of NTC and its effectiveness.

- ❖ To study the relationship between sales and different variables of working capital.
- ❖ To shed light on creation and mobilization of fund in NTC.

The Major findings were.

- ❖ NTC kept its large portion of profit as retained earning. There are no systematic techniques used for managing the cash in NTC.
- ❖ The fund collected from different sources is used mainly to purchase of fixed assets. Large portion for purchase or current assets and in repayment of current liabilities some amount is used in purchasing marketable securities.
- ❖ The size of current assets were increasing rapidly than the fixed assets. Which indicates the conservative policy in current assets. Size of working capital in NTC is far greater than the industry average.
- ❖ Cash and bank balance constitute the most important and largest element of working capital in NTC. About 36%of current assets is held as cash during the study period. The
- ❖ Growth trend of current assets is highly increasing than the total assets and net sales. The increasing trend of receivable seems to be consistent with the increase in net sales. But the size of cash has been increased in an inconsistent manner, which is the main cause of rapid increase in current assets.
- ❖ NTC kept excess amount of working capital. The volume of sales seems to be increasing every year. But rate of growth in working capital is higher than that of sales. Therefore, the turnover ratios are continuously decreasing every year

  There has been excess liquidity position in NTC. The relationship between liquidity and profitability ratio does not follow any regular trend during that period. There is no correlation between liquidity and profitability. This condition does not meet the proposition that „Higher the liquidity lower the profitability". Calculation of t -statistic shows that there is no significance difference between liquidity and profitability in NTC.

- There is no comprehensive long/midterm planning or control system of account receivable in the corporation. Larger amount is still due from many a last years and the amount of doubtful debt covers a significant portion of the account receivable.

The Recommendations were as follows.

- Optimize liquidity position
- Concentrate on collection of outstanding bills. As credit terms and standard are too much liberal in NTC. NTC should make appropriate decision regarding credit terms, credit standard and policy.
- Apply cash management techniques so as to invest excess fund in marketable securities.
- It would be better to pay off long term loan by using internal fund as NTC has large amount of internal fund lying idle on one hand and a significant portion of total fund is provided by high interest bearing loan on other.
- The financial position should be timely assessed through financial experts in order to know the financial strengths and weakness.
- Long term and midterm planning and control system of account receivable and cash budget should be prepared.

Neupane, D. K (2001) had make study on the topic "A Study on Profit Planning in Nepal Telecommunications Corporation". The general objective of the study was:

- To examine the present comprehensive profit planning system applied by NTC.

The other specific objectives of the study were to highlight NTC to analyze functional budgets adopted in the Corporation, to analyze Ratio Analysis and variances of NTC, etc.

The Main findings were as follows:

- Budgets are prepared for the formalities. The corporation has no skilled planners
- NTC has not adequately considered controllable and non - controllable variables affecting the organization.
- Actual sales line trends are always below the budgeted sales lines. Net Profit of NTC is in increasing trend.
- Huge amount of cash is remaining idle.
- There is no clear-cut criterion to separate cost into fixed and variable. Turnover Ratio is not so good even it enjoys monopoly market.
- The Recommendations were as follows:
- NTC must restructure its capital structure.
- Long term objectives should be reformulated. Estimation of fund is needed.
- CVP relationship should be considered while formulating profit plan.
- There should be timely address of the weakness shown by the evaluation.
- A separate Profit Planning department must be established.

CHAPTER - III

RESEARCH METHODOLOGY

Introduction

The basic objective of the study is to appraise the true picture of the financial performance of Nepal Telecom and to recommend necessary suggestions for the improvements. Financial analysis is the process of identifying the financial strengths and weakness of the firm by properly establishing the relationships between capital and assets of the organization. Financial analysis plays an important role in finding the real picture of financial performance of any organization. It provides an idea to the management while adopting the financial policies.

The study requires an appropriate research methodology so as to achieve its objectives. The purposeful methodology has been followed for the fulfillment of the stated objectives. The methodology consists of research design, nature and sources of data, data collection procedure, data processing, sample and population and tabulation and analytical tools used.

A human nature is so curious and always wants to do something new and different. For this, several questions raises in his mind and to get the answers, he should gather information from different sources and analyze them to get the result. The researcher for gaining the knowledge about method of goal achievement, when we desire, is known as research methodology (Joshi; 2001:12-13). Research methodology is the way to solve systematically about the research problem. (Kothati;1990:39)

3.1 Research Design

Research Design is the plan structure and strategy of investigation conceived so as to obtain answer to research questions. The research is based on recent historical data as well as primary source of information. The study will

explore the financial position of Nepal Telecom. The financial position refers to the amount of resources i.e. assets and liabilities of the company on the specific period and the results of their utilization. To conduct the study both descriptive and analytical research approaches has been adopted. Descriptive approach is utilized for conceptualization, problem identification, conclusion and suggestion of the study whereas analytical approach will be followed for the presentation and analysis of data. Thus the study is analytical as well as exploratory in nature. The data have been analyzed on the basis of standard financial formulas used in the book of financial management.

3.2 Population and sample

As the study concerns to the financial position of Nepal Telecom, the study tries to draw conclusion by analyzing yearly financial statement of the organization. Thus the entire fiscal years are considers as the population and the five years from 2060/2065 are taken as sample.

3.3 Types and sources of data

The main source of data for the purpose of this study is the published financial statements of Nepal Telecom. The study is thus mainly based on the secondary data. However a good effort has been made to draw the vital information by gathering and analyzing primary source of information. It constitutes mostly the annual reports, which comprises balance sheet and profit and loss account statement. Information has also been supplemented from various publication of Nepal Telecom. All other available published and unpublished material concerning the study as well as some journal abstracts will also be used in the study. The data has been processed through editing, coding and classification of the collected data. Present data have been analyzed using various analytical as well as descriptive financial and statistical tools. The reliability of the study and its findings depends upon the mainly on secondary data

The major sources of data and information are as follows:

- Website of Nepal Telecom: http://www.ntc.net.np
- Annual Reports and other published documents of Nepal Telecom.
- Economic Survey F/Y 2064/065, Ministry of Finance, HMG/N
- Various Planning Documents, National Planning Commission HMG/N

  Telephone inquiries
- Materials published in paper and magazines.
- Various Research Studies, Dissertations and articles related to the subject.

3.4 Data Collection Procedure

The main sources of data are secondary and they are collected directly from official records and published statements. The researcher has consulted concerned officials for data and information. Verification and clarification of data has been done through discussion with the concerned authority.

3.5 Data processing

The balance sheet, income statements and the profit and loss accounts of the company for 5 years create from 2060/061are collected for the convenience of the study. Then all the raw data are processed and presented in tabular form with the help of simple arithmetic rules. Entire raw data are converted into approximate and condensed in the form of consolidated balance sheet and income statement. Most of the data have been compiled in one form and processed and interpreted as per the need of the study. The secondary type of data is presented for the analytical purpose after the tabulation of data. This type of data processing will help to present the clear situation of financial position of Nepal Telecom.

3.6 Analytical Tools Used in the Study

Since the study is concentrated on Financial Performance of Nepal Telecom some important financial as well as statistical tools and techniques are used for

the analysis. The major tool employed for the analysis of this study is the ratio analysis that establishes the quantitative relationship of two variables of the financial statements. Ratio Analysis is the basic tool used for the study and is considered to be the powerful tool of financial analysis. Beside ratio analysis, various other financial tools and statistical tools have been studied.

3.6.1 Ratio Analysis

Ratio Analysis Ratio analysis is a widely used tool of financial analysis. Ratio analysis is a powerful and important tool of financial analysis, which helps in identifying the health of the organization. In other words, Ratio analysis helps the analyst make qualitative judgment on the firm's financial position as well as performance.

It presents the actual situation of the organization. It provides guideline especially in spotting trend towards better or poor performance. Since financial efficiency is vital element to achieve the goal, the management should be aware of the current financial position. If present condition can be assessed correctly, then the management can predict the future position, and take corrective actions to improve the financial position. So it is very important for any organization to analyze its financial position with the help of ratio analysis.

Ratio analysis helps in identifying the strengths & weaknesses of the organization. Through Ratio analysis, one can meaningfully summarize the large quantities of financial data to make qualitative judgment about the firm's financial performance as well as financial position. The financial Ratio is simply the relationship between two figures taken mainly from the financial statements of a business firm. Mathematically, Ratio refers to the numerical or quantitative quotient between two variables. A Ratio is calculated by dividing one item of the financial statement with other. The primary purpose of Ratio is to point out areas of further investigation. Ratio analysis is used as a major tool in interpreting and evaluating financial statements.

Ratio analysis stands for the process of determining and presenting the relationship of items and groups of items in the financial statement. According to Van Horne, "to evaluate the financial condition and performance of a firm, the financial analysis needs certain yardsticks. The yardstick frequency used is a Ratio or index relating to pieces of financial data to each other."(Van Horne, 1998:759)

3.6.1.2 Types of Ratio Used

Ratio may be classified in number of ways keeping in view of the particular purpose. There are different views about classification of ratio analysis. According to James C Van Horne," Different types of ratios namely liquidity ratio, leverage ratio , turnover ratio and profitability ratios are used in analysis of the financial position of a company." The study considers only those ratios, which are essential for decision making of capital structure. Following ratios are used to know the financial performance of Nepal Telecom.

A) Liquidity Ratio
B) Turnover Ratio/Assets Management Ratio / Activity Ratio
C) Profitability Ratio
D) Leverage/ Solvency Ratio/ Debt Management Ratio

A. Liquidity Ratio

Generally, the first concern of the financial analysis is liquidity. It tests whether the firm will be able to meet its maturing short-term obligations or not. The preparation of cash budgets & funds flow statements is required for detailed liquidity analysis of a company, but Liquidity Ratios provide a quick and easy measure of liquidity as it shows the relationship between cash & other current assets to current liabilities. Two commonly used liquidity Ratios are presented here. This Ratio helps to analyze the financial capacity of NTC to repay current liabilities and short - term loan.

I. Current Ratio

Commonly used to measure the short term solvency of the firm. It is a measure of short - term financial liquidity that indicates the availability of the rupees of current assets for each rupee of current liabilities. "The higher the Current Ratio, the larger is the amount of rupees available per rupee of current liability, the more is the firm's ability to meet current obligations and the greater is the safety of funds of short - term creditors."(Khan, 3Ed: 4) . The current assets normally include those assets that can be converted into cash within a year; such assets are marketable securities, accounts receivable and inventories. Current liabilities generally include those obligations maturing within a year; such liabilities are accounts payable, short term notes payable, current maturities of long term debt, accrued income taxes and other accrued expenses etc. The Current Ratio is calculated by using this formula.

Current Ratio = Current asset/ Current Liabilities

II. Quick Ratio

The Quick Ratio is calculated by deducting inventories from current assets and dividing the remainder by current liabilities. Generally, quick assets mean those types of assets that can be converted into cash quickly without any loss in value. So cash is considered the most liquid or quick asset and other quick assets include sundry debtors, bills receivables, marketable securities etc. Inventories are typically the least liquid of the firm's current assets and the assets on which losses are most likely to occur in the event of liquidation. Therefore, the measure of the firm's ability to pay off short term obligation without relying on the sale of inventories is important.

Quick Ratio = (Current Assets - Inventory) / (Current Liabilities)
OR
Quick Raio = Quick Assets / Current Liabilities

B. Activity Ratios

"Activity Ratios are used to measure the speed with which various accounts are converted into sales or cash."(Lawrence, 5th Ed;1997). Funds have been

invested in various assets fixed as well as current to generate sales and profits in the firm. And these Ratios, also called Turnover Ratios, are employed to evaluate the efficiency with which the firm manages and utilizes its assets. So it involves a relationship between sales and various types of assets. A number of Ratios are available for measuring the activity of the firm.

I. Inventory Turnover Ratio

Inventory Turnover Ratio indicates the efficiency of the firm in producing and selling its product. It is the measurement of how quickly inventory turns into sales. Generally, the higher the Inventory Turnover Ratio, the better is the inventory management. Low Ratio is either the sign of slow moving / obsolete inventory or the sign of excess inventory level than warranted by the production & sales activities. A very high Ratio should also be carefully analyzed as it may be the result of carrying too low level of inventory. Due to this situation, the firm might suffer from the problem of frequent stock outs and frequent replenishment in small volume which adversely affect the total cost of maintaining the inventory (ordering and carrying costs). Thus neither too high nor too low Ratio should be better for the company. It is calculated by dividing, the cost of goods sold by average inventory.

Inventory Turnover = Cost of Goods Sold / Average Inventory

In the absence of information on cost of goods sold, one can use the following formula to find Inventory Turnover Ratio.

Inventory Turn Over Ratio = Sales / Inventor

Where, Average inventory is the closing balance of inventory.

We can also calculate the Average Age of Inventory dividing the number of days in a year i.e. 360 by inventory turnover ratio. It shows the average length of time, inventory is held by the firm.

Average Age of Inventory = 360 / Inventory Turnover Ratio

II. Debtors (Account Receivable) Turn Over Ratio

Many firms sell their goods both for cash and credit. And when goods are sold for credit to the customers, debtors are created. Debtors Turnover Ratio indicates how many times debtors are turned into cash each year. Generally higher value of this Ratio indicates the management of credit is more efficient. Debtors Turnover Ratio is calculated dividing credit sales by average debtors. But in the absence of information about a firm's credit sales and opening & closing balances of debtors one can calculate this Ratio dividing sales by closing balance of debtors.

Debtors Turnover Ratio = Credit Sales / Average Debtors

OR

Debtors Turnover Ratio = Sales / Debtors

III. Average Collection Period (ACP)

The average number of days in which debtors remain outstanding is called Average Collection Period. It can be computed as follows.

ACP = Debtors / Average Credit Sales Per Day

OR

ACP = Debtors*360 / Credit Sales

But in the absence of information about a firm's credit sales, the Ratio will be calculated as follows:

ACP = Debtors/ Average Sales Per Day

Or

ACP = Debtors*360 / Sales

IV. Assets Turnover Ratios

Assets Turnover Ratio is simply the relationship between sales and assets. Several Assets Turnover Ratios can be calculated. But only four types of Assets Turnover Ratios are calculated in this research.

a). Total Assets Turnover Ratio

This Ratio shows the relative efficiency in utilizing its resources in order to make output by the firm. It is calculated by dividing sales by total assets.

Total Assets Turnover Ratio = Sales / Total Assets

b). Fixed Assets Turnover Ratio

Fixed Assets Turnover measures the relative efficiency of utilizing fixed or earning assets to generate sales by the firm. And it is calculated simply dividing sales by net fixed assets of the firm.

Fixed Assets Turnover Ratio = Sales / Net Fixed Assets

V. Working Capital Turnover Ratio

A firm may like to relate net working capital to sales to judge the efficiency of net current assets employed by the firm. It may computed net Working Capital Turnover Ratio by dividing sales by net working capital. Mathematically,

Working Capital Turnover = Sales / Net Working Capital

This Ratio indicates the amount of sales generated by each rupee of current assets that is financed by permanent fund.

VI. Capital Employed Turnover Ratio

Capital Employed Turnover indicates the amount of sales generated by each unit of permanent capital employed in the business. It can be taken as refined estimated for Total Assets Turnover. It is also called Net Assets Turnover. It excludes the amount of current liabilities from total assets to arrive at the amount of capital employed. Fund financed by current liabilities is not considered as a part of true capital because it is argued that current liability financing frequently changes its size. Mathematically,

Capital Employed Turnover Ratio = Sales / Total Capital Employed Where; Total Capital Employed = Total Assets - Total Current Liabilities

C. Profitability Ratios :

Profitability Ratio is the main concern of the owners and the management of the firm. The management of the firm always wants to know how efficient the operation of the firm is. Likewise the owners of the company always expect a reasonable return for their investment in the firm. For this reason, profitability Ratio can be a good measurement of the operating efficiency and profitability of the firm. By the help of the Profitability Ratios, one can make a quick and clear view towards the firm's Profitability, Return on Assets, and Return on Equity and Earnings per Share etc. In general, Profitability Ratios can be determined by two different factors of the financial statements. One is related to the income statement i.e. sales, expenses etc. and the other one is related to the balance sheet i.e. the investments, capital etc.

Profitability Ratios Related To sales:

These Ratios explain how much profit earned or how much expenses occurred by the company on each rupee of its sales. The following Profitability Ratios related to income statement are presented here.

I. Net Profit Margin :

Net profit is the residue of revenue over total costs. The costs include operating & selling expenses, interests, and taxes. The Net Profit Margin Ratio measures the relationship between Net Profit and sales of the firm. It indicates the ability of the management in running the business efficiently in terms of revenue generation, costs of producing goods & services, operating & selling expenses, costs of borrowed capital and making a reasonable return for its owners. It is computed by dividing net profit after tax by sales.

Net Profit Margin = Net Profit After Tax (NPAT) / Sales

Some Scholars does not consider interest charges as the expenses of the firm in computing Net Profit Margin. To exclude the effect of financing charges on profitability, they used the following alternative formula for computing Net Profit Margin Ratio:

Net Profit Margin = (NPAT + Interest After Taxes) / Sales

II. Operating Expenses Ratio

The Operating Expenses Ratio explains the changes in Operating Profit Margin. This Ratio is computed by dividing operating expenses by sales. Operating expenses consists of cost of goods sold, selling expenses and general and administrative expenses excluding interests.

Operating Expenses Ratio = Operating Expenses / Sales

Profitability Ratios Related To Investments:

Another computation of Profitability Ratios is related to investments. It is called Return on Investment (ROI). But there are different concepts of investments in financial literature: assets, capital employed and shareholders' equity. Based on these, the ROI also categorized in different categories:

- Return on Assets
- Return on Capital Employed
- Return on Shareholders' Equity.

III. Return on Assets (ROA)

Here, the Profitability Ratio is measured in terms of the relationship between net profits and the assets of the firm. Different approaches are applied to define Net profit and assets for calculating ROA. But we will apply net profit after tax (NPAT) plus interest and total closing assets for this study. It is computed as:

Return on Assets = (NPAT + Interest After Taxes)/Total Assets

IV. Return on Capital Employed (ROCE)

This is another type of ROI and a little different from ROA. Here, profit is related to the capital employed which is equal to net fixed assets plus net working capital or shareholders' equity plus long term debt. It is calculated as:

ROCE = (NPAT + Interest After Taxes) / Capital Employed

Where,

Capital Employed = Owner's Equity + Total Long Term Debt

V. Return on Equity (ROE)

Common or ordinary shareholders are entitled to the residual profits. "While the ROCE expresses the profitability of a firm in relation to the funds supplied by the creditors and owners taken together, the Return on Shareholders' Equity measures exclusively the return on the owners" fund."(Khan, 3Ed: 4). A Return on Shareholders" Equity is calculated to see the profitability of owners' investment. The shareholders" equity or net worth will include paid - up share capital, share premium and reserves and surplus less accumulated losses. Net worth can also be found by subtracting total liabilities from total assets. It is computed as net profit after taxes divided by shareholders" equity.

Return on Equity = Net Profit After Taxes (NPAT) / Net Worth (NW)

D. Leverage Ratios

Leverage Ratios measure the firm's ability to meet its long - term obligations. These also indicate how much levered the firm is. In other words, from Leverage Ratios, one can easily know, how much long - term debt is being used in the company and whether the company will be able to pay the debt or not when due. The Leverage Ratios are the main concern of long - term outside creditors such as debenture holders, banks, and financial institutions etc. "The short term creditors like bankers and suppliers of raw materials are more concerned with the firm's current debt paying ability. On the other hand,

long term creditors, like debenture holders, financial institutions, etc. are more concerned with the firm's long term financial strength."(Pandey, 7Ed: 211) So Leverage Ratios are calculated to judge the long-term financial position of the firm. Some basic types of Leverage Ratios are:

I. Debt Ratio

The Ratio of total debt to total assets, generally called the Debt Ratio, measures the percentage of funds provided by creditors. In other words, this Ratio shows the proportion of interest bearing debt in the capital structure. Debt Ratio is calculated by dividing the total debt by total assets (net). Total debts include both current and long - term debts and total assets (net) include net fixed assets plus current assets. In the outside creditors' view, low Debt Ratios are preferred because the lower the Ratio, the greater the probability against their losses in the event of liquidation while in the stockholders' view, the reverse is preferred because the high leverage will increase the probability of expected earnings. But there should be an appropriate mix of debt & equity financing for better health of the company.

Debt Ratio = Total Debt/ Total Assets

II. Debt Equity Ratio

Debt Equity Ratio reflects the relative portion of creditors' and shareholders' claims upon the total assets of the company. It can be computed by dividing total debt by net worth.

Debt Equity Ratio = Total Debt / Net Worth

III. Long -Term Debt Ratio

Long - Term Debt Ratio explains the leverage in terms of long - term capitalization and it is calculated dividing long - term debt by capital employed. Capital employed consists of long term debt plus net worth.

Long -Term Debt Ratio = Long -Term Debt/ Capital Employed

Where;

Capital Employed = Long -Term Debt + Net Worth

IV. Interest Coverage Ratio:

It is also known as 'Time-Interest-Earned Ratio'. This Ratio measures the debt servicing capacity of a firm insofar as fixed interest on long term debt is concerned. Higher Ratio is preferable both from the view point of lenders as well as from the view point of the owners. This Ratio, as the name suggests, shows how many times the interest charges are covered by the EBIT out of which they will be paid. In other words, it indicates the extent to which a fall in EBIT is tolerable in the sense that the ability of the firm to service its interest payments would not be affected. It is determined by dividing by dividing the operating profits or earnings before interest and taxes (EBIT) by fixed interest charges on debts.

Interest Coverage Ratio = EBIT / Interest

3.6.1.3 Comparison of Standards

"The Ratio analysis involves comparison for a useful interpretation of the financial statements."(Pandey, 2005: 104) A Ratio itself could not help much to the analyzer unless he/she makes comparison of it with some standards. There are many types of standards available for comparisons. The important ones are:

a. Past Ratios
b. Projected Ratios
c. Competitors' Ratios
d. Industry Ratios

Comparison with past Ratios of the same company may be suitable to evaluate performance over a period of time of a company. It is known as time series analysis or trend analysis. Projected Ratios are future Ratios that are developed from projected financial statements of the company. Comparison with future

Ratios helps to find whether the company's performance is accordance with the long term planning or not. Comparison with competitors' Ratio is also called cross-sectional analysis. The analyzer compares the company's performance with its competitors' and finds the company's relative financial position / performance. Industry Ratios are always useful to compare the company's performance with whole the industry's as it is from the same industry. "This sort of analysis, known as the industry analysis, helps to ascertain the financial standing and capability of the firm vis -à-vis other firms in the industry."(Pandey, 2006: 105)

Among various types of comparisons, this research mainly uses the past Ratios for meaningful analysis of NT's financial performance.

3.6.2 Statistical Analysis

Facts and figures about any phenomenon whether it relates to population, production, sales, profit or any other matters are called 'statistics'. In this sense, the term statistics is considered synonymous with figure. To the layman, the term statistics usually carries only the nebulous and too often distasteful connections of figures. "The word statistics refer either to quantitative information or to a method of dealing with quantitative information." (Gupta, 1983:1). This Research applies the following statistical tools for the required financial analysis.

- Arithmetic Mean
- Correlation Analysis
- Regression Analysis

3.6.2.1 Arithmetic Mean

The Arithmetic Mean is the most popular and commonly used measures of central tendency, which represents the entire data by a single value. The Arithmetic Mean of values of variable in a given set of observation is the summation of all the values of the variables divided by the number of observations. In general, X_1, X_2, X_3... ..., X^n are given observations up to N^{th}

term, then their Arithmetic Mean (X bar) is given by:

$X = (X_1 + X_2 + X3 + \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots X_n) / N$

Where,

X = Mean, X_1, X_2, X_3... X_n are the given set of observations and

N = numbers of item observed.

3.6.2.2 CORRELATION ANALYSIS

Correlation Analysis is the statistical tool generally used to describe the degree to which one variable is related with another. The relationship is generally assumed to be a linear one. This analysis is also used in conjunction with Regression Analysis to measure how well the regression line explains the variations of the independent variable. It enables one to determine to the degree and direction of association between two variables.

For measuring Correlation, it is essential that the two phenomena should have cause and effect relationship. In absence of such relationship, one should not talk of Correlation between them. But the Correlation in itself does not tell about the nature of the cause and effect of relationship between the variables. It is explained by Regression analysis.

There are several mathematical methods of measuring Correlation. The method developed by Carl Pearson, popularly known as Pearson's co-efficient of Correlation, is most widely used in practice. Carl Pearson's co-efficient of correlation measures the degree of association between two variables, say variable X and variable Y, and is denoted by the symbol 'r'. The formula for computing Pearsonian correlation 'r' is:

$$r = \frac{COV(XY)}{\sqrt{VAR\,(X)\,VAR(Y)}}$$

$$r = \frac{\mathrm{N}\sum \mathrm{XY} - \sum \mathrm{X} \sum \mathrm{Y}}{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}$$

Where,

X=Value of variable X

Y = Value of variable Y

The value of the co-efficient of Correlation obtained by the above formula shall always lie between +1 to -1. The following general rules are taken to interpret the value of 'r'.

A. If 'r' = +1, it means that there is perfect positive relationship between the two variables.

B. If 'r' = -1, it means that there is perfect negative relationship between the two variables.

C. If 'r' = 0, it means that there is no relationship between the two variables i.e. the variables in question are independent.

D. The closer the value of 'r' to =+1 or -1, the closer the relationship between the two variables; and the closer the value of 'r' to 0, the less close is the relationship.

The correct interpretation of 'r' depends on the size of the sample, among the other things. Smaller the size of sample, less reliable is the result. So we need to test the statistical significance of 'r' before confidently inferring from it.

Probable Error: The Probable Error of the co-efficient of Correlation helps in interpreting its value. With the help of Probable Error, it is possible to determine the reliability of the value of coefficient in so far as it depends on the conditions of random sampling. The Probable Error of the coefficient of Correlation is obtained as follows:

$$P.E.r = 0.6745 \times \left(1 - r^2 \sqrt{n}\right)$$

Where r is coefficient of Correlation and n is the number of pairs of items.

Interpretation:

1. If the value of r is less than the Probable Error, there is no evidence of Correlation, i.e. the value of r is not at all significant.
2. If the value of r is more than six times the Probable Error, the existence of Correlation is practically certain, i.e., the value of r is significant

3.6.2.3 Regression Analysis

Regression analysis is used to estimate the likely value of one variable from the known value of the other variable i. e. in regression analysis we establish a kind of average irreversible functional relationship between the two variables. The cause and effect relationship is clearly indicated through regression analysis than by correlation. In other words, regression analysis is a mathematical measure of the average relationship between two or more variables in terms of original units of data. There are two types of variables in regression analysis viz. dependent variable and independent variable, the variable whose-value is influenced or is predicted is called dependent variable whereas the variable which influences the value or is used for prediction is called independent variable. The dependent variable is also known as regressed or explained variable while the independent variable is called as regress or predictor or explanatory variable.

3.6.2.4 Lines of Regression

If there exists a relationship between two variables, the points in the scatter diagram wi1l more or less concentrate around a cure, called the curve of regression. If the curve is a straight line, it is called the line of regression and relationship between the variables is said to be linear regression.

A line of regression is the line, which gives the best estimate to the value of one variable for any specified value of the other variable. Thus the line of regression is the line of best fit.

The term best fit is interpreted in accordance with the principle of Least Squares which consists in minimizing the sum of squares of the residuals or the errors of estimates, i.e. deviation between the given observed values of the variables and their corresponding estimated values as given by the line of best fit. If we have two variables X and Y, we shall have two regression lines, Minimizing squares of error parallel to y-axis gives the equation of the line of regression equation of Y on X and minimizing the sum of squares of the errors parallel to X- axis, gives the equation of the line of regression of X on Y.

Regression Equation of Y on X.

It is the line, which gives the best estimates for the values of Y for any specified values of X.

Regression equation of Y on X is given by

$Y = a + b \times X$ ... . (I)

Where,

Y= Dependent variable

X= Independent variable

a = Intercept of the line

b = Slope of the Line (It measures the average change in the value of Y as a result of one unit change in value of X). It is also called regression coefficient of Y on X. In other words, it measures the rate of relationship.

The value of the constants a and b can be determined by solving following equation.

$Y = n\,a + b\,\Sigma X$ ... . (ii)

$\Sigma XY = a\,\Sigma X + b\,\Sigma X$ ... .(iii)

By calculating the equation no (ii) and (iii), we get the value of 'a' and 'b' and substituting these value in equation (i), we get required estimated regression equation of Y on X.

3.7 Methods of Presentation and Analysis

Simple methods of analysis have been used, data presentation and analysis has been divided into small sub - topics. Every result has been tabulated and clear interpretation of it has been given simultaneously. Detail of calculations has been presented in appendices at the end of the report. Tables, and have been used to make report clear and easily understandable. Summary, conclusion and recommendation have been presented at the last chapter of the report.

CHAPTER - IV
PRESENTATION AND ANALYSIS OF DATA

4.1. Introduction

This chapter highlights the financial position of Nepal Telecom. The tools used for the purpose of analysis have been discussed in detail in research methodology. Some financial and statistical tools have been used to evaluate the financial position of NT. The financial tool include ratio analysis between various variables whereas the statistical tools include Correlation and regression analysis between the variables. The major variable like assets, liabilities, sales, debt, and equity are taken for the analysis. Moreover the variables affecting to the financial performance are also considered in the study. The analysis is made through the data presentation and various financial ratios reflecting the relationship among variables affecting financial performance.

4.2. Financial Analysis

The main objective of this study is to examine the financial position/performance of NTC. To meet this objective, it is essential to present, analyze and interpret data contained in annual reports of NTC. The annual reports include balance sheet and Income statement along with their supporting schedules. Analysis and interpretation of data is an attempt to find - out the implications and the significance of past activities/decisions in the light of present position and future prospect and to make suggestion for future action. In this study, the data are presented, analyzed and interpreted on the basis of research questions. The analysis part begins with a brief overview of financial position/performance indicators of the firm.

The different types of tools and techniques that have been used to analyze the data are as follows:

- Ratio Analysis
- Trend Analysis
- Correlation/Regression Analysis

Ratio Analysis

Ratio Analysis will help us to analyze the financial position and financial performance of Nepal Telecom. The rationale of Ratio Analysis lies in the fact that it makes related information comparable. A single figure by itself has no meaning but when expressed in terms of a related figure, it yields significant inferences. Following are some of the ratios that will help us to analysis the financial position of Nepal Telecom.

4.2.1 Liquidity Ratio:

Liquidity ratios are used to judge an organizations ability to meet its short -term obligation. These ratios are comparison of short -term obligation with the resources available and are measured by current ratio and quick ratio. The liquidity ratio reflects the short -term financial strength of a firm.

4.2.1.1 Current Ratio (CR)

The relationship between current assets and current liabilities is expressed by Current Ratio . Current Ratio is supposed to be around 2:1 but this standard should not be used rigidly. A higher Ratio here would imply that the company maintains a sound liquidity position from the short-term lenders' viewpoint and from the Corporation's own viewpoint. But a very high Ratio would indicate that a high amount of idle fund being invested in current assets or higher proportion of financing the current assets by dearer permanent sources.

Current Ratio (CR) = Current Assets / Current Liabilities

Table 4.1
Calculation of current ratio and its straight line trend equation
(in thousand)

Year Order	Fiscal Year	Current Assets	Current Liabilities	Current Ratio	Straight Line Trend
1	2062/63	20213762	12629715	1.60	1.486
2	2063/64	20598352	14722678	1.40	1.498
3	2064/65	22526522	15665380	1.44	1.510
4	2065/66	23519754	15675154	1.5	1.522
5	2066/67	24180638	15014439	1.61	1.534
Average current ratio				151	

Source: Appendix -I

Straight Line Trend of the Ratio is: $\hat{Y} = 1.4540+0.0120(x)$ straight line trend value

When X=6, $\hat{Y}$ =1.546, i.e. Expected Current Ratio for next year (year=6)

Where,
Y= estimate of the Current Ratio
X= measure of time when base year 2062/63 = 1

The table 4.1 shows that the average Current Ratio is 1.51 times during the study period. The Ratio 1.51 on an average indicates that the Organization has current assets of Rs 1.51 for each rupee of current liabilities. As current liabilities are paid by the current assets, it seems that NTC will be able to pay its current liabilities at the time of requirement. It ranges between a highest of 1.61 times in F/Y 2066/67 B.S and a lowest of 1.4 times in F/Y 2062/63. The overall Ratio trend does not show any clear direction. While comparing with the average, one finds that in F/Y 2062/63 to 2066/67 B.S the Ratio is higher than the average and for F/Y 2062/63, 2063/64 the Ratio is lower than the average. If we see the actual trend, we can find its Current Ratio is not so volatile over time.

The fitted Trend Line shows that the liquidity position of the Organization would remain sound in future.

4.2.1.2 Quick Ratio/ Acid Test Ratio

One defect of Current Ratio is that it fails to convey any information on the composition of the current assets of a firm. Quick Ratio is a measure of liquidity designed to overcome the defect of Current Ratio. The term quick refers to current assets which can be converted into cash immediately or at a short notice without diminution of value. The current assets excluded from this category are inventory and prepaid expenses. So, while calculating Quick Ratio for NTC, inventory is deducted from total current assets and divided by total current liabilities. Quick Ratio is supposed to be around 1:1 but this standard also should be defined by the nature of the organization.

Quick ratio = Quick assets/Current liabilities (or) Quick Assets = Current Assets-Inventory

Table 4.2

Calculation of quick ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Current Assets	Inventory	Quick Assets	Current Liabilities	Quick Ratio	Straight Line Trend
1	2062/63	20213763	255250	19958513	12629715	1.58	1.508
2	2063/64	20598352	309857	20288495	14722678	1.38	1.458
3	2064/65	22526522	329315	21097207	15665380	1.42	1.448
4	2065/66	23519754	327684	23192070	15675154	1.48	1.418
5	2066/67	24180638	416424	23764104	15014439	1.38	1.388
Average Quick Ratio						1.45	

Source: Appendix -I

Straight Line Trend of the Ratio is: $\hat{Y} = 1.5380 - 0.0300(X)$

When X=6, $\hat{Y}$ = 1.358i.e. Expected Quick Ratio for next year (year=6)}

Where, Y= estimate of the Quick Ratio

X= measure of time when base year 2062/63 = 1

The table 4.2 shows that the average Quick Ratio is 1.45 times during the study period. The Ratio of 1.45, on an average, indicates that the Organization has quick assets of Rs 1.45 for each rupee of current liabilities. As average

Current Ratio is 1.45 throughout the study period, we can see a little difference between these two Ratios. It means that the least liquid item among the current assets, the inventory, has occupied a very nominal place as part of the total current assets of NTC. In this respect, NTC can be said to have a good liquidity position to fulfill its current obligations when they become due.

The table shows that the Ratio ranges between a highest of 1.58 times in F/Y 2062/63 B.S and a lowest of 1.38 times in F/Y 2066/67 and 2063/64 B.S. The overall Ratio Trend does not show any clear direction but in most recent years it seems decreasing slowly. While comparing with the average, one finds that in F/Y 2062/63 to 2065/66B.S the Ratio is higher than the average and in F/Y 2063/64 and 2066/67 B.S the Ratio is lower than the average. If we see the actual trend, we can find that the Quick Ratio is not so volatile over time.

The Straight Line Trend fitted on the basis of least square method shows a lung run negative growth rate of 0.0300 times per year for this Ratio. Based on the fitted Trend Line, it can be expected that the liquidity position of the Organization could remain sound in future.

4.2.2 Turnover Ratio / Activity Ratio

Funds of creditors and owners are invested in various assets to generate sales and profits. The better the management of assets, the larger will be the amount of sale. Activity Ratios are employed to evaluate the efficiency with which the firm manages and utilizes its assets. These Ratios are also called Turnover Ratios because they indicate the speed with which assets are being converted or turned over into sales. So, it involves a relationship between sales and assets reflecting whether assets are managed well. Several Activity Ratios can be calculated to judge the effectiveness of assets utilization.

4.2.2.1 Inventory Turnover Ratio (ITR)

The Inventory Turnover Ratio (ITR) is the relation between the sales and the inventory of a firm. It indicates the efficiency with which the firm is able to use its inventory to generate sales revenues. Generally, the higher a firm's Inventory Turnover, the more efficient its inventory management is supposed to be. The Inventory Turnover is calculated by dividing sales by closing inventory. This Ratio of NTC for the period of five years along with its Straight Line Trend is calculated.

Inventory Turnover Ratio = Sales/Inventory

Table 4.3
Calculation of inventory turnover ratio and its straight line trend equation

(Rs.in thousand)

Year Order	Fiscal Year	Operating Sales	Inventory	Inventory Turnover	Straight Line Trend
1	2062/63	8309936	255250	32.56	28.876
2	2063/64	8584144	309857	27.70	31.920
3	2064/65	10413655	329315	31.62	34.964
4	2065/66	13967318	327684	42.62	38.008
5	2066/67	16788359	416424	40.32	41.052
Average Inventory Turnover Ratio				34.96	

Source: Appendix -I

Straight Line Trend of the Ratio is: $\hat{Y} = 25.8320+3.0440\ (X)$

When X=6, $\hat{Y} = 44.096$ {i.e. Expected ITR for next year (year=6)}

Where, Y= estimate of the Inventory Turnover Ratio

X= measure of time when base year 2062/63 = 1

The table 4.3 show that the average of the Inventory Turnover Ratio of NTC for the past five year was 34.96 times. The average Ratio of 34.96 indicates that each rupee of inventory is generating sales of Rs. 34.96. It ranges between a

highest of 42.62 times in F/Y 2065/66 B.S and a lowest of 27.70 times in F/Y2063/64 B.S. The overall Ratio Trend shows an upward direction particularly in the most recent years. If we see the actual trend, we can find that the Inventory Turnover Ratio is slightly volatile over time. But for the last years, the Ratio is increasing continuously. And since a high Ratio is good from the view point of inventory utilization, the increasing Ratio seems favorable for NTC.

The Straight Line Trend fitted on the basis of least square method shows a long run positive growth rate of 3.0440 times per year for this Ratio. Based on the fitted Trend Line, it can be expected that the inventory utilization level of NTC should improve in coming years.

4.2.2.2 Average Age of Inventory

Average Age of Inventory is just an alternate method of expressing the efficiency of the inventory management. Lesser the time the inventory remains in the go down, better would be the inventory management. The Average Age of Inventory is calculated by dividing 360 by Inventory Turnover Ratio.

Average age of inventory = 360 / inventory turnover ratio

Table 4.4
Calculation of Average Age of Inventory (days)

Fiscal Year	Inventory Turnover	Average Age of Inventory
2062/63	32.56	11
2063/64	27.70	13
2064/65	31.62	11
2065/66	42.62	8
2066/67	40.32	9
Average		10

Source: Appendix -I

From the tables show that the Average Age of Inventory of NTC for the study period is 10 days. The average value of 10 indicates that an item of inventory purchased by the firm remains in the go down for 10 days before being released for sale or service to its customers (i.e. a typical item of inventory in the store is replaced every 10th day. The Average Age between a highest of 13 days in F/Y 2063/64 B.S and a lowest of 8 days in F/Y 2064/65 B.S. The overall value trend shows a downward direction particularly in the most recent years.. If we see the actual trend, we can find that the Average Age of Inventory is showing decreasing tendency over time, particularly for the last four years. And since a lower value is good from the view point of inventory utilization, the decreasing value is a good indication for NTC.

4.2.2.3 Debtors Turnover Ratio (DTR)

The Debtors Turnover Ratio (DTR) is the relation between the sales and the receivables of a firm. The analysis of Debtors Turnover Ratio supplements the information regarding the liquidity of one item of current assets of the firm. It indicates the efficiency with which the firm is able to turn its credit sales into cash. Generally, the higher a firm's Debtors Turnover, the more efficient its credit management is supposed to be and vice versa. The Debtors Turnover is calculated by dividing sales by closing sundry debtors. This Ratio of NTC for the period of five years along with its Straight Line Trend is calculated.

Debtors Turnover Ratio= Sales / Debtors

Table 4.5
Calculation of Debtors Turnover Ratio and its straight line trend equation
(Rs. in thousands)

Year Order	Fiscal Year	Operating Sales	Debtors	Debtors Turnover	Straight Line Trend
1	2062/63	8309936	2668942	3.11	2.934
2	2063/64	8584144	2825943	3.04	3.340
3	2064/65	10413655	3099495	3.36	3.746
4	2065/66	13967318	3455511	4.04	4.152
5	2066/67	16788359	3482610	4.82	4.558
Average Debtors Turnover Ratio				3.67	

Source: Appendix -I I

Straight Line Trend of the Ratio is: $\hat{Y} = 2.5280 + 0.4060 (X)$

When X=6, $\hat{Y} = 4.964$ {i.e. Expected DTR for next year (year=6)}

Where, Y= estimate of the Debtors Turnover Ratio
X= measure of time when base year 2062/63 = 1

The table 4.5 shows that the average DTR of NTC for the past five year was 3.67 times. The average Ratio of 3.67 indicates that each rupee of investment in receivables is generating sales of Rs. 3.67. It ranges between a highest of 4.82 times in F/Y 2066/67B.S and a lowest of 3.04 times in F/Y 2063/64 B.S. The overall trend of the Ratio does not show any specific direction. The Ratio seems to be mildly volatile over time but it has shown marked improvements over the most recent years of the study period which, if maintained, can be a very good sign for the credit collection of the NTC. While comparing with the average, one finds that from F/Y 2066/67, 2065/66, and 2064/65 the Ratio is higher than the average and for F/Y2062/63 to 2063/64B.S the Ratio is lower than the average.

The Straight Line Trend fitted on the basis of least square method shows a long run positive growth rate of 0.4060 times per year for this Ratio. Based on the fitted Trend Line, it can be expected that the receivable management of NTC should improve in coming years.

4.2.2.4 Average Collection Period (ACP)

The average number of days through which debtors remains outstanding is called Average Collection Period. Average Collection Period is just an alternate method of expressing the turnover efficiency of the receivables. Lesser the time the receivables remains due, better it is supposed to be. The Average Collection Period is calculated by dividing 360 by Debtors Turnover Ratio.

Average Collection Period(ACP) = Debtors*360 /Sales

Table 4.6
Calculation of Average Collection Period

(Rs. in thousand)

Year Order	Fiscal Year	Debtors	Operating Sales	ACP (Days)
1	2062/63	2668942	8309936	116
2	2063/64	2825943	8584144	119
3	2064/65	3099495	10413655	107
4	2065/66	3455511	13967318	89
5	2066/67	3482610	16788359	75
5-Yearly Average				101

Source: Appendix -I I

The table 4.6 shows that the Average Collection Period of NTC over the five years of study period is 101 days. The average value of 101 indicates that an invoice of credit receivable remains outstanding for 101 days before being collected from the customers (i.e. a typical debtor of NTC pays his/her dues 101 days after the purchase of goods/consumption of service). The ACP ranges between a highest of 119 days in F/Y 2063/64 and a lowest of 75 days in F/Y 2066/67. While comparing with the average, one finds that from F/Y

2062/63, 2063/64 and 2064/65, the values are higher than the average and for F/ Y 2065/66 and2066/67; the values are lower than the average. The actual value trends show a humped curve for the overall period of five years. If we take a close look at the actual trend, we can find that the Average Collection Period is showing decreasing tendency over later half periods of the study periods. And since a lower value is good from the view point of collection efficiency, the decreasing value may be a good indication for NTC in coming years.

4.2.2.5 Total Assets Turnover Ratio

The Total Assets Turnover (TATR) is the relation between the sales and the total assets of a firm. It indicates the efficiency with which the firm is able to use all its assets to generate sales revenues. Generally, the higher a firm's Total Assets Turnover, the more efficiently its assets said to be. The Total Assets Turnover is calculated by dividing sales by total assets. This Ratio of NTC for the period of five years along with its graphic trend is shown in the following table.

Total Assets Turnover Ratio (TATR)= Sales / Total assets

Table 4.7
Calculation of Total Assets Turnover Ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Total Sales	Total Assets	TA Turnover	Straight Line Trend
1	2062/63	8852727	33080441	0.27	0.266
2	2063/64	9194297	35432582	0.26	0.265
3	2064/65	11058914	39104959	0.26	0.264
4	2065/66	14751623	43529299	0.27	0.263
5	2066/67	17889310	49371223	0.26	0.262
Average of Total Assets Turnover				0.26	

Source: Appendix -I I

Where,
Total Assets = Current Assets + Total fixed Assets
Total fixed Assets =Net fixed assets + capital work in progress+ Investments)
Straight Line Trend of the Ratio is: $\hat{Y} = 0.2670-.0010 (X)$

When X=6, $\hat{Y} = 0.261$ {i.e. Expected TAT Ratio for next year (year=6)}
Where, = estimate of the Total Assets Turnover Ratio
= measure of time when base year 2062/63 = 1

From the table 4.7 shows that the average of the TATR Ratio of NTC for past five year was 0.26 times which is lower than the general standard average of at least 1.00 times for this line of business that each rupee of investment in assets is generating sales of Rs. 0.26 The overall Ratio Trend shows a random movement of the Ratio over the five year period. Though the Inventory Turnover Ratio is mildly volatile over time, but for the last 3 -4 years, the Ratio is decreasing continuously which should be the real cause of concern for the NTC. Unless the firm generates sufficient volume the further investment in assets will not be justified.

The Straight Line Trend fitted on the basis of least square method shows a long run negligible negative growth rate of -0.0010 times per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the total assets utilization level of NTC should remain at least constant in coming years. Continuous expansion of its assets over the recent years followed by marginal increase in sales has primarily caused TATR to remain stable. If the firm cannot utilize this expanded capacity in the near future, the firm may have to make savings its assets investment or else it would face inactive TATR Ratio.

4.2.2.6 Fixed Assets Turnover Ratio (FATR)

The Fixed Asset Turnover measures the efficiency with which the firm has been using its fixed (earning) assets to generate sales. This Ratio shows the relationship between sales and net fixed assets of a firm. Generally, higher turnover is preferred because it reflects greater efficiency in the utilization of fixed assets.

The Fixed Asset Turnover is calculated by dividing the firm's sales by its net fixed assets. This Ratio of NTC along with its graphical trend for the period of five year is shown as follows:

Fixed assets turnover ratio (FATR) = Sales / net fixed assets

Table 4.8
Calculation of fixed assets turnover ratio and its straight line trend equation
(Rs. in thousand)

Year Order	Fiscal Year	Operating Sales	Net Fixed Assets	FA Turnover	Straight Line Trend
1	2062/63	8309936	8094882	1.03	0.944
2	2063/64	8584144	9040917	0.95	1.026
3	2064/65	10413655	10088426	1.03	1.108
4	2065/66	13967318	11361042	1.23	1.190
5	2066/67	16788359	10197703	1.30	
Average of Fixed Assets Turnover				**1.11**	

Source: Appendix -I I

Straight Line Trend of the Ratio is**:** $\hat{Y} = 0.8620+0.0820 (X)$

When X=6, $\hat{Y}$ = 1.354{i.e. Expected FAT for next year (year=6)}

Where,

Y= estimate of the Fixed Assets Turnover Ratio

X= measure of time when base year 2062/63 = 1

From the table 4.8, it is clear that the Fixed Assets Turnover of NTC is in increasing trend. It ranges from a minimum of 0.95 times in F/Y 2063/64 B.S

to a maximum of 1.30 times in F/Y 2066/67 . While comparing with the average, one finds that in initial 3 years, the Ratios are below the average and for later three years, the Ratios are above the average. The average Ratio is 1.11 times which indicates that each rupee of investment in fixed assets is generating sales of 111 paisa., the good aspect is that it is showing a clear upward trend in 5years of the study period. It can be safely termed that the company"s efficiency in using its fixed assets is good and it is going toward the right direction in the most recent years.

The Straight Line Trend fitted on the basis of least square method shows a sizeable long run positive growth rate of 0.0820 times per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the fixed assets utilization level of NTC should improve, at least in coming years. NTC should try to increase its current level of fixed assets utilization in the near future.

4.2.2.7 Working Capital Turnover Ratio (WCT)

The Working Capital Turnover (WCT) Ratio measures the efficiency with which the firm has been using its net current assets (revolving assets) to generate sales. This Ratio showsthe relation between sales and net current assets of a firm. Generally, higher turnover is preferred because it reflects greater efficiency in the utilization of net current assets. Working capital here means only that part of current assets which is financed by the long term sources. The Working Capital Turnover is calculated by dividing the firm's sales by its net working capital. This Ratio of NTC along with its graphical trend for the period of five year is shown as follows:

Working Capital Turnover Ratio(WCT) = Sales / Net working capital

Table 4.9

Calculation of Working Capital Turnover ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Operating Sales	CA	Total CL	Net WC	WC Turnover	Straight Line Trend
1	2062/63	8309936	20213762	12629715	7584047	1.10	1.182
2	2063/64	8584144	20598352	14722678	5875675	1.46	1.360
3	2064/65	10413655	22526522	15665380	6861142	1.52	1.538
4	2065/66	13967318	23519754	15675154	7844600	1.78	1.716
5	2066/67	16788359	24180638	15014439	9166199	1.83	1.894
Average of Working Capital (WC) Turnover						1.538	

Source: Appendix -I II

Where,

Total Current liabilities= Current liabilities + provision

Straight Line Trend of the Ratio is: $\hat{Y} = 1.0040 + 0.1780(X)$

When X=6, $\hat{Y} = 2.072$ {i.e. Expected WCT for next year (year=6)}

Where,

Y= estimate of the Working Capital Turnover Ratio

X= measure of time when base year 2061/62 = 1

Table 4.9 shows that the average of the WCT Ratio of NTC for past five year was 1.538 times and this is lower than the general standard average of at least 2.00 times for this line of business. The ratio seems to be increasing as it ranges from 1.83 in 2066/67 B.S to 1.1 in 2062/63 B.S. The average Ratio of 1.538 indicates that each rupee of investment in working capital is generating sales of Rs. 1.538. The overall Ratio Trend shows a upward movement of the Ratio over the five year period.

The Straight Line Trend fitted on the basis of least square method shows a long

run sizeable growth rate of 0.1780 times per year for this ratio. If this ratio is to move as per the fitted trend Line in future, it can be expected that the total assets utilization level of the company would be to the level of satisfactory in the near future.. If the firm cannot utilize added investment in working capital in the near future, the firm may have to make savings its working capital investment or else it would face further decline in WTC Ratio.

4.2.2.8 Capital Employed Turnover Ratio (CET)

Funds of owners and creditors are invested in various assets to generate sales, so the invested capital must be compared & analyzed with sales in order to examine the efficiency of the company's management in generating revenues from available capital. The Sales to Capital Employed Ratio, also called Capital Employed Turnover, have been computed to know how efficiently the long term capital is employed in generation of revenues. Higher Ratio is desirable from the viewpoint of owners as well as creditors. The Ratio shows the future sales promotion condition by appropriate use of long term debt and capital. This Ratio is computed by dividing sales by capital employed. This Ratio for NTC for the period of five year is shown in the following table:

Capital Employed Turnover Ratio (CET) = Sales/Total Capital Employed

Capital Employed Turnover Ratio (CET)= Total of Net Worth + Long Term Liabilities

Table 4.10
Calculation of Capital Employed Turnover Ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Total Sales	Capital Employed	CE Turnover	Straight Line Trend
1	2062/63	8852727	20450725	0.43	0.426
2	2063/64	9194297	20707904	0.44	0.451
3	2064/65	11058914	23549578	0.47	0.476
4	2065/66	14751623	27854145	0.53	0.501
5	2066/67	17889310	35343894	0.51	0.526
Average of Working Capital (WC) Turnover				0.476	

Source: Appendix -I II

Straight Line Trend of the Ratio is: $\hat{Y} = 0.4010+0.0250 (X)$

When X=6, $\hat{Y}$ =0.55 {i.e. Expected CET for next year (year=6)}

Where,

Y= estimate of the Capital Employed Turnover Ratio

X= measure of time when base year 2061/62 = 1

From the table shows that the average of the CET Ratio of NTC for past five years was 0.476 times, which is lower than the general standard average of at least 1.00 times for this line of business. Barring a sudden upward swing, the ratio seems to be steadily increasing over the 5-year period. The Ratio ranges from the lowest of 0.43 in F/Y 2062/63 B.S to the highest of 0.53 in 2065/66 B.S. The average Ratio of 0.476 indicates that each rupee of investment in permanent capital is generating sales of just 47.60 paisa. The overall Ratio Trend shows a positive movement of the Ratio over the five year period. While comparing with the average, one finds that in F/Y 2062/63, 2063/64 B.S; the

Ratio is lower than the average and for F/Y 2064/65, 2065/66 and 2066/67 B.S; the Ratio is higher than the average.

The Straight Line Trend fitted on the basis of least square method shows a long run positive growth rate of 0.0250 times per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the volume generated by the permanent capital of the company should increase in coming years.

4.2.3 Leverage Ratios

The short - term creditors like bankers and suppliers of raw materials are more concerned with the firm's current debt paying ability. On the other hand, long term creditors, like debenture holders, financial institutions, etc. are more concerned with the firm's long term financial strength. In fact, a firm should have a strong short as well as long term financial position. To judge the long term financial position of the firm, financial leverage, or Capital Structure Ratios are calculated. These Ratios indicate mix of the funds provided by owners and lenders. As a general rule, there should be an appropriate mix of debt and owners equity in financing the firm's assets.

4.2.3.1 Total Debt Ratio (TDR)

The relationship between creditors' funds and total assets is known as proprietary Ratio. This Ratio measures the proportion of total assets financed by owners' funds. This Ratio intends to show the long-term financial composition/strength of the company. Higher Ratio means high financial risk and lower Ratio means not -proper utilization of leverage benefit. So, an average position between the two extremes is favourable .It is calculated by dividing total liabilities by total assets. The Total Debt Ratio along with its Straight Line Trend of NTC for the past five year period is shown in the following table.

Total Debt Ratio = Total debt / Total assets

Total Debt = Current liabilities + Long term debt

Table 4.11
Calculation of Total Debt Ratio and its straight line trend equation

(Rs. in thousand)

Year Order	Fiscal Year	Total Debt	Total Assets	Total Debt Ratio	Straight Line Trend
1	2062/63	12640965	33080441	0.38	0.410
2	2063/64	14746917	35432582	0.42	0.397
3	2064/65	15665379	39104959	0.40	0.378
4	2065/66	16866833	43529299	0.39.	0.359
5	2066/67	15014439	49371223	0.30	0.340
Average of Total Debt Ratio				**0.378**	

Source: Appendix -I II

Where,
Total Debt= Long Term Liabilities + Current Liabilities and provision
Total Assets= Current Assets+ Fixed Assets+ Investments+ Capital Work in Progress

Straight Line Trend of the Ratio is: $\hat{Y} = 0.4350 + 0.0190(X)$

When X=6, $\hat{Y} = 0.549$ {i.e. Expected CET Ratio for next year (year=6)}

Where,
Y= estimate of the Total Debt Ratio
X= measure of time when base year 2062/63 = 1

From the table, Total Debt to Total Asset Ratio of NTC from F/Y 2062/63 to F/Y 2066/67 B.S is presented. In five years study of the period seems fluctuated .first two year is increasing ,three year 2064/65,2065/66and 2066/67 is decreasing The average ratio for the five t-year period indicates that the creditors have contributed just around 39% of the fund requirement of the

business. It seems that in recent years the Corporation, recognizing the risk and utilizing the surplus profit, has increased the debt. The Straight line trend fitted on the basis of least square method shows a long run growth rate of 0.0190 times per year for this Ratio. If this ratio is to move as per the fitted Trend Line in future, the debt would increase so fast that most of the benefits of leverage can be recognized.

4.2.3.2 Debt Equity Ratio (DE)

Debt to Equity Ratio is another type of measure of financial structure. This Ratio shows the position of total debt relative to the owner"s capital. This relationship between total debt and net worth shows the outsiders' liabilities as a percentage of owners" capital. There is no exact standard norm of this Ratio, but in common practice this Ratio will be good for industries of this sort if it is below 1.5:1. This Ratio is calculated by dividing total debt by net worth. The table given below shows the Debt Equity Ratio of NTC for five years period with the Trend Line in accompanying graph.

Debt Equity Ratio(DE) = Total Debt / Net Worth

Where,
Net worth = Total of equity capital + Reserve and surplus - Deferred expenditure

Table 4.12
Calculation of Debt Equity Ratio and its straight line trend equation
(Rs. in thousands)

Year Order	Fiscal Year	Total Debt	Net worth	Debt Equity Ratio	Straight Line Trend
1	2061/62	12640965	20439476	0.62	0.706
2	2062/63	14746917	20683665	0.71	0.658
3	2063/64	15665379	23549578	0.67	0.610
4	2064/65	16866833	26662465	0.63	0.562
5	2066/67	15014439	35343894	0.42	0.514
Average of Debt Equity Ratio				**0.61**	

Source: Appendix -I II

Straight Line Trend of the Ratio is: $\hat{Y} = 0.7540 - 0.0480 (X)$

When X=6, $\hat{Y} = 0.7534$ {i.e. Expected Debt-Equity Ratio for next year (year=6)}
Where,

Y= estimate of the Debt-Equity Ratio

X= measure of time when base year 2062/63 = 1

The from the table shows that the Total Debt to Net worth Ratio of NTC is increasing year by year. This increase indicates that the organization deliberately wants to increase its financial leverage/risk and shows the management's attitude to content with lever up the capital structure of the organization.. The Ratio ranges from a higher of 0.71 in F/Y 2063/64 B.S to a lower of 0.42 in F/Y 2066/67 B.S. The average is 0.61 which means that for each rupee of equity holder's money, the debt holder's have contributed 61 paisa to finance the firm's operation. This Ratio is lower than average in F/Y 2066/2067 and higher than the average in the first four years of the study period. The average of this Ratio over the study period is clearly much lower than the general industry norm of 1.5:1.

The Straight Line Trend fitted on the basis of least square method shows a long run sizeable positive growth rate of 0.0638 times per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the debt financing level of the company would almost two third the equity financing of the Organization in the coming year. Continuous addition in debt over the study periods followed by marginal increase in total debt in the same periods has primarily caused D-E Ratio to nosedive over the study period.

4.2.3.3 Long Term Debt to Capital employed ratio (LTD TO CE)

The relationship between creditors' funds and firm's capital can also be expressed in terms of another Leverage Ratio, known as LTD to CE Ratio. Here, the just the long term creditors' funds are measured relative with the total capitalization of the firm and not merely with the NW. The total capitalization or capital

employed includes the total explicit cost bearing debt (long term) and shareholders' equity. This Ratio is computed by dividing LTD by CE. The table given below shows the LTD to CE Ratio of NTC for five years of study period. And the figure shows the Trend Line for this Ratio.

Long Term Debt to capital employed ratio = Long Term Debt / Capital Employed

Table 4.13

Calculation of Long - term debt to capital employed ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Long Term Debit	Capital Employed	LTD to CE Ratio	Straight Line Trend
1	2061/62	11249	20450725	0.0006	0.004
2	2062/63	24238	20707904	0.0012	0.007
3	2063/64	0	23549578	0	0.010
4	2064/65	1191680	27854145	0.0428	0.013
5	2066/67	0	35343894	0	0.016
Average of Long Term Debt Ratio				**0.0089**	

Source: Appendix -I V

Straight Line Trend of the Ratio is: $\hat{Y} = 0.0011+0.0030 (X)$

When X=6, $\hat{Y} = 0.019$ i.e. Expected LTD to CE Ratio for next year (year=6)}

Where,

Y= estimate of the LTD to CE Ratio

X= measure of time when base year 2061/62= 1

The table 4.13 shows the fluctuating pattern of ratios over time. The average Ratio of 0.0089 implies that out of total capitalization; negligible amount is financed by permanent debt sources and remaining four-fifth by equity fund. This may imply a good margin of safety to the company lenders point of view. But, from the view point of the owners, the reduction in this Ratio position signifies that the company is not properly utilizing the benefits of the leverage for magnifying the return to the stockholders.

The Straight Line Trend fitted on the basis of least square method shows a long run growth rate of 0.019 times per year for this Ratio.

4.2.3.4 Interest Coverage Ratio(IC):

Interest Coverage (IC) Ratio is one of the most important Coverage Ratio used to test the firm's debt- servicing capacity. This Ratio is computed by dividing EBIT by interest expenses. This Ratio, as the name implies shows how many times the interest charges are covered by EBIT. A higher IC Ratio is desirable, but too high indicates that firm is traditional in using debt and firm is not using enough creditors" securities to the best advantage of shareholders. A lower IC Ratio indicates excessive use of debt or inefficient/weak operational profit. This Ratio for NTC for the period of F/Y2061/62to 2065/66 is calculated as follows.

Interest Coverage Ratio = EBIT / Interest

Table 4.14
Calculation of Interest Coverage Ratio and its straight line trend equation

(Rs. in thousand)

Year Order	Fiscal Year	Interest Exp.	EBIT	IC Ratio	Straight Line Trend
1	2062/63	89942	4640610	51.60	63.202
2	2063/64	57732	4979261	86.25	79.600
3	2064/65	65045	6908772	106.22	95.998
4	2065/66	67142	7950464	118.41	112.396
5	2066/067	93307	10964763	117.51	128.794
Average of Total Debt Ratio				96	

Source: Appendix -I V

Straight Line Trend of the Ratio is $\hat{Y} = 46.8040+163980(X)$

When X=6, $\hat{Y} = 145.192$ {i.e. Expected IC Ratio for next year (year=6)}
Where,

Y= estimate of the Interest Coverage Ratio
X= measure of time when base year 2061/62 = 1

From the table shows the Interest Coverage Ratio of NTC over the study periods. It seems that the Organization has excellent and all time increasing

Coverage Ratios over the period i.e. the debt servicing capacity of NTC seems quite favorable. But this is a good performance in disguise because we can see that the organization is reducing its use of long term debt over the years so fast that the fixed interest burden of the organization becomes almost negligible in the most recent year. The average Interest Coverage Ratio is 96 times which implies that NTC has been able to cover the interest expenses by a good margin of safety. In other words, the Organization seems to be able to earn good operating profit to meet its fixed obligations.

During the study period, the Ratio ranges from a minimum of 51.60 times in F/Y 2061/62 to a maximum of 117.51 times in F/Y 2065/66. In last two years, there has been remarkable improvement in Coverage Ratio but this all is more because of declining interest expenses rather than excellent operating profits. So, the performance of the firm in terms of Interest Coverage Ratio should be judged carefully in this case.

The Straight Line Trend fitted on the basis of least square method shows a long run sizeable positive growth rate of 16.3980 times per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the debt servicing ability of the firm would not be any cause of concern in coming years. Continuous sharp reduction in long term debts over the study periods followed steady increase in operating income over the same periods has primarily caused Interest Coverage Ratio to increase fast over the study period.

4.2.4 Profitability Ratio

A company should earn profits to survive over a long period of time. Therefore, profits are essential for a company. But, then, it does not mean that every action initiated by management of a company should be aimed at maximizing profits. The social consequence of the actions does also matter. So, maximum profit consistent with social responsibility should be the long run objective. It is unfortunate that the word 'profit' is looked upon as a term of

abuse since some firms always want to maximize profits at the cost of employees, customers and society. Except such infrequent cases, it is a fact that sufficient profits must be earned to sustain the operation of the business, to be able to obtain funds from investors for expansion and growth and to contribute towards the social overheads for the welfare of the society.

Profit is the difference between revenues and expenses over a period of time. Profit is the ultimate 'output' of a company, and it will have no future if it fails to make sufficient profits. Therefore, the financial manager should continuously evaluate the efficiency of the company in terms of profits. The profitability Ratio is calculated to measure the operating efficiency of the company. Creditors and owners both are interested in the profitability of the firm. If company is making profits regularly, creditors will also be assured of getting their dues on time.

4.2.4.1 Net Profit Margin (NPM)

The Net Profit Margin measures the relationship between profit and sales and indicates management's efficiency in manufacturing, administering and selling the product. This Ratio is the overall measure of the firm's ability to turn each rupee sales into net profit. A high Net Profit Margin would ensure adequate return to the owners as well as enable the firm to withstand adverse economic conditions. A low Net Profit Margin has the opposite implications. However, a firm with low Net Profit Margin can earn a high rate of return on investment if it has a higher Inventory Turnover. The Net Profit Margin is measured by dividing profit after taxes by sales.

Net Profit Margin = Net Profit after Tax / Sales

Table 4.15
Calculation of net profit margin ratio and its straight line trend equation using net profit after tax as profit

(Rs. in thousands)

Year Order	Fiscal Year	NPAT	Total Sales	NP Margin	Straight Line Trend
1	2062/63	3290117	8852727	0.37	0.346
2	2063/64	3542461	194297	0.39	0.393
3	2064/65	4936647	11058914	0.45	0.440
4	2065/66	5652688	14751623	0.38	0.487
5	2066/67	10871456	17889310	0.61	0.534
Average of Net Profit Margin Ratio				0.44	

Source: Appendix -I V

Straight Line Trend of the Ratio is $\hat{Y} = 0.2990+0.0470(X)$

When X=6, $\hat{Y} = 0.58$ {i.e. Expected NPM for next year (year=6)}

Where,

Y= estimate of the Net Profit Margin Ratio

X= measure of time when base year 2061/62 = 1

The table shows that the average of the NPM Ratio of NTC for past five year was 44%. The Ratio seems to be stable barring over the study period. The average Ratio of 0.44 times indicates that each rupee sales is contributing 44 paisa for rewarding the owners. The overall Ratio Trend shows a small swing in positive direction of the Ratio within the range of 34.60% to 53.40% over the five year period. The computations show that the Net Profit Margin upon sales is favorable. With the low Turnover Ratio, further improvement in NPM is sure to have a positive result on the equity holders' return.

The Straight Line Trend fitted on the basis of least square method shows growth rate of 0.0470 per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the profit margin level of the

company in coming years should remain at stable to the firm currently earning. Continuous increase in the cost composition of the Organization due to civil war during the period is perhaps showing its effect on the profitability of the organization.

4.2.4.2 Modified Net Profit Margin (MNP)

Depending on the concept of profit employed by the company, Net Profit Margin Ratio can be calculated differently. The company's capital structure, non - operating income and non -operating expenses etc. are some factors that affect the earnings by its operation. So among different factors, capital structure is an important factor which can bring important variation in this ratio and can make comparison distorted. Because the conventional measure of net profit margin computed above is affected by the firms financing policy. So, for a true comparison free of biases of the leverage ratio variation, profit should also include the financing charges. Thus, the revised net profit margin can be computed in the following way:

Net Profit Margin = (NPAT + Interest after tax) /Sales

Table 4.16
Calculation of net profit margin ratio and its straight line trend equation using earnings after tax + interests after tax as profit

(Rs. in thousands)

Y. O	F Year	NPAT	Int. AT	NPAT+Int.AT	Total Sales	NP M	Straight Line Trend
1	2062/63	3290117	89942	3380059	8852727	0.382	0.345
2	2063/64	3542461	57732	3600193	9194297	0.392	0.400
3	2064/65	4936647	65045	5001692	11058914	0.452	0.445
4	2065/66	5652688	67142	5719830	14751623	0.388	0.491
5	2066/67	10871456	93307	10964763	17889310	0.613	0.537
Average of Net Profit Margin Ratio						**0.445**	

Source: Appendix -I V

Straight Line Trend of the Ratio is: $\hat{Y}$ =0.3080+0.0458 (X)

When X=6, $\hat{Y}$ = 0.583{i.e. Expected Modified NPM Ratio for next year (year=6)}

Where,

Y= estimate of the Modified NPM Ratio

X= measure of time when base year 2062/63 = 1

If we eliminate the effect of financing charges from the Net Profit Margin, the Trend Line ranges between a highest of 61.30% in F/Y 2066/67 to 38.20% in F/Y 2062/63 B.S. Besides these, the Modified Net Profit Margin Ratio has similar strengths and weaknesses as general Net Profit Margin Ratio calculated above.

4.2.4.3 Operating Expenses Ratio (OE)

Operating expenses constitute service/product costs, administrative costs and selling costs. The Operating Expenses Ratio indicates the average aggregate variation in expense. In general, higher Operating Expenses Ratio means inefficiency due to higher operating cost relative to Sales. A lower Operating Expenses Ratio is favorable since it will leave a higher amount of operating income to meet interest, taxes, bonus, dividend and plough back of profit in the firm. It is measured by dividing operating expenses by sales.

Operating Expenses Ratio(OE) = Operating Expenses / Sales

Table 4.17

Calculation of operating expenses ratio and its straight line trend equation

(Rs. in thousand)

Year Order	Fiscal Year	Opt Exp.	Total Sales	Opt. Expenses Ratio	Straight Line Trend
1	2062/63	426214430	5928648	0.416	0.4242
2	2063/64	2891309	6555992	0.441	0.4288
3	2064/65	3258571	7669283	0.425	0.4334
4	2065/66	3991863	8855034	0.451	0.438
5	2066/67	3990361	9194297	0.434	0.4426
Average of Operating Expenses Ratio				**0.4334**	

Source: Appendix -I V

Straight Line Trend of the Ratio is: $\hat{Y} = 0.4196 + .0046\,(X)$

When X=6, $\hat{Y} = 0.4472$ {i.e. Expected OE Ratio for next year (year=6)}

Where,

Y= estimate of the Operating Expense Ratio

X= measure of time when base year 2062/63 = 1

From the table shows that the average OE Ratio of NTC for past five years is 43.34% which is lower than the general standard average of around 50% for this line of business. . The Ratio seems to be stable but slightly in increasing trend as it ranges from a lower of 41.6% in F/Y 2062/63 to 45.10%in F/Y 2065/66 B.S. The average Ratio of 43.34 indicates that the firm incurs a cost of 43.34paisa for each rupee of sales it generates. Barring F/Y 2062/63, the Ratio is increasing on year to year basis.. Though the operating expense Ratio is relatively stable over time, but for the last 3-4 years, the Ratio is increasing continuously which should be the real cause of concern for the NTC. Unless the firm takes measures to tame the operating expenses, the situation may go out of control.

The Straight Line Trend fitted on the basis of least square method shows a long run positive growth rate of 00.46% per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the cost of operation of NTC should increase slowly but surely. Continuous increase in input prices due to inflation and the security situation not accompanied by the equal sales increase has brought this position.

4.2.4.4 Return on Assets Ratio (ROI)

Here the profitability is measured in terms of profit and the assets. The ROA is also called return on investment (ROI). The conventional approach of calculating ROA/ ROI is to divide NPAT by investment/assets. Assets represent pool of funds supplied by shareholders and lenders, while NPAT represents residue income of the owners. Therefore, it is conceptually unsound to use NPAT in the

calculation of ROA. Secondly, NPAT is affected by the capital structure. It is therefore more appropriate to use the following formula to compute the ROA/ROI.

Return on Assets = (NPAT + Interests after tax) / Total assets

NPAT = Net profit after tax

Table 4.18
Calculation of Return on Assets ratio and its straight line trend equation
(Rs. in thousands)

Year Order	Fiscal Year	NPAT	Interest AT	NPAT Plus Interest AT	Total Assets	ROA	Straight Line Trend
1	2062/63	3290117	89942	3380059	33080441	0.10	0.082
2	2063/64	3542461	57732	3600193	35432582	0.10	0.109
3	2064/65	4936647	65045	5001692	39104959	0.13	0.136
4	2065/66	5652688	67142	5719830	43529299	0.13	0.163
5	2066/67	10871456	93307	10964763	49371223	0.22	0.190
Average of Return on Assets						0.14	

Source: Appendix -I V

Straight Line Trend of the Ratio is: $\hat{Y} = 0.0550+0.0270\ (X)$

When X=6, $\hat{Y} = 0.22$ {i.e. Expected ROA Ratio for next year (year=6)}
Where,

Y= estimate of the Return on Assets Ratio
X= measure of time when base year 2062/63 = 1

From the table shows that the average ROA of NTC for the study period is 14% The Ratio seems to be a almost stable as it ranges from 22% in F/Y 2066/67 to 10% in F/Y 2062/63 and 2063/64 B.S. But the real problem is that the actual trend of this Ratio is showing upward movement particularly in the most recent years. The average Ratio of 14% indicates that each 100 rupees of investment in assets is generating a profit of Rs. 14 The actual Trend Line is positive direction.

The Straight Line Trend fitted on the basis of least square method shows a long run is going to positive growth rate 0.027 %per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the total assets return level of the company should further progress in coming years.

4.2.4.5 Return on Capital Employed (ROCE)

The relationship between the after tax return earned by both equity holder and lender and the capital they provided indicates the efficiency of management for capital utilization. The Ratio is similar to the ROA expect in one respect. Here the profits are related to capital employed. The funds employed in net assets or the funds financed by permanent sources are known as capital employed. This Ratio shows the effectiveness of management in generating profit by the utilization of available capital. Higher the Ratio, the more efficient is the use of capital employed. It is calculated as follows:

ROCE = (NPAT + after tax Interests on long-term debt) / Capital Employed

Table 4.19
Calculation of Return on Capital Employed ratio and its straight line trend equation

(Rs. in thousand)

Year Order	Fiscal Year	NPAT	Interest AT	NPAT Plus Interest AT	Capital Employed	ROACE	Straight Line Trend
1	2062/63	3290117	89942	3380059	20450725	0.17	0.150
2	2063/64	3542461	57732	3600193	20707904	0.17	0.182
3	2064/65	4936647	65045	5001692	23549578	0.21	0.214
4	2065/66	5652688	67142	5719830	27854145	0.21	0.246
5	2066/67	10871456	93307	10964763	35343894	0.31	0.278
Average of Return on Capital Employed						0.21	

Source: Appendix - V

Straight Line Trend of the Ratio is: $\hat{Y} = 0.1180+0.0320 (X)$

When X=6, $\hat{Y} = 0.310$ i.e. Expected ROCE Ratio for next year (year=6)}

Where,

Y= estimate of the ROCE Ratio

X= measure of time when base year 2062/63 = 1

The above figures show that the average ROCE of NTC for the study period is 21% As is the case with ROA, this is good if we compare this return with the cost of debt. But the past trend of this Ratio does not show any clear downward trend as it is the case with ROA. Therefore, it can be safely said that the return to the long term stakeholders are better than the return earned by its assets assuming that cost of the short -term sources are negligible.

The average Ratio of 21% indicates that each rupee of long term fund employed by the Organization is generating after tax profit of 21 paisa.

The Straight Line Trend fitted on the basis of least square method shows a long run negligible positive growth rate 0.0320or 3.2 % per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the return level of the long term capital employed by the company should increase slightly in coming years.

4.2.4.6 Return on Equity (ROE)

The Return on Shareholders' Equity (ROSE) {or simply Return on Equity (ROE)} indicates how well the company's management is able to provide return to its owners. The return on common stock is not fixed. The residue of the earnings, on which the stockholders have claim, may be distributed to them or retained in the business. Nevertheless, the net profit after taxes represents their return. The shareholders' equity includes the total of equity capital, reserve & surplus minus deferred expenditure. ROE is regarded as an important measure because it reflects the productivity of shareholders' capitals

well as the operational efficiency of management. We use the following formula to calculate ROE.

Return on Equity (ROE) = Net profit after tax (NPAT) / Net worth

Table 4.20

Calculation of return on equity ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	NPAT	NET WORTH	ROE	Straight Line Trend
1	2062/63	3290117	20439476	0.161	0.145
2	2063/64	3542461	20683665	0.171	0.179
3	2064/65	4936647	23549578	0.210	0.212
4	2065/66	5652688	26662465	0.212	0.246
5	2066/67	10871456	35343894	0.308	0.279
Average of Return on Equity (ROE) Ratio				**0.212**	

Source: Appendix - V

Straight Line Trend of the Ratio is: $\hat{Y} = 0.1119+0.0335 (X)$

When X=6, $\hat{Y} = 0.313$ {i.e. Expected ROE Ratio for next year (year=6)}

Where,

Y= estimate of the Return on Equity Ratio

X= measure of time when base year 2062/63 = 1

From the table shows the ROE of NTC for past 5 years. The average Ratio for the 5 -year period is around 21.2% which indicates that the equity holders of NTC earned 21.2 paisa of return on their investment of Re. 1.00 over the last 5 years, on average. It is obvious from the table that after the initial 2 years of the study period the average ROE for the final of the 3 years has been satisfactory movement toward positive. NTC has to take measures to make the Ratio more stable in future which should increase the confidence of the owners.

The Straight Line Trend fitted on the basis of least square method shows a long run positive growth rate of3.35% per year for this Ratio. If this Ratio is to move as per the fitted Trend Line in future, it can be expected that the equity

holders' return would further go slightly upward from its current level.

4.3 Statistical Analysis

4.3.1 Correlation and Regression Analysis

Correlation Analysis intends to measure the relationship between two variables. This analysis describes not only the magnitude of relationship but also its direction. Regression Analysis intends to use the relationship between the known variables and the unknown variables to estimate and predict the values of unknown one. Correlation & Regression analysis of Gross Domestic Product (GDP) and Sales Revenue; Investment (Total Asset) and Profit ; Sales Revenue and Cost; Investment (Total Asset) and Sales Revenue are presented in this study.

4.3.1.1 Correlation & Regression analysis of Gross Domestic Product (GDP) and Sales Revenue

The relationship between Gross Domestic Product (GDP) and Sales Revenue is measured and tested by Karl Pearson's Co-efficient of Correlation. A positive Correlation here would imply that the company maintains a stable growth in its revenue with the growth in the economy as a whole. Insignificant or negative value would point out the weakness of management to expand and grow the Organization in the tune of the economic growth. The Regression Equation would develop a function using which we can predict what the likely Sales Revenue will be in the coming years with a given GDP estimates.

Table 4.21
Computation of Correlation & Regression Co-efficient from the variables GDP and Sales Revenue

(in ten millions of Rs.)

Fiscal Year	GDP Rs (X)	Sales Rs (Y)	X_2	Y_2	XY
2062/63	48100.4	885.27	2313648480	783702.9729	42581841.11
2063/64	49773.9	919.43	2477441121	845351.5249	45763616.88
2064/65	51448.5	1105.89	2646948152	1222992.692	56896381.67
2065/66	53168.2	1475.16	2826857491	2176097.026	78431601.91
2066/67	56012.4	1788.93	3137388954	3200270.545	100202262.7
Total	258503.4	6174.68	13402284199	8228414.76	323875704.3
				r =	0.97604
				PE=	0.014282723

Source: Appendix - V

Summary of Computations
r = 0.97604

PE = 0.014282723

|r| > PE

|r| > 6 x PE & |r| >0.5

The value of r is found to be 0.98 (see appendix:1) which means that there exists a high degree of positive Correlation between GDP and Sales Volume i.e. the two variables increase/decrease strongly in the same direction. The value of r is far greater than 6 times the probable error, which means that there is clear evidence of significant association between these two variables. The computed value of r indicates a cause and effect relationship.

The regression co-efficient is -5165.61. The regression equation of Sales (Y) on GDP (X) is given by

$\hat{Y}$ = -5165.61+0.1238* (X)

The value of b is found to be 0.1238 (see appendix:2), which means that 1 unit change in GDP would result in 0.1238 unit change in the Sales Revenue of

NTC. Given the forecast of GDP of the country for future by the economists, we can use the above developed equation to estimate what the revenues of the NTC would likely to be in the coming years and plan accordingly for future sales.

4.3.1.1 Correlation & Regression Analysis of Investments (Total Assets) and Profit

The relationship between Investment and Profit is measured and tested by Karl Pearson's Co-efficient of Correlation. A positive Correlation here would imply that the Corporation maintains a stable growth (or decline) in its Profit in line with its Investment increase (or decrease). Insignificant or negative value would point out the weakness of management to keep the Profit in line with the Investments i.e. it points to the fact that the Corporation's expansion may not be giving desirable results. The Regression Equation would develop a function using which we can predict what the size of profit would be in the coming years with a planned additional investment in Assets.

Table 4.22
Computation of Correlation & Regression co - efficient from the variables investments and profit

(Ten million)

Fiscal Year	Investments (X)	Profit (Y)	X2	Y2	XY
2062/63	391.0290728	329.0117	152903.7358	108248.6987	128653.14
2063/64	333.8733695	354.2461	111471.4269	125490.2994	118273.339
2064/65	415.6948417	493.6647	172802.2014	243704.836	205213.8693
2065/66	488.3855717	565.2688	238520.4666	319528.8163	276069.1261
2066/67	837.01821	1087.1456	700599.4839	1181885.556	909960.6641
Total	2466.001066	2829.3369	1376297.315	1978858.206	1638170.139
				r =	0.98707
				PE=	0.007751949

Source: Appendix - V

Summary of Computations
r = 0.98707
PE = 0.007751949
|r| > PE
|r| > 6 x PE & |r| >0.5

The value of r is found to be 0.99(see appendix:3), which implies that there exists a high degree of positive Correlation between Total Investments and Total Profit. This means the two variables move in the same direction; i.e. if Total Investment increases then Total Profit also increase and vice-versa. The value of r is greater than 6 times the probable error and higher than +0.5; means that there is significant degree of positive Correlation between the variables i.e. the value of r is significant. Hence, the relationship between Total Investments and Total Profit is that of a cause and effect one.

The regression co-efficient is -182.766 The regression equation of Profits (Y) on Investments (X) is given by

$\hat{Y}$ = -182.766+ 1.5165* (X)

The value of b is found to be 1.5165(see appendix:4), which means that, on average, 1 unit change in Total Investment (Asset) would result in 1.5165 unit change in the Net Profit of NTC. Given the capital budget plan of the NTC for coming years, we can use the above Equation to estimate what the profit of the NTC would likely to be in the coming years.

4.3.1.2 Correlation & Regression Analysis of sales revenue and Total Cost

The relationship between Sales Revenue and Cost is measured and tested by Karl Pearson's Co-efficient of Correlation. A positive Correlation here would imply that most of the Costs of NTC are of variable nature. A low positive Correlation would imply that the average Cost would go down as the volume expands. A negative Correlation, which is highly unlikely, would point out that Cost of NTC decreases with the increase in Sales Volume and vice versa. The Regression Equation would develop a function, with the help

of which, we can predict what the amount of Cost would be in the coming years with various predicted Sales Levels.

Table 4.23
Computation of Correlation & Regression co - efficient from the variables sales revenue and total cost

(In million of Rs.)

Fiscal Year	Total Sales Revenue (X)	Total Costs (Y)	X_2	Y_2	XY
2062/63	885.2727	430.2059609	783707.7534	185077.1688	380849.5926
2063/64	919.4297	427.2768204	845350.9732	182565.4813	392850.9988
2064/65	1105.8914	421.5188007	1222995.789	177678.0993	466154.0166
2065/66	1475.1623	676.8301882	2176103.811	458099.1037	998434.3771
2066/67	1788.931	701.7854136	3200274.123	492502.7667	1255445.682
Total	6174.6871	2657.617184	8228432.449	1495922.62	3493734.667
				r =	0.94451
				PE=	0.032550199

Source: Appendix - V

SUMMARY OF COMPUTATIONS
r = 0.994495910
PE = 0.00331
|r| > PE
|r| > 6 x PE & |r| >0.5

The value of r is found to be 0.99(see appendix:5), which implies that there exists a high degree of positive Correlation between Sales Revenue and Cost. This means the two variables move in the same direction; i.e. if Sales Revenue increases then Cost also increases, and vice-versa. The value of r is greater than 6 times the probable error and higher than +0.5; means that there is significant degree of positive Correlation between the variables i.e. the value of r is significant. Hence, the relationship between Total Costs and Total Sales Revenue is that of a cause and affect one.

The regression co-efficient is 7185.10. Hence the regression equation of Costs (Y) on Sales (X) is given by,

$\hat{Y}$= 7185.10+ 0.09679 *(X)
The value of b is found to be 0.09679 (see appendix:6), which means that, on

average, 1 rupee change in Volume (Sales) would result in 9.68 paisa change in the Total Cost of NTC. Given

4.4 Major Findings

The Sales forecasts of the NTC for coming years, we can use the above Equation to estimate what the Costs of the NTC would likely to be in the coming years.

4.4.1 Ratio Analysis

Ratio is said to tell more than what is told alone by absolute values comprising the Ratio. Indexing of two items tell more than the items tell together. All Ratios computed in chapter four try to measure the financial position and/or performance of NTC, the core subject matter of this study. The analysis becomes irrelevant if the corrective actions based on the suggestion do not make difference.

4.4.1.1 Liquidity Position

This research has used two short-term liquidity indicator Ratios. On the basis of these Ratios, one should say that the overall short -term solvency position of NTC is satisfactory. Perhaps, because of the service nature of its operation, NTC has maintained low level of inventory compared with other current assets components. Hence, the difference between Current Ratio and Quick Ratio is negligible. Though both these ratios decreasing beyond 2:1. The nominal negative growth rate shown by the Straight Line Trend is not fair so the actual trend should not be let to increase this way for long time. Payment of short term dues and obtaining short term loans under favorable terms and conditions should not be of problem to the NTC in coming years.

4.4.1.2 Turn over position

This research has used 7 Turnover Ratios to judge the efficiency of the component/aggregate of the resources used by the firm in generating volume.

The Average Age of Inventory and the Average Collection Period are simply mirror images of Inventory Turnover and Debtor Turnover Ratios. Conclusions are solely based on historical Straight Line Trend, Actual Trend and historical average. The resources we consider about, current assets have the poorest performance. Though inventory seems to have good utilization rate compared to other current assets, it is because of the inventory's small size NTC carries. So NTC should be concerned about its current assets investment in future. As the increase in sales is not accompanied proportionally by the rate of increase in working capital. So There seems to be laxity in management in efficiently mobilizing the working capital. Fixed Assets Turnover/utilization seems to be improving over time. But it is still far below 1.00 mark which should make management not to be complacent. The performance of current assets in terms of volume generation was so poor over time that the improvement in performance of fixed assets could not compensate it. That's why the Total Assets Turnover is poor and fluctuating. So, overall, the asset utilization

position of NTC is termed poor as well as deteriorating over the five years of study period. NTC should pay constant/close attention on the desirability of the current size of its current assets investment. If the company can improve asset utilization, it can charge cheaper rates for its service which would be vital in coming days because of the competition from the private sector permitted by the government under its liberalization and open market policy. Its utilization trend needs to be improved if the Organization has to obtain better return on its resources. We see that, on average, it takes five months to collect a typical account from a customer.

4.4.1.3 Long term Solvency Position

This research has, in effect, used 3 Leverage Ratios to judge the extent to which NTC has been financed with debt and bear fixed obligations. TD to TA and TD to TE Ratios are essentially the same measure. It seems that NTC has kept the policy of increasing its debt financing proportion gradually over the study period. Overall, debt financing proportion increase from approximately slightly increase of the total assets. The amount of long -term

debt used by NTC has decreasing. Capital employed now only consists of equity.

4.4.1.4 Profitability Position

This research has used 6 Profitability Ratios to judge the overall effectiveness of the firm. The first three Ratios use sales as a base to measure performance, while the other three use investment/capital as a base to measure performance. The profitability position shown by the first type of Ratios seems good. The profit margin are good, operating costs proportion are minimum. But the trends are not satisfactory enough. The cause may be the destruction of infrastructure during the civil war and internal problems of the concern. Operating Expenses Ratio Trend is maintaining its stage up and Modified Net Profit Margin. It means that operating expenses as well as other expenses are slowly going up on average over the study period. To reverse this trend, the Organization needs to put stringent cost control measures in place. The profitability of assets/capital is also poor. With so huge investment, the average return on assets can safely be termed as poor. Because of the cheaper debt source, the return to equity holder could be magnified on average over the study period. Because the Organization is reducing sharply its long term debt financing (interest bearing) sources, the shareholders of the Organization can expect to receive lower rate of return in future on their investments. The after tax return on total assets is also going in downward trend according to least square method. One of the main reasons that is said to have adverse effect on its profitability during the most recent years is the insurgency, which has destructed many of its key structures all over the country and has resulted in drastic decline in operational profit. This argument is not totally valid. The Organization has not seem the provisions of to buy enough insurance to cover destroyed assets Competition is also going to be a major factor for the downturn of the Organization, if NTC does not get alert on time and take careful and measured actions. The way it behaved to its customers under monopoly is certainly not going to work under competitive market. Secondly, given the competitors mainly concentrated around big cities, the Organization subsidizing its rural operation through urban profit is going to face competition with such a severe constraint.

Solvency position, short-term as well as long -term, is good and the direction of the Ratios which indicate these positions is positive particularly from the viewpoint of the lenders. But when it comes to resource employment position, it can be safely said that the turnovers generated by the assets are not satisfactory. Utilization of working capital in particular is very poor. Profitability on the operational front seems fairly good but with such low turnover, this cannot be termed excellent. Moreover, the negative trend of profit on operation makes the situation even more disappointing. The low rate of profit on assets/capital accompanied by negative growth rate on these Ratios shows that asset returns are poor on aggregate. Investments decisions are weak, operational efficiency are weak, only financial position / management is good. But even the financial management from the viewpoint of the equity holder can be termed unsatisfactory because of the reducing leverage benefits to the Share holders. So, on all fronts, NTC need to have a fresh re- look so that it can run smoothly in coming days of the 1st century.

4.4.2 Regression and Correlation Analysis

Regression and Correlation Analysis are used to see the relationship between the variables that does not point to the past position and performance but to the future prospect based on which planning for better performance can be done. We computed Correlations and Regression Equations between three pairs of variables. Correlations between all the pairs of variables are highly positive as per our anticipation. Because the Correlations are highly positive and significant, one can safely use the Regression Equations to forecast the value of dependent variables based on the anticipated value of independent variable.

GDP and sales indicate the relationship of volume with that of the expansion of economy. The higher degree of Correlation between GDP and sales points out to the fact that the volume of NTC is going to be up as the nation become more and more affluent. This rate of change in volume as shown by the Regression Coefficient 'b' is approximately 1.4 paisa per rupee of GDP

increased. With such a low turnover position, if the company can achieve the increased sales without investing much on assets, the overall profitability position should improve.

The relation between the Investment and profit indicates the profitability on investment. High and significant Correlation between investment and profit points to the fact that additional investment, on aggregate; by rupee 1 will lead to increase in profit by just 10 paisa. So, a typical investment project, NTC is expected to initiate, can expect to earn around 10% Return on Investment, approximately equal to the 5 years average ROI.

The relationship between sales and investment indicates turnover. The sales and investment are highly positively correlated means that an increase in investment would definitely increase sales. But as indicated by the Regression Coefficient 'b' on average, 1 rupee change in Volume (Sales) would result in 9.68 paisa change in the Total Cost of NTC. Next time when NTC considers further investment, the company should see that whether the turnover or volume generated by the investment is sufficient or not.

On sum, the Correlation and Regression Analysis backs the same conclusion we drew under Ratio Analysis. Profitability on investment is around 10%, which we already termed poor in Ratio Analysis. As of the relation between sales and investment, The company should see that whether the turnover or volume generated by the investment is sufficient or not. The most encouraging position of the firm as shown by the relationship between GDP and sales is that the size of firm's sales volume runs parallel with economic (GDP) growth.

CHAPTER V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Telecommunication is an inevitable infrastructure of development to all countries. It is considered as prerequisite for the other dimension of development. In Nepal the need of telecommunication services are primarily fulfilled by Nepal Telecom.

Introduction of liberalized economic policy in Nepal gradually facilitated the private sector investment as a result multinational companies also showed their presence. Further more public enterprises started to be privatized. Such trend couldn't also remain intact without influencing Nepal Telecommunications Corporation. Hence Nepal Telecommunications Corporation has been changed to Nepal Dorsanchar Company limited in 2061 BS under the company act. It's popularly known commercial name is "Nepal Telecom". Although Nepal Telecom has been recently established under the company act and its 100% ownership has been held by Nepal Government by receiving the entire investment from government.

As financial health is the key indicator of the success and failure of the organization. Different financial indicator show to what extent would the organization is capable to meet the expectations of various stakeholders of the company. In the light of this main issue of the study has focused to evaluate the financial performance of Nepal Telecom on the basis of latest available information. Financial Analysis and planning function is not a decision-making in itself rather it is an ancillary service, which helps in planning for those two decisions and evaluating the outcome of those two decisions and recommending necessary rectifying measures.

To make the study significant, ratio analysis and trend analysis, income and expense analysis, correlation and regression analysis have been carried out

regarding the major variables of NTC. Before the analysis of such financial and statistical tools the details of the same has been explained in the chapter namely literature review and for the mathematical calculations research methodology has been carried out. On basis of the analysis we will conclude our findings and try to provide some relevant recommendations to the management of NTC so that they can apply those recommendations if they deem appropriate.

Nepal Telecom as a state owned enterprise has involved in providing the cost effective and people friendly telecom services in the nation since long time. The organization has enjoyed monopoly in the telecom market and got policy privilege during long period. Even thought, with the upcoming of private sectors telecom, Nepal Telecom has been able to maintain its profit growth. Nepal Telecom is financially performing well. It has able to use its assets in an effective manner providing a huge return to the government.

5.2 Conclusion

Nepal Telecom has better performance than other state owned enterprise of Nepal, in the sense that it is such a state owned enterprise, which is operating under the net profit margin since the establishment of NTC. Financial statement of the company shows that the Gross Revenue as well as Net Profit has increased to a tune of higher rate. The overall short -term solvency position of NTC is satisfactory. Perhaps, because of the service nature of its operation, NTC has maintained low level of inventory compared with other current assets components.

There seems to be negligence in management in efficiently mobilizing the working capital. Fixed Assets Turnover/utilization seems to be improving over time. But it is still far below 1.00 which should make management not to be complacent. The performance of current assets in terms of volume generation was so poor over time that the improvement in performance of fixed assets could not compensate it. That's why the Total Assets Turnover is poor and fluctuating.

So, overall, the asset utilization position of NTC is termed poor as well as deteriorating over the five years of study period. NTC should pay constant/close attention on the desirability of the current size of its current assets investment. If the company can improve asset utilization, it can charge cheaper rates for its service which would be vital in coming days because of the competition from the private sector permitted by the government under its liberalization and open market policy.

Solvency position, short-term as well as long -term, is good and the direction of the Ratios which indicate these positions is positive particularly from the viewpoint of the lenders. But

When it comes to resource employment position, it can be safely said that the turnovers generated by the assets are not satisfactory.

Utilization of working capital in particular is very poor. Profitability on the operational front seems fairly good but with such low turnover, this cannot be termed excellent. Moreover, the negative trend of profit on operation makes the situation even more disappointing. The low rate of profit on assets/capital accompanied by negative growth rate on these Ratios shows that asset returns are poor on aggregate.

The relation between the Investment and profit indicates the profitability on investment. High and significant Correlation between investment and profit points to the fact that additional investment, on aggregate; by rupee 1 will lead to increase in profit by just 10 paisa. So, a typical investment project, NTC is expected to initiate, can expect to earn around 10% Return on Investment, approximately equal to the 5 years average ROI.

Overall the company is able to perform well. The general faith of people on the government telecom will drive the profit of the business in upward trend. Because of its low price of calls, and effective reach it will prove to be

one of the best earning company for the government. If the management is managed properly, this company should and will provide a huge return to the government and its shareholders (once the company go public).

5.3 Recommendations

The following recommendations are in order NTCs management on improving its financial position and performance addressed by this study.

- Though the average cost of producing and selling services to the customers of this Organization is satisfactory, the increasing trend of cost should be a cause of concern. With such a low Turnover Ratio of the Organization's assets, the management should be careful not to let the Profit Margin go down. This can be achieved either by increasing price charged to the customer or by reducing cost. Given the competition that is forthcoming in the recent years, the Organization should concentrate itself seriously on second alternative (i.e. reducing cost).

- It seems that the Organization is losing the benefit of the leverage over time, particularly in the most recent years. A profitable company like NTC should not hesitate to use the cheaper debt source to magnify the Return of Equity. So, the management should consider using long-term debt when financing new expansion projects in the future.

- NT being a service oriented firm does not need s higher liquidity position. Thus company should stabiles its current ratio near 1:1. Large amount of fund tied up in current assets may bypass the opportunity cost so it is better to invest such excess amount in fixed assets to increase its capacity.

- Average collection period of NTC is very poor. On average, it takes more than 4 months to collect a typical account, so the collection effort needed to be intensified by providing attractive packages to the customers, providing more authority and accountability to the concerned officers so that ACP can be reduced to more manageable level.

- It seems that the working capital is not managed properly in generating sales volume. The excess investment in working capital is not properly utilized. So NTC can think of reducing its current assets components by using cash to expand its equipment capacity or reducing operating expenses.

- Though Fixed Assets Turnover is increasing over time, it is still far below 1.00 times barrier. So, NTC management should be careful in future not to undertake capital intensive investment projects if they fail to generate sufficient volume. And the Fixed assets Turnover could be increased to some extent if the company runs in installed capacity of the equipment as far as possible.

- Given the high risk perception on most part of the countryside where the key communication towers and related structures are situated, NTC should buy enough insurance for all of these structures. So that it does not suffer from huge losses even if the facilities/structures are destroyed. The past experience of the management of not buying enough insurance for those valuable structures should have taught a good lesson to them.

- The investment appraisal criteria should be overhauled to make it more scientific so that it weighs all relevant factors before making further investment decision so that the project do not provided lesser return than cost of capital.

- Set up pro-forma balance sheet and income statements to use these as a general guideline to determine the size/proportion of investment and financing items of balance sheet and operational items of the income statement, so that a standardization and rationalization in operation, financing and investment can be made.

The Organization should impart professional management on its top hierarchy. Given the tough competition emanating from the private sector, the Organization should resist unnecessary political interferences in managing its day to day operations. It should seek freedom to decide on its own under the broad guidelines given by the government.

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APPENDIX -I

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{[N\sum X^2 - (\sum X)^2]\,[N\sum Y^2 - (\sum Y)^2\,]}}$$

$$r = \frac{5 \times 323875704.3 - 258503.4 \times 6174.68}{\sqrt{5 \times 134022841999 - (258503.4)^2} \times \sqrt{5 \times 8228414.76 - (6174.68)^2}}$$

$r = 0.97604$

Calculation of probable error,

$$PE = \frac{0.6745(1 - r^2\,)}{\sqrt{N}}$$

$$PE = \frac{0.6745\,[1 - (0.97604)^2\,]}{\sqrt{5}}$$

$PE = 0.014282723$

APPENDIX –II

Regression co-efficient of GDP and Sales:

$$b = \frac{N\Sigma XY - \Sigma Z\Sigma Y}{N\Sigma X^2 - (\Sigma X)^2}$$

$$b = \frac{5 \times 3238757043 - 258503.4 \times 6174.68}{5 \times 13402284199 - (258503.4)^2}$$

b = 0.1238

$$a = \frac{\Sigma Y}{N} - b \times \frac{\Sigma X}{N}$$

$$a = \frac{6174.68}{5} - 1.1238 \times \frac{258503.4}{5}$$

a = - 5165.61

Hence the regression equation of Sales (Y) on GDP (X) is given by

$\hat{\mathbf{Y}}$ = -5165.61+ 0.1238***(X)**

APPENDIX –III

Co-efficient of Correlation of Investment and Profit:

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{[N\sum X^2 - (\sum X)^2]\,[N\sum Y^2 - (\sum Y)^2]}}$$

$$r = \frac{5 \times 1638170.139 - 2466.001066 \times 2829.3369}{[\sqrt{5 \times 1376297.315 - (2466.001066)^2} \times \sqrt{5 \times 1978858.206 - (2829.3369)^2}]}$$

r = 0.98707

Calculation of Probable error,

$$PE = \frac{0.6745(1 - r^2)}{\sqrt{N}}$$

$$PE = \frac{0.6745\,[1 - (0.98707)^2]}{\sqrt{5}}$$

$$PE = 0.007751949$$

APPENDIX -IV

Regression co-efficient of Investment and Profit:

$$b = \frac{N\Sigma XY - \Sigma Z\Sigma Y}{N\Sigma X^2 - (\Sigma X)^2}$$

$$b = \frac{5 \times 1638170.139 - 2466.001066 \times 2829.3369}{5 \times 1376297.315 - (2466.001066)^2}$$

b = 1.5165

$$a = \frac{\Sigma Y}{N} - b \times \frac{\Sigma X}{N}$$

$$a = \frac{2829.}{5} - 1.5165 \times \frac{2466.001066}{5}$$

$$a = 182.0766$$

APPENDIX –V

Co-efficient of Correlation of Sales Revenue and Total Cost:

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{[N\sum X^2 - (\sum X)^2]\,[N\sum Y^2 - (\sum Y)^2\,]}}$$

$$r = \frac{5 \times 3493734.667 - 6174.6871 \times 2657.617184}{[\sqrt{5 \times 8228432.449 - (6174.6871)^2} \quad \times \sqrt{5 \times 149522.62 - (2657.617184)^2}]}$$

$$r = 0.94451$$

Calculation of Probable error,

$$PE = \frac{0.6745(1 - r^2\,)}{\sqrt{N}}$$

$$PE = \frac{0.6745\,[1 - (0.0.94451)^2\,]}{\sqrt{5}}$$

$$PE = 0.032550199$$

APPENDIX –VI

Regression co-efficient of sales revenue and total coast

$$b = \frac{N\Sigma XY - \Sigma Z\Sigma Y}{N\Sigma X^2 - (\Sigma X)^2}$$

$$b = \frac{5 \times 3493734.667 - 6174.6871 \times 2657.617184}{5 \times 8228432.449 - (6174.6871)^2}$$

b = 0.3511

$$a = \frac{\Sigma Y}{N} - b \times \frac{\Sigma X}{N}$$

$$a = \frac{2657.617184}{5} - 0.3511 \times \frac{6174.6871}{5}$$

a = 97.9323

Appendix

DISCRIPTION OF PARTICULARS AS PER FINANCIAL STATEM

TOTAL CURRENT ASSETS	*TOTAL OF CURRENT ASSETS AND LOANS & ADVANCE*
TOTAL FIXED ASSETS (NET)	*TOTAL OF FIXED ASSETS (NET), CAPITAL WORK - IN -*
TOTAL ASSETS	*TOTAL CURRENT ASSETS PLUS TOTAL FIXED ASSETS*
TOTAL CURRENT LIABILITIES	*TOTAL OF CURRENT LIABILITIES AND PROVISIONS*
TOTAL LONG - TERM LIABILITIES	*TOTAL OF LOANS FROM GOVT. OF NEPAL AGAINST…*
TOTAL NET WORTH	
TOTAL CAPITAL EMPLOYED	*TOTAL OF EQUITY CAPITAL, RESERVE & SURPLUS MI*
TOTAL OPERATING REVENUE (SALES) TOTAL REVENUE	*TOTAL OF CURRENT LIABILITIES AND PROVISIONS*
TOTAL OPERATING EXPENSES	*TOTAL OF EXPENDITURE MINUS INTEREST ON LOAN,*
EMPLOYEE BONUS AND INCENTIVE PACKAGE	*AS PER INCOME STATEMENT*
EBIT	*NET PROFIT BEFORE TAX PLUS INTEREST ON LONG -*
INTEREST ON LONG - TERM DEBTS	*TOTAL OF INTEREST ON LOAN AS PER INCOME STATE*
AVERAGE INTEREST RATE	*CURRENT YEAR'S INTEREST EXPENSES DIVIDED BY P BALANCE*
NET PROFIT BEFORE TAX	
TAXES	*AS PER INCOME STATEMENT*
NET PROFIT AFTER TAX	*AS PER INCOME STATEMENT*
AVERAGE TAX RATE	*AS PER BALANCE SHEET*
AFTER TAX INTEREST	*TAXES DIVIDED BY NET PROFIT BEFORE TAX INTEREST EXPENSES (1 - AVERAGE TAX RATE)*
TOTAL COST	*TOTAL REVENUE MINUS NET PROFIT AFTER TAX*

Appendix –I

Calculation of current ratio and its straight line trend equation

(in thousand)

Year Order	Fiscal Year	Current Assets	Current Liabilities	Current Ratio	Straight Line Trend
1	2062/63	20213762	12629715	1.60	1.486
2	2063/64	20598352	14722678	1.40	1.498
3	2064/65	22526522	15665380	1.44	1.510
4	2065/66	23519754	15675154	1.5	1.522
5	2066/67	24180638	15014439	1.61	1.534
Average current ratio				151	

Source: Annual Reports of Nepal Telecom

Calculation of quick ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Current Assets	Inventory	Quick Assets	Current Liabilities	Quick Ratio	Straight Line Trend
1	2062/63	20213763	255250	19958513	12629715	1.58	1.508
2	2063/64	20598352	309857	20288495	14722678	1.38	1.458
3	2064/65	22526522	329315	21097207	15665380	1.42	1.448
4	2065/66	23519754	327684	23192070	15675154	1.48	1.418
5	2066/67	24180638	416424	23764104	15014439	1.38	1.388
Average Quick Ratio						1.45	

Source: Annual Reports of Nepal Telecom

Calculation of inventory turnover ratio and its straight line trend equation

(Rs.in thousand)

Year Order	Fiscal Year	Operating Sales	Inventory	Inventory Turnover	Straight Line Trend
1	2062/63	8309936	255250	32.56	28.876
2	2063/64	8584144	309857	27.70	31.920
3	2064/65	10413655	329315	31.62	34.964
4	2065/66	13967318	327684	42.62	38.008
5	2066/67	16788359	416424	40.32	41.052
Average Inventory Turnover Ratio				34.96	

Source: Annual Reports of Nepal Telecom

Calculation of Average Age of Inventory (days)

Fiscal Year	Inventory Turnover	Average Age of Inventory
2062/63	32.56	11
2063/64	27.70	13
2064/65	31.62	11
2065/66	42.62	8
2066/67	40.32	9
Average		10

Source: Annual Reports of Nepal Telecom

Appendix –II

Calculation of Debtors Turnover Ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Operating Sales	Debtors	Debtors Turnover	Straight Line Trend
1	2062/63	8309936	2668942	3.11	2.934
2	2063/64	8584144	2825943	3.04	3.340
3	2064/65	10413655	3099495	3.36	3.746
4	2065/66	13967318	3455511	4.04	4.152
5	2066/67	16788359	3482610	4.82	4.558
Average Debtors Turnover Ratio				3.67	

Source: Annual Reports of Nepal Telecom

Calculation of Average Collection Period

(Rs. in thousand)

Year Order	Fiscal Year	Debtors	Operating Sales	ACP (Days)
1	2062/63	2668942	8309936	116
2	2063/64	2825943	8584144	119
3	2064/65	3099495	10413655	107
4	2065/66	3455511	13967318	89
5	2066/67	3482610	16788359	75
5-Yearly Average				101

Source: Annual Reports of Nepal Telecom

Calculation of Total Assets Turnover Ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Total Sales	Total Assets	TA Turnover	Straight Line Trend
1	2062/63	8852727	33080441	0.27	0.266
2	2063/64	9194297	35432582	0.26	0.265
3	2064/65	11058914	39104959	0.26	0.264
4	2065/66	14751623	43529299	0.27	0.263
5	2066/67	17889310	49371223	0.26	0.262
Average of Total Assets Turnover				0.26	

Source: Annual Reports of Nepal Telecom

Calculation of fixed assets turnover ratio and its straight line trend equation

(Rs. in thousand)

Year Order	Fiscal Year	Operating Sales	Net Fixed Assets	FA Turnover	Straight Line Trend
1	2062/63	8309936	8094882	1.03	0.944
2	2063/64	8584144	9040917	0.95	1.026
3	2064/65	10413655	10088426	1.03	1.108
4	2065/66	13967318	11361042	1.23	1.190
5	2066/67	16788359	10197703	1.30	
Average of Fixed Assets Turnover				**1.11**	

Source: Annual Reports of Nepal Telecom

Appendix –III

Calculation of Working Capital Turnover ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Operating Sales	CA	Total CL	Net WC	WC Turnover	Straight Line Trend
1	2062/63	8309936	20213762	12629715	7584047	1.10	1.182
2	2063/64	8584144	20598352	14722678	5875675	1.46	1.360
3	2064/65	10413655	22526522	15665380	6861142	1.52	1.538
4	2065/66	13967318	23519754	15675154	7844600	1.78	1.716
5	2066/67	16788359	24180638	15014439	9166199	1.83	1.894
Average of Working Capital (WC) Turnover						1.538	

Source: Annual Reports of Nepal Telecom

Calculation of Capital Employed Turnover Ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Total Sales	Capital Employed	CE Turnover	Straight Line Trend
1	2062/63	8852727	20450725	0.43	0.426
2	2063/64	9194297	20707904	0.44	0.451
3	2064/65	11058914	23549578	0.47	0.476
4	2065/66	14751623	27854145	0.53	0.501
5	2066/67	17889310	35343894	0.51	0.526
Average of Working Capital (WC) Turnover				0.476	

Source: Annual Reports of Nepal telecom

Calculation of Total Debt Ratio and its straight line trend equation

(Rs. in thousand)

Year Order	Fiscal Year	Total Debt	Total Assets	Total Debt Ratio	Straight Line Trend
1	2062/63	12640965	33080441	0.38	0.410
2	2063/64	14746917	35432582	0.42	0.397
3	2064/65	15665379	39104959	0.40	0.378
4	2065/66	16866833	43529299	0.39.	0.359
5	2066/67	15014439	49371223	0.30	0.340
Average of Total Debt Ratio				**0.378**	

Source: Annual Reports of Nepal Telecom

Calculation of Debt Equity Ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Total Debt	Net worth	Debt Equity Ratio	Straight Line Trend
1	2061/62	12640965	20439476	0.62	0.706
2	2062/63	14746917	20683665	0.71	0.658
3	2063/64	15665379	23549578	0.67	0.610
4	2064/65	16866833	26662465	0.63	0.562
5	2066/67	15014439	35343894	0.42	0.514
Average of Debt Equity Ratio				**0.61**	

Source: Annual Reports of Nepal Telecom

Appendix –IV

Calculation of Long - term debt to capital employed ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	Long Term Debit	Capital Employed	LTD to CE Ratio	Straight Line Trend
1	2061/62	11249	20450725	0.0006	0.004
2	2062/63	24238	20707904	0.0012	0.007
3	2063/64	0	23549578	0	0.010
4	2064/65	1191680	27854145	0.0428	0.013
5	2066/67	0	35343894	0	0.016
Average of Long Term Debt Ratio				**0.0089**	

Source: Annual Reports of NTC

Calculation of Interest Coverage Ratio and its straight line trend equation

(Rs. in thousand)

Year Order	Fiscal Year	Interest Exp.	EBIT	IC Ratio	Straight Line Trend
1	2062/63	89942	4640610	51.60	63.202
2	2063/64	57732	4979261	86.25	79.600
3	2064/65	65045	6908772	106.22	95.998
4	2065/66	67142	7950464	118.41	112.396
5	2066/067	93307	10964763	117.51	128.794
Average of Total Debt Ratio				96	

Source: Annual Reports of Nepal Telecom

Calculation of net profit margin ratio and its straight line trend equation using net profit after tax as profit

(Rs. in thousands)

Year Order	Fiscal Year	NPAT	Total Sales	NP Margin	Straight Line Trend
1	2062/63	3290117	8852727	0.37	0.346
2	2063/64	3542461	194297	0.39	0.393
3	2064/65	4936647	11058914	0.45	0.440
4	2065/66	5652688	14751623	0.38	0.487
5	2066/67	10871456	17889310	0.61	0.534
Average of Net Profit Margin Ratio				0.44	

Source: Annual Reports of NTC

Calculation of net profit margin ratio and its straight line trend equation using earnings after tax + interests after tax as profit

(Rs. in thousands)

Y. O	F Year	NPAT	Int. AT	NPAT+Int.AT	Total Sales	NP M	Straight Line Trend
1	2062/63	3290117	89942	3380059	8852727	0.382	0.345
2	2063/64	3542461	57732	3600193	9194297	0.392	0.400
3	2064/65	4936647	65045	5001692	11058914	0.452	0.445
4	2065/66	5652688	67142	5719830	14751623	0.388	0.491
5	2066/67	10871456	93307	10964763	17889310	0.613	0.537
Average of Net Profit Margin Ratio						**0.445**	

Source: Annual Reports of Nepal Telecom

Calculation of operating expenses ratio and its straight line trend equation

(Rs. in thousand)

Year Order	Fiscal Year	Opt Exp.	Total Sales	Opt. Expenses Ratio	Straight Line Trend
1	2062/63	426214430	5928648	0.416	0.4242
2	2063/64	2891309	6555992	0.441	0.4288
3	2064/65	3258571	7669283	0.425	0.4334
4	2065/66	3991863	8855034	0.451	0.438
5	2066/67	3990361	9194297	0.434	0.4426
Average of Operating Expenses Ratio				**0.4334**	

Source: Annual Reports of Nepal Telecom

Calculation of Return on Assets ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	NPAT	Interest AT	NPAT Plus Interest AT	Total Assets	ROA	Straight Line Trend
1	2062/63	3290117	89942	3380059	33080441	0.10	0.082
2	2063/64	3542461	57732	3600193	35432582	0.10	0.109
3	2064/65	4936647	65045	5001692	39104959	0.13	0.136
4	2065/66	5652688	67142	5719830	43529299	0.13	0.163
5	2066/67	10871456	93307	10964763	49371223	0.22	0.190
Average of Return on Assets						0.14	

Source: Annual Reports of Nepal Telecom

Appendix –V

Calculation of Return on Capital Employed ratio and its straight line trend equation

(Rs. in thousand)

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Year Order	Fiscal Year	NPAT	Interest AT	NPAT Plus Interest AT	Capital Employed	ROACE	Straight Line Trend
1	2062/63	3290117	89942	3380059	20450725	0.17	0.150
2	2063/64	3542461	57732	3600193	20707904	0.17	0.182
3	2064/65	4936647	65045	5001692	23549578	0.21	0.214
4	2065/66	5652688	67142	5719830	27854145	0.21	0.246
5	2066/67	10871456	93307	10964763	35343894	0.31	0.278
Average of Return on Capital Employed						0.21	

Source: Annual Reports of Nepal Telecom

Calculation of return on equity ratio and its straight line trend equation

(Rs. in thousands)

Year Order	Fiscal Year	NPAT	NET WORTH	ROE	Straight Line Trend
1	2062/63	3290117	20439476	0.161	0.145
2	2063/64	3542461	20683665	0.171	0.179
3	2064/65	4936647	23549578	0.210	0.212
4	2065/66	5652688	26662465	0.212	0.246
5	2066/67	10871456	35343894	0.308	0.279
Average of Return on Equity (ROE) Ratio				**0.212**	

Source: Annual Reports of NTC

Computation of Correlation & Regression Co-efficient from the variables GDP and Sales Revenue

(in ten millions of Rs.)

Fiscal Year	GDP Rs (X)	Sales Rs (Y)	X_2	Y_2	XY
2062/63	48100.4	885.27	2313648480	783702.9729	42581841.11
2063/64	49773.9	919.43	2477441121	845351.5249	45763616.88
2064/65	51448.5	1105.89	2646948152	1222992.692	56896381.67
2065/66	53168.2	1475.16	2826857491	2176097.026	78431601.91
2066/67	56012.4	1788.93	3137388954	3200270.545	100202262.7
Total	258503.4	6174.68	13402284199	8228414.76	323875704.3
				r =	0.97604
				PE=	0.014282723

Source : Annual Reports of NTC and Economic Survey 064/065 B.S.

Computation of Correlation & Regression co - efficient from the variables investments and profit

(Ten million)

Fiscal Year	Investments (X)	Profit (Y)	X2	Y2	XY
2062/63	391.0290728	329.0117	152903.7358	108248.6987	128653.14
2063/64	333.8733695	354.2461	111471.4269	125490.2994	118273.339
2064/65	415.6948417	493.6647	172802.2014	243704.836	205213.8693
2065/66	488.3855717	565.2688	238520.4666	319528.8163	276069.1261
2066/67	837.01821	1087.1456	700599.4839	1181885.556	909960.6641
Total	2466.001066	2829.3369	1376297.315	1978858.206	1638170.139
				r =	0.98707
				PE=	0.007751949

Source : Annual Reports of NTC

Computation of Correlation & Regression co - efficient from the variables sales revenue and total cost

(In million of Rs.)

Fiscal Year	Total Sales Revenue (X)	Total Costs (Y)	X_2	Y_2	XY
2062/63	885.2727	430.2059609	783707.7534	185077.1688	380849.5926
2063/64	919.4297	427.2768204	845350.9732	182565.4813	392850.9988
2064/65	1105.8914	421.5188007	1222995.789	177678.0993	466154.0166
2065/66	1475.1623	676.8301882	2176103.811	458099.1037	998434.3771
2066/67	1788.931	701.7854136	3200274.123	492502.7667	1255445.682
Total	6174.6871	2657.617184	8228432.449	1495922.62	3493734.667
				r =	0.94451
				PE=	0.032550199

Data Source : Audited Financial Reports of NTC