AN ANALYSIS ON FINANCIAL PERFORMANCE OF NEPAL ELECTRICITY AUTHORITY

A Thesis

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RECOMMENDATION

This is certify that the thesis

Submitted by
Mr. Bijay Lama

Entitled

"An Analysis of Financial Performance of Nepal Electricity Authority"
Has been prepared as approved by this department in the prescribed format of the faculty of management. This thesis is forwarded for examination.

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DECLARATION

I hereby declare that this thesis entitled **"An Analysis of Financial Performance of Nepal Electricity Authority"** submitted to Patan Multiple Campus, Faculty of Management, Tribhuvan University is my original work done for the partial fulfillment of requirement of the degree of Masters of Business Studies (MBS), which is prepared under the supervision of Mr. Rakesh Chandra Misra Associate Professor of Patan Multiple Campus.

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LIST OF ABBREVIATIONS

ACP	Average Collection Period
ADB	Asian Development Bank
B.S.	Bikash Sambat
CA	Current Assets
CBS	Central Bureau of Statistics
CL	Current Liabilities
Co.	Company
CR	Current Liabilities
D/E	Debt-Equity
D/TA	Debt to Total Assets
e.g.	Examples
EBT	Earning Before Tax
etc.	Etcetera
Fy	Fiscal Year
GoN	Government of Nepal
GWh	Giga Watt
ITR	Inventory Turnover Ratio
ITR	Inventory Turnover Ratio
JCF	Janakpur Cigarette Factory
KUKL	Kathmandu Upatyaka Khanepani Ltd.
KV	Kilovolt
KW	Kilowatt
Ltd	limited
MW	Megawatt
NEA	Nepal Electricity Authority
NPAT	Net Profit After Tax
NRs.	Nepal Rupees
NTC	Nepal Telecom
PE	Public Enterprise
PR	Profitability Ratio
QR	Quick Raito
ROA	Return on Assets
ROD	Return on Total Deposit
TATR	Total Assets Turnover Ratio
US	united States

CHAPTER-1

GENERAL BACKGROUND

1.1 Introduction/General Background

The overall development of the nation depends upon the uplifting of the national economy, which in turn depends upon the nature of its infrastructure. On 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. Nepal is one of the least developed country, considered to be economically less privileged among the countries in the world with around 320 US dollar per capital income, 3.5% economic growth and 30% people are under the line of poverty. More than 76% or the total population are actively engaged on agriculture the contribution of agriculture sector to the gross domestic product is only 36% the sustainable development of the country industrial sector should be contribute more in GDP with involvement of more people. Now Nepal has adopted the path of economic development through liberalization for the economic growth of the nation. However, it is a known fact that any strategy for economic development requires a steady supply of funds for productive investment, productive investment, in other words refer to the investment venture in productive enterprises. Thus for the development of the country, many of the business firms have been established as public enterprises as well as private under company act 1964. The development of the nation largely depends on its economic development. Thus the primary goal of any nation, including Nepal, is rapid economic development to promote welfare of the people and nation as well. This requires productive activities enterprises, which in term in the result of the investment venture in the productive enterprises. The establishment of these enterprises needs a huge amount of funds. Existing enterprises and companies, with in the economy can be viewed as productive enterprises to operate with equity and debt funds. The decision making process of choosing funds with the best financial mix among various alternatives, plays a crucial role in the capital investment decision of the form. The capital structure concept has an important place in the theory of financial management. The term capital structure is also known as financial structure of financial plan of leverage. The financial decision of a firm relates to choice of proportion of debt and equity to finance the investment requirements. A proper balance between debt and equity is necessary to ensure a tradeoff between risk and return to the shareholders mix. A capital structure with reasonable proportion of debt and equity is called optimal capital structure. However, the capital structure and its implication are more noticeable.

Nepalese companies have not adopted proper combination of capital structure policy. Thus firms objective to maximize the wealth of shareholders or return on equity is not meet by Nepalese companies because in most of companies, there is no existence of debts in their capital structure and equity capital is only source of financing where as in some cases the promotion of debt is very high which creates the financial burden of firm. On the other hand, if is very low in some cases for instance.

From the above presentation, we can say Nepalese companies do not take capital structure concept seriously, therefore some the companies went in to bankruptcy and some of the companies have been suffering losses due to huge amount of interest payment. Thus appropriate capital structure should be managed for the sound health of the company with proper combination of capital structure components. In the context of Nepal, Public utility services organization like Nepal Electricity Authority is playing a major role in the development of country.

1.2 Public Enterprises in Nepal:

Public Enterprises are the statutory companies which produce goods and services to satisfy the basic needs of the people. The government is the owner of such enterprises. The practicality of public Enterprises emerged with the concept of welfare state that state should be responsible to satisfy the basic needs of its people. Usually the public Enterprises are established for production and marketing of fundamental goods and services in a suitable rate. The provision of services by public enterprises is a common practice in Europe and elsewhere. Usually the practice is highly significant in communist countries.

Public enterprises play a vital role in most developing countries. The role of public enterprises different from country basically due to political philosophy of existing governments, public enterprises play a major role in achieving the twin objectives of social and economic developing envied in the national policy, the role of public enterprises in simulating and augmenting the place of economic growth in developing countries can hardly be under estimated. Different agencies and government to suit their own respective situation have defined PE as "Those organization namely owned and or controlled by the public authorities consisting of establishment which by virtue of their kind of activities, technology and mode of operation are classified as industries"(Shrestha, Bhumeshor:1990;-Public enterprises management in Nepal).

In Nepal in the mid 1950s, it was observed that the public enterprises were essential. Though Nepal is a country with mixed economy, in that time it was hard for any individual or private group to start the business providing basic goods and services to the people. Accumulation of capital from private sector was difficult. The state took the initiatives; result of which is the establishment of public Enterprises. Public enterprises in Nepal in the past had contributed a lot to the people and the national economy. The government had established enterprises to provide and supply food products, petroleum products, basic medicines, convenience trading of imported goods, and means of air and land transportation, means of communication, electricity etc. But in present scenario in almost all sectors there exist private national and international companies in the market. Because of the tough competition, many public enterprises are in loss. The performance of public enterprises weakened over the 2007/08 fiscal year, as 15 companies suffered losses leading to a decline in the volume of combined profits. Only a very few corporations are in a position to pay revenue to the government. Majority of them are hard pressed to sustain even everyday administrative costs. Most public enterprises have very weak financial position and lack professional competence. Because of the complicated bureaucratic structure and political appointment of the head of the corporation, most of the corporation lacks professionalism, experts and competence.

PEs in Nepal contributes a vital instrument for the social economic development of the country. It enjoys a strategic crucial position in our mixed economy. They have been established in many sectors for the overall development of the country with different goals and objectives. Nepal Bank Ltd, a commercial Bank established in 1994 BS was a first PE to have separate legal status in Nepal. During Second World War some other PEs were established, however, they could not make substantial progress. Nepal started its planned economic development in 2013 BS with the lunching of first five year plan since then the number of PEs has increased substantially in the various fields of national economy, most of the PEs were established in the “Panchat Era”. Nepal Electricity Authority is a largest public utility PE, there were 6 PEs before the privation program but now there are only 36 PEs, among them now 17 are in profit others have been suffering from losses. Harisiddhi Break Factory is the first privation PE in 1992 AD.

1.3 Nepal Electricity Authority:

Nepal Electricity Authority (NEA) was established on August 16, 1985 under the Nepal Electricity Authority Act, 1984 through the merger of the Department of Electricity Development, Ministry of Water Resources, related Development Boards and Nepal Electricity Corporation. Prime purpose of creation of NEA was to remedy the inherent weakness associated with incumbent fragmented electricity organizations with overlapping responsibilities and duplication of works. Merger of these individual organizations became necessary to achieve efficiency and reliable service. NEA has been always languishing with the issues of high tariff, high system losses, high generation costs, high overheads, over staffing and lower domestic demand. Its endeavors to maximize the utilization of available resources including import through trading of power from Indian short term market has not able to offset the unbalance, resulting in long hours of distasteful load shedding.

Water resources are important natural resources for the economic development of Nepal. Availability of abundant water resources and geo-physical features provide ample opportunity for hydropower production in Nepal. Out of total hydropower generation capacity of about 83000 MW in the country about 43000 MW of power generation appears feasible to date from financial-technical perspective.

Nepal's hydropower history begin in 1911 AD with the construction of first power house "The Pharping Hydropower station" harping along generated enough electricity to feed the people of Kathmandu for more than two decades, Sundarijal(640KW), Sikaros(600KW), were also developed in the Rana regime.

NEA is one of the largest government organizations in Nepal with the country's highest capital investment, assets and human resources. Since, it has been established in 1st Bhadra 2042 BS under NEA Act 2041 to provide electricity services all over the country, but it has no radically developed and serves electricity only urban area. NEA's responsibilities are planning, construction, operation and militants of the power system through the country including power trading with India. The primary objectives of NEA is to generate, transmit and distribute adequate reliable and affordable power by planning, construction operating and maintaining all generations, transmission, distribution facilities in Nepal's power system both interconnected and isolated. A major developments activity of NEA has been through credit from international leaders such as ADV, World Bank, OPEC, and Fund for international development and Norwegian government. Now there are total 10,314 staff in approved position and 9,280 in existing situation.

1.4 Development of Hydropower in Nepal:

The history of hydropower in Nepal begins with the Pharping hydro plant 500KW build way back in 1964 BS. The second hydropower project of 900 KW capacities was installed at Sundarijal in 1991 BS. The third power generation is Morang hydro electricity Power Company of 977 KW. During the period of 2013 to 2027 BS Trisuli-1(9000KW), Phewa(1080KW) hydropower project were started. During the fourth five year plan i.e. from 2028 BS to 2032 BS total 29090 KW capacity of hydropower plant was completed by Trisuli-2(1200KW), Koshi(6800 KW), Sunkoshi(10050 KW), Dhankuta(2040 KW) hydropower plant. At the end of fourth five-year plan, total hydropower production capacity reached to 42978 KW.

Similarly in the sixth five-year plan, total 19,864 KW of additional hydropower project were complicated with the starting of Gandak(15000 KW), Kulekhani-1(6000 KW), Derghat(14100 KW), Seti-Pokhara(1500 KW), Doti(200 KW), Phidim(240 KW), Balgung(200 KW), Dhaging(32 KW), Gorkha(64 KW), Jomsom(240 KW), Jumla(200 KW), and Shyangji(80 KW), Hydro project. During the seventh and eighth year plan, Kulekhani-2(32000 KW), Marshyandi(6900 KW), selleri(400 KW), Darchula(50 kW), Chame(45 KW), Terhathum(100 KW), Helambu(50 KW), Manang(80 KW), Sharpudaha Rukum(200 KW), Chaughaeri Rukum(150 KW), Bajhang(200 KW), Taplegung(125 KW), Khandbari(250 KW), Bhojpur(250 KW), Okhaldunga(125 KW), Tatopani-1(100 KW), Namche(600 KW), Suranaiya Gaun(200 KW), Rupalgadi(100 KW), Andhikhola(5100 KW), Duhabi multifiber power project(2600 KW), Jhimruk(12500 KW), Tatopani-2(100 KW), Achham(400 KW), and Chatra(3500 KW) were completed.

During the ninth and tenth five-year plan up to 2066 BS till now, Kaligandaki 'A'(144000 KW), Modikhola(14800 KW), Devighat(14100 KW), Pukhola(6200 KW), Middle Marsyandi(70000 KW), Chatra(3200 KW), Panauti(2400 KW), Phidim(240 kW), Sumalyagad(200 KW), Khandbari(250 KW), Dhanging(32 KW), Heldung Humla(500 KW), Duhabi Multifiber Diesel Plan(39000 KW), Simikot Solar Power Station(50 KW), Gamgadhi Solar Power Station(50 KW) have been completed.

Future plan of NEA is to implement a short term, meddle term and long term strategic plans to expand generation, transmission and distribution capacity. Curb the system losses and improve financial health. Rehabilitating existing hydro and thermal plants for 100% availability shall be lunch as short term masers Khlakhani-3 Hydroelectric Projects, Chameliya hydroelectric projects and multfiber- Dhalkeber 400 KV cross and medium term measures, upper Tamakoshi (456 000 KW), Upper Trishuli- 3 A (60000 KW), Upper Trishuli -3 B (37000 KW), Hydroelectric profects will go in implementation as long term measures, similarly from private sector Kebeli-A (300000 KW), Upper Marshyangdi (50000 KW), Upper Modhi-A (40000 KW), and few more projects are expected to be completed within five year from now. With the completion of high capacity cross broader interconnection, seasonal trading shall be possible and problem of base load supply during dry season shall be resolved. NEA plans to take strong projects like Nasyagudag and Budigandaki as longer option. With plans in hands for expansion, we shall have a vast fabric of transmission network to meet our domestic and export capacity requirement. Modes operand of distribution and supply services shall be changed to make it customer friendly by use of information technology and latest state of art use elsewhere.

1.5 Statement of Problem

Electricity is one of the basic infrastructures of nation. Industrialization and development without electricity cannot be imagined. NEA has almost full monopoly of the generation and distribution of electricity, as Nepal is a second richest country over the water resources, NEA has a very doom scope for its future growth and expansion. NEA has been established to improve the national economy and to make self sufficient in the electricity that is why it is beneficial to evaluate the financial performance of NEA. In order to evaluate the financial performance of NEA this study seeks to find out the answer of the question through various methods of analysis.

Financial analysis is one of the most important functions of an enterprise. It is concerned with generation, transmission, distribution and other function any PEs, Including NEA.

NEA must be able to generate fair rate of return and surplus on its own. For this purpose it becomes imperative to be financially sound and independent at least in terms of paying interest on debts, operation and maintenance expenditure, administrative expenditure and generating desirable rate of return on capital employed without it no industrialization of the economy can be imagined. In this context, NEA has great role to play than any other PEs s most of the industries depend on power supply. In this sense NEA has no difficult in selling its product and services as the demand of power supply is always growing. NEA gets the highest potential to further growth and expansion, as it does have no market competition, despites these facts the performance of NEA is not satisfactory. In the context, the study of NEA primary focuses on the financial obligation, generating rate of return on capital investment and internal revenue generation. This study confines to the problems of financial operation, financial position, capital structure and financial management of NEA. The present study will make a mildest attempt to have incited over the problems of financial management of NEA as well as to recommend some concrete suggestions for the improvement in overall financial performance through financial analysis. The study tries to seek answer to the following question.

- Is the NEA in a position to meet its current obligation?
- How efficiency has NEA been to use its assets?
- How the NEA can get red of current great losses?
- What sources of long-term finance do NEA and what is the relationship between them employ?
- Is the company providing fair rate of return?

Analysis of financial position and statement is a crucial part of business enterprise, poor financial management affects adversely on liquidity, turnover and on profit it is required to measure the financial position of the enterprises periodically in order to ensure its smooth function. Financial analysis may not be expected in the future (Pandy I: 1988: edition publishing house).

1.6 Objective of the study

The study basically aims to evaluate the financial position if NEA and to suggest recommendation based on it. The specific objectives of this study will be:

- To assess the performance of NEA through financial analysis.
- To identify financial drawbacks and strengths of NEA.
- To recommend the best possible sector for the NEA to invest.
- To find out measures to reduce financial wastages of the NEA.
- To find out the present financial condition of the NEA.
- To fore see the future trend of different financial ratios.
- To study the relation between sales with total cost, sales with investment with profit.

1.7 Significance of the study

Among the different natural resources available in Nepal, water resources are the most important, by posing nearly 2.27 percent of the world's water resources

(NG/NDC: 1993: Sectarian central of statistics). The theoretical hydropower potential of Nepal is 83000 MW of which an estimated 650 MW is exploited which is only 0.78% of the total capacity. One of the major resources for the rampant poverty and backwardness of the Nepalese economy is the power deficit shortage power creates multifarious problem in the development of agriculture industry, trade and other sector of the economy. The three-year interim plan of government of Nepal provided high priority to the energy sector. A part from the medium/mega hydropower projects, emphasis has been laid for the development of small hydropower is essential not only for reducing regions imbalance on development but also for assisting the mug ration of population from the hills to the Terai.

Analysis of financial position and statement is crucial part of financial decision making process of business enterprises. Poor financial management affects adversely on liquidity turnover and profitability, if is required to measure the financial position of the enterprises periodically in order to ensure smooth functioning of an enterprises. NEA is an enterprise of great national concern.

Thus, this study is made to evaluate the financial position of NEA.

The changing socio-economic scenario and current policies of Nepal government in the power sector have encouraged private enterprises to grow and to participate in this sector as well. In other words, NEA will have to face competition on few years back as private sector would emerge and if would not be able to enjoy the monopoly like now. According to energy policy of the government, there is a provision for external, internal and joint collaboration with private sector in development and facing of small scale hydropower projects, in addition there is also a provision for legal and institutional arrangement for pricing the power.

This study will be useful to provide information and to draw the attention of NEA management regarding what can be done for further strengthening the financial position of NEA. This study is expected to be helpful to the private and non-government agencies, which are willing to invest in hydropower projects in

Nepal. This study is beveled to be an important effort to provide some appropriate measures to solve financial problems of NEA. Further it will be important for the following groups and individuals.

- Present and perspective customers
- Policy making authority
- Further researcher
- Government

1.8 Limitation of the study

The study may have some constrains, financial position, lack of sufficient data and lack of research experience. The study will be limited by following factors;
As the title specified the study covers only the financial position of NEA.

- The study will be based on secondary data: therefore the accuracy of result and conclusion highly depends upon the reliability of these data.
- The evaluation is made with analysis of financial statement published and presented by NEA.
- The study excludes profitability and cost of joint and by products of NEA.
- Because of resource constraint, this study is not comprehensive neither extensive.
- The study will be cover a period of 9 year from FY2000/01 to 2008/09.

1.9 Organization of Chapter:

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 Recommendation

Chapter one; concentrates on introductory part of the study. It includes introduction of NEA, historical background of NEA, and development of hydropower in Nepal as well as the statement of the problem, significance of the study, limitations of the study and chapter plan.

Chapter two; is review of literature under conceptual framework and review of previous studies have been covered.

Chapter three; is concentrated in research methodology, which deals research design, period covered types and sources of data, data collection procedure, method of analysis and analytical tools used.

Chapter four; is the major part of the thesis, which is related to presentation, analysis, and interpretation of data related to the financial performance of the NEA.

Chapter five; is the concluding chapter, discusses the summary, conclusion and recommendations.

Besides these, bibliography and annexes are included at the end of the thesis.

CHAPTER -2
REVIEW OF LITERATURE

The review of literature basically highlights the existing literature and research related to the present study with a view to finding out what had already been explained and how the present research adds to the dimension. A literature review is an essential part of all studies. It is a way to discover what other research have concerned and left in the area. The purpose of literature review is to find out what research duties have been conducted in ones chosen field of study and what remains to do.

Review of literature is supposed to revise the eminent literature relating to the study, various books, journals, statements, reports and thesis etc, are the basis for preparing it. Some in writer or researcher have also give contribution on it. Financial performances in the context of Nepalese enterprises in concerned, the management exports and students describing the financial performance of public enterprises have undertaken some studies. Nepal being one of the rich countries in hydropower sector, many important literatures are available in this field.

The review of relevant literature has been categorized into following headings:

1. Conceptual Framework
2. Review of articles/journals/thesis
3. Review of related unpublished thesis

2.1 Conceptual Framework

Since this study is related with the structure of assets and liabilities management of Nepal Electricity Authority, we must have some knowledge about assets liabilities and their structure. Assets and liabilities are shown in balance sheet so the concept of balance sheet must be known and what types of tools are used to manage the assets and liabilities also be considered.

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 prepar4ing these statements. "The basic objective of financial statements is to assist in decision making. The analysis and interpretation of financial statements depends 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.

2.1.1.1 Balance Sheet

Balance sheet is a financial statement that summarizes a company's assets, liabilities and scholar's equity at a specific point of time. This balance sheet segment gives investors and idea as to what the company owes, as well as the amount invested by the shareholders.

The balance sheet must follow the following formula:

Assets = Liabilities + Shareholders' Equity

It's called a balance sheet because the two sides balance out. This makes sense: a company has to pay for all the things it has (assets) by either borrowing money (liabilities) or getting it from shareholders (shareholders' equity).

The liabilities side of the balance sheet is comparatively simple. It consists in the first place, of the banks liability to their shareholders- the capital originally paid in and any accumulation of undistributed profits. The assets side of balance sheet is both more complicated and more interesting. In distributing its resources among the different types of assets open to it.

Importance and Objectives of Balance Sheet

Balance sheet being the position statement prepared at certain date, it reveals state of affairs. Balance sheet contains accounts mentioned in the trail balance, which don't have place in Trading and profit, & loss account being capital items. Importance and objectives of balance sheet can be presented in the following points.

1. It reveals the financial position of the firm.
2. It ascertains composition of assets and liabilities.
3. It depicts the solvency i.e. debt paying capacity of the firm.
4. It shows the position of proprietor’s capital as calculated assets- borrowed money= proprietor’s capital.

Advantage of Balance Sheet

1. A balance sheet serves the purpose of communication to the user groups the quantitative information generated by the financial accounting process. The income statement and the balance are the most useful end product of the final accounting.
2. Wherever a business entity wants to raise capital balances sheet is the basic document that has to be provided to the investors of lenders for determining the financial status and taking an investment or lending decision on the basis of it.
3. A balance sheet prepared in an efficient manner containing the necessary information, well assist the outside investors and user to take a decision

and it will encourage them to invest to invest their money in that business concern.

4. A balance sheet, properly prepared, will help the financial analyst to interpret the same with the help of ratio analysis.

2.1.1.2 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).

2.1.1.3 Assets

Assets are the resources owned by the business or non-business firms to generate economic benefits. Assets can be tangible or intangible which solely or combine contribute in earning capacity of the firm. Simply assets can be defined as any property that has monetary value. Assets can be defined as "Physical things of right owned that has a monetary value is assets. In other words assets are that expenditure which results in acquiring of some property of benefit of a lasting nature" (Jain & Narang, 1991:8).

Assets represent economic resources is the valuable possessions owned by the firm. These possessions should be capable of being measured in monetary terms. Assets are the future benefits (Panday, 2002:31)

The right hand column in the balance sheet shows assets of the bank assets are thing of the value owned by a business and acquired at a cost, which is measurable. Assets are the future benefit that represents:

Store purchasing power (e.g. cash)

- Money claims(e.g. Receivable stock)
- Tangible and intangible items that can be sold of used in business to generate earnings.
- A tangible item includes land, building, plant, equipment etc.
- Intangible items include copyright, trade name or goodwill.

I. Classification of assets

The assets are classified into current and fixed assets. Fixed assets are further classified as tangible and intangible assets. Assets may also be classified as money resources, physical resources and intangible resources.

Bills receivable and marketable investment are examples of money resources. Plant and machinery, buildings and inventory are examples of physical resources while goodwill and copyrights comprise intangibles.

a) Fixed Assets

As the name suggests, such assets are fixed in the sense that they are acquire to be retained in the business on a long-term basis to produce goods and services, and are not, for resale. They are, in a sense, long-term resources in that they are held for longer than one accounting period. Such assets are obviously of crucial significances as they basically determine the future earnings/revenue/profits of firms.

Fixed assets fall into two categories: tangible and intangible. Tangible fixes assets are those, which have a physical existence and generate goods and services. Included in this category of fixed assets are land, building, plants, machinery, furniture, and so on. They are shown in the balance sheet, in accordance with the cost concept, at their cost to the firm at the time they were purchased.

The other types of fixed assets, intangible assets; do not generate goods and services of assets directly. In as way, they reflect the right of the firm. This category of assets comprises patents, copyrights, trademarks and goodwill. These assets confer certain exclusive rights on their owners. Patents confer exclusive rights to use an invention: trademarks represents exclusive rights to use certain names, symbols, labels, designs, etc. intangible fixed assets are also written –off over a period of time.

Valuation of Fixed Assets in the Balance Sheet

i. Land:

Land is shown at cost price in the balance sheet. However, land in the form of wasting assets such as oil, well, mineral deposits etc includes depletion year after year due to the extraction of such land. Such kinds of assets at cost less depletion in the balance sheet.

ii. Buildings:

In the Balance sheet the building is shown at cost on the date of acquisition and cost less depreciation date in the subsequent years. The building may be purchased r constructed by the business concern. If the building may be purchased then its cost include all costs incurred up to the point of registration and if it is constructed, its cost include the cost of (material and overhead) architect's fees and imputed value of its own resources.

iii. Plant and Machinery:

The term plant and machinery includes such assets as machinery, equipment, computers, vehicles, and material handling equipment of all types they are used in the business for productive purpose. Plant and machinery are shown in the balance sheet at cost on the date of acquisition and cost less accumulated depreciation to date in the subsequent years.

iv. Intangible Assets:

These assets includes patents, trademarks, goodwill etc. the intangible assets which have limited existence or economic life shall be shown in the balances sheet and be amortized over a number of years until they outline their utility. The assets, which have indefinite existence, must be shown in the balance sheet at cost and should be amortized till they start losing their value.

v. Contingent Assets:

A contingent asset is the right to property, which may come into existence or the happening of some future event. Example are uncalled share capital of the company, copyright etc. usually these assets are not shown in the balance sheet because of the principle of conservation.

vi. Goodwill:

It is a thing easy to describe but difficult to define. It is an intangible asset. According to Kohler "Goodwill is the current value of expected future income of normal return on the investment in net tangible assets". Goodwill is not recorded unless it is paid. Therefore it should not be considered that is no goodwill for the business if it does not figure in the balance sheet.

vii. Other Assets:

These includes deferred charges such as formation expanses, discount on issue of shares and debentures etc, any amount not written off no the date.

b) Current Assets;

The second category of assets included in the balance sheet is current assets. In contrast to fixed assets, current assets are short-term in nature. As short-term assets, they refer to assets resources which are either held in the form of cash or are expected to be realized in cash within the accounting period or the normal operating cycle of the business. The term “operating cycle: means the time span during which cash is converted into inventory, inventory into receivables/cash sales and receivable into cash. Conventionally, current assets designate assets which are held for a short period of time, usually not more than a year from the balance sheet. These are also known as liquid assets. Current assets include cash, marketable securities, accounts receivable (debtors), notes/bills receivables and inventory.

Normally the current assets are arranged in the balance sheet in the liquidity order which may be shown as follows:

- Cash
- Bank balance
- Temporary investment
- Bills receivable
- Debtors
- Stock in trade(inventories)
- Payment in advance

i. Valuation of Current Assets in the Balance Sheet Cash in hand and at Bank:

It is the most liquid assets and includes cash in hand and cash at bank. It provides instant liquidity and cash be used to meet obligations/ acquire assets without any delay. So cash is shown in the balance sheet and in current fair value. In the case of embezzlement or to be recoverable, it can be shown in the balance sheet below the cost or the market price.

ii. Marketable Securities:

These are short-term investments which are both readily marketable and which are expected to be converted into cash within a year. According to the outlet to invest temporarily surplus/idle funds/cash. According to the generally accepted accounting principles, marketable securities are shown in the balance sheet below the cost or the market price.

iii. Account Receivable:

They represent the amount the customer owe to the firm, arising from the sale of goods on credit is formal document of promise made by a debtor 1.0 payable amount due either on demand or at a specific date. Bills receivable are shown in the balance sheet at its normal amount and present value.

iv. Note/Bills Payable;

These refer to amounts owned to outsiders which written acknowledgements to the obligation are available.

v. Inventories;

It means the aggregate of those items which are held for sale in the ordinary course of business (finished goods), or are in the process of production for such sales(work in progress), or are to be currently consumed in the production of goods and services(raw materials) to be available for sale. It is the least liquid current assets. Included in inventory are raw materials, work in progress (semi-finished) and finished goods. Each of these serves a useful purpose in the process of production and sale. Inventory is reported in the balance at the cost or market value whichever is lower.

c) Investment;

The third category of assets is investments. They represent investment of funds in the securities of another company. They are long-term assets outside the business of the firm.

The purpose of such investments is either to earn a return or /and to control another company. It is customarily shown in the balance sheet with the market value shown in parenthesis.

d) Other Non-Current Assets;

Included in this category of assets is what is called deferred charges, i.e. advertisement expenditure, preliminary expenses, and so on. They are pre payments for services/benefits for periods exceeding the accounting period. All other assets which cannot be included in any of the above categories are grouped as other assets usually they represent deferred charged. Prepayments for services of benefits for period longer than the accounting period are referred to as deferred charges and include advertising, preliminary expenses etc. (Pandy: 1995:306).

2.1.1.4 Liabilities

The second major content of balance sheet is liabilities of the firm. Liabilities may be defined as the claims of outsiders against the firm. Alternatively, they represent the amount that the firm owes to outsiders i.e. other owners. The assets have to be financed by different sources. One sources of funds is borrowing long-term as well as short-term. The firm can borrow on a long-term basis from financial institution, banks or through bonds, mortgages, debentures, etc. the short-term borrowing may be in the form of purchase of goods and services on credit. These outside sources from which a firm can borrow are termed as liabilities.

Depending upon the periodicity of the funds, liabilities can be classified into:

i. Long-term liabilities
ii. Current liabilities
iii. Owners equity

i. Long-term Liabilities:

They are so called because the sources of funds included in them are available for periods exceeding one year. In other words, such liabilities represent obligations of a firm payable after the accounting period. The sources of long-term borrowings are (i) debentures, (ii) bonds, (iii) mortgages. (iv) Secured loans from "financial institutions and commercial banks. They have to be repaid/redeemed either in lump sum at the maturity of the loan/debenture or in installments over the life of the loan. Long-term liabilities are shown in the balance sheet net of redemption-repayment.

ii. Current Liabilities:

The second type of liability is current liabilities. In contrast, to the long-term liabilities, such liabilities obligations to outsiders repayable in a short period. Usually within the accounting period or the operating cycle of the firm. It can be said to the counterpart of the current assets. Conventionally, they are paid out of the current assets; in some cases, however, existing current liabilities can be liquidated through the creation of additional current liabilities. Included in this category are:

i. Account payable
ii. Bill/Note payable
iii. Tax payable
iv. Accrued expenses
v. Deferred income and
vi. Short-term bank credit.

The first two categories may also be called trade credit. Trade credit represents the claims of such outsiders as have sold goods to the firm on credit for a short period depending upon trade practices. Usually, such credit is unsecured. One form of this type of short-term credit(current liabilities) is that the buyer-firm will pay the amount after a lap of time but there is no formal written loan agreement. This type is known as account payable.

When the claim of the supplier of the good and services is evidenced by a not/bill-written acknowledgement of debt, it is called bill/note payable. A bill/note is a promise in writing to pay a certain sum of money at some specific date.

Another source of current liabilities is short-term bank taxes. Accrued expenses represent certain obligations, which are claims against assets, but there is no documentary evidence. Examples of this type of current liability are outstanding wages, salaries, rent and commission, etc.

Deferred income represents the liability that arises out of receipt of income in advance, e.g. rent received in advance.

Current liabilities are debts payable within an accounting period. Current assets are converted into cash to pay current liabilities. The typical examples of current liabilities are creditors, bills payable, borrowing, deposits, expenses payable and incomes received in advance.

iii. Owners' Equity

The third major content of a balance sheet is the owner's equity. Conceptually, it refers to the claims of the owners of the business against the assets of the firm. Alternatively, owners' equity may be viewed as that part of the resources of a firm which are supplied by its owners. The owners of a business are known as shareholders. There are two types of shareholders- ordinary and preference. The preference shareholders are entitled to a stared amount of dividend and return of principal at ma maturity. The ordinary shareholders as well as the creditors. They are entitled to the income /assets of the firm remaining after the claims of the creditors/preference shareholders are met in full. Their claim against the assets of the firm is, thus, residual. This is also known as the equity of the owners.

The owners' equity may be said to consist of two elements: (i) paid –up capital, i.e. the initial amount of funds contributed by the shareholders; (ii) retained earnings/reserves and surplus, i.e. that part of the profits belonging to the shareholders which is not paid out to them as dividends but instead is retained/ploughed back in the business.

2.1.1.5 Statement of Assets and Liabilities:

If a balance sheet shows the financial-position of a concern the question arises how the financial position of concern ascertained? The financial position or financial worth of a concern is indicated by its assets on a given date and its liabilities (excluding capital) on that date. Excess of assets over liabilities (other than capital) represents capital and is indicative of the financial soundness of concern.

2.1.2 Concepts Financial Analysis:

Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationships between the items of balance sheet and profit and loss account. Financial analysis can be undertaken by management of the firm or by parties outside the firm viz. owners, creditors, investors and others.

Ratio analysis is a powerful tool of financial analysis. A ratio analysis defined as "the indicated quotient of two mathematical expressions" and "as the relationship between two things". In financial analysis, a ratio is used as a benchmark for evaluating the financial position and performance of the firm.

Manohar K. Shrestha in his book "Financial Management deals that the essence of financial analysis is to covert data into useful information in a way relevant to measure significant relationship for undertaking the decisions. This needs the fulfillment of the essence that constitutes a good financial analysis. As much especially in a developing country like Nepal, we have to see firstly how far the financial statement prepared by public corporation and industrial enterprises bear the essence of good financial analysis and whether these are handled by competent analysts.

Weston and Bringham, in the book "Essentials of Managerial finance" financial statements reports states that firm's position at the point in time and on its operation over some past periods. However, the real value of financial statement lies in the fact they can be used to help the firm's future earnings and dividends. From an investor's stand point, predicting the future is what financial statement analysis is all about, while from managements standpoint, Financial statement analysis is useful both as a way to anticipate future conditions and more important, as a standing point for planning actions that will influence the future course f actions.

Dr. Radhey Mohan Srivastava, the book "Financial Management" argues that Financial strengths and weaknesses of the company by establishing strategic relationship between components of balance sheet and profit and loss statement and other comparative data. Financial analysis is this attempt to dissect the financial statements into their components on the basis of the purpose in hand and establish relationship as between these components on the other hand and as a between individual components on the other. Along this a study of trends of various important factors over the past several years is also undertaken to have clear understanding profitability and financial conditions of the business organization.

According to Mr. Khan and Jain, "The balance sheet provides information about the financial position of a firm at a particular point of time, say, as on Dec 31st. It can be visualized as a snapshot of the financial status of company. (Khan and Jain, 1993)

Ratio analysis is a widely-used tool of financial analysis. It is defined as the systematic use of ratio to interpret the financial statements so that the strength and weakness of a firm as well as its historical performance and current financial condition can be determined.

The main objective of a financial ratio analysis is to prepare a basis to evaluate financial performance of the firm by computing all the possible ratios. The ratios thus taken are nothing but the translated forms of the accounting numbers extracted from the financial statements into relative values that allow us to compare the financial position of one firm to another. In another word, it can be stated that the ratios computed in the course of financial ratios analysis are designed to show the relationship between financial statement within firms and between firms.

Ratio analysis is a powerful tool of financial analysis. A ratio is defined as "the indicated quotient of two mathematical expressions" and " as the relationship between two things". In financial analysis a ratio is used as a benchmark for evaluating the financial position and performance of a firm.

Standard of Comparison:

The ratio analysis involves comparison for a useful interpretation of financial statements. A single ratio in itself doesn't indicate favorable or unfavorable condition. It should be compared with some standard. Standard of comparison may consist of:

1) Past ratio:- i.e. ratio calculated from the past financial statement of the same firm.
2) Projected ratios: - i.e. ratio developed using the projected of Performa financial statement of the same firm.
3) Competitor's ratio: - ratio of some selected firms, especially the most progressive and successful competitor, at the same point in time.
4) Industry ratio: - i.e. ratios of the industry to which the firm belongs.

2.1.2.1 Types of Ratios:

Several ratios calculated from the accounting data can be grouped into various classes according to financial activity of function to be evaluated. The parties interested in financial analysis are short and long term creditors, owners and management. Short-term creditor' main interest is in the liquidity position or the short solvency and profitability of the firm. Similarly owners concentrate on the firm's profitability and financial condition. Management is interested in evaluating every aspect of firm's performance.

In view of the requirement of several of ratios we may classify them into following four groups.

1) Liquidity ratios
2) Capital adequacy ratios
3) Activities ratios
4) Profitability ratios

1) Liquidity ratios:

Liquidity ratios measure the firm's ability to meet current obligations. It reflects the short-term financial strength of the business activities, two ratios under liquidity ratios, which are as follows:

a) Current ratio
b) Cash and Bank Balance to total Deposit Ratio

2) Capital Adequacy Ratio:

This ratio shows the proportion of debt and equity in financing the firm's assets. Long-term creditors, like debenture holders, financial institutions etc. are more concerned with the firm's long-term financial strength. The following ratios are included in capital adequacy ratio.

a) Shareholder's funds to total deposit ratio.
b) Shareholder's funds to total assets ratio.

3) Activities Ratio:

Activity ratios are employed to evaluate the efficiency with which the firm manage and utilizes its assets. These ratios are also called turnover ratio because they indicate the spiced with which the assets are being converted turn over into sales. Activity ratios, thus, involve a relationship between sales and assets.

a) Loan and advances (total credit) to total deposit ratio.
b) Investment to total deposit ratio.
c) Performing assets to total assets.

4) Profitability ratio:

The profitability ratios are calculated to measure the operating efficiency of a company. Beside management of the company, creditors and owners are also interested in the profitability of the firm. Creditors want to get interest and repayment of principal regularly. Owners want to get a reasonable return on their investment. This is possible only when the company earns enough profits.

The profitability position can be evaluated through following ratios.

1. Return on total assets (ROA)
2. Return on total deposit (ROD)
3. Return on risky assets i.e. loan and advances
4. Interest earned to total assets.

Ratio analysis is the process of determining and interpreting numerical relationships based on financial statements. A ratio is a statistical yardstick that provides a measure of the relationship between two variables or figures. As ratio are simple to calculate and easy to understand, there is a tendency to employ them profusely. While such statistical calculations stimulate thinking and develop understanding, there is a danger of the accumulation of a mass of data that obscures rather than clarifies relationship. The financial analyst has to steer a careful course. His experience and objectives of analysis help him in determining which of the ratios are more meaningful in a given situation.

2.1.2.2 Utility of Ratio Analysis:

The ratio analysis is the most powerful tool of the financial analysis. Many diverse groups of peoples are interested in analyzing the financial information to indicate the operating and financial efficiency and growth of the firm. These people use ratio to determine those financial characteristics of the firm in which they are interested. With the help of ratios one can determine.

1) The ability of the firm to meet its current obligations.
2) The extent to which the firm has used its long-term solvency by borrowing funds.
3) The efficiency with which the firm is utilizing its assets in generation sales revenue.
4) The overall operating efficiency and performance of the firm.

2.1.3 Objective 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 asses 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 budget.
- The real meaning and significance of financial data.

- The long-term liquidity of its fund.

2.1.4 Need of Financial 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 firm'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 weakness and credit worthiness are interpreted on the basis such analysis leads management of an enterprise to take crucial decision 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 of failure of a company's operation, determine the relative efficiency of various departments, process and produces 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 share holders, 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 to 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 benfits 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

I. 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.

II. 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

I. 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 in one date or period of times as a whole, this is also known as dynamic analysis.

II. 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, SP Jain and K. L. Narang have categorized on the basis of objective of the study.

C) According to Objective

I. 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.

II. 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.

2.2 Review of Journals/Articles:

Analytical studies of an enterprise pertaining to the financial position are essential to know their profit potentiality, operative efficiency and decision-making technique. In our country as well, the financial experts and other analysts have made some research towards financial position of different corporations by using various analytical tools. Some of the available research studies relating to the financial aspects of PEs in Nepal have been reviewed.

Mr. Prachar Pradhan (2064) on his article entitled "Challenges and issues on the domestic hydropower projects and perspective on export oriented hydropower project" has the written about hydropower potential, hydropower generation, existing status, power demand forecast by 2020 for domestic scenario and power generation expansion (NEA and IPP).

He said about hydropower potential of Nepal that, the Karnali and Mahakali river systems represents approximately 43 percent of Nepal theroretical hydropower potential and 55 percent of the technical/economical potential.

Mr. Pradhan has added that, now the total installed capacity in NEA owned by the private sector and NEA's thermal power (Diesel) of 55 MW. Although total hydropower capacity in the system is 556 MW, only about 452 MW can be generated from hydropower stations during the winter season when the power demand will be at its peak. During the time of power deflect; about 50 MW is imported from India as per the Indo-Nepal power exchange agreement. Nepal and India have agreed in principle to increase this level of exchange form 50 MW to 150 MW. Nepal is also entitled to 70 million units of energy annually from Tanakpur in the far west under the Mahakali Treaty. NEA continues to be sole purchase of independent power producer (IPP) power. To date, twenty two power purchase agreements totaling 228.840 MW have been concluded of which 152.613 MW have already been commissioned (as of July, 2007).

In "Energy Sector Perspectives", Dr. Bhekh B. Thapa and Bharat B. Pradhan says that hydropower is Nepal's major resource endowment-numerous attractive run-off river and multipurpose hydro schemes have been identified but remain undeveloped, small and micro-hydro potential remains virtually unused in the hill and mountain areas and despite Nepal's small sized, only about 10.5% of the population have access to electricity supply, whereas about 40% of domestic connections are concentrated in the Kathmandu valley(Thapa, Bhekh B.et al, 1995).

In the journal “Hydro Nepal” Mr. Anil Kumar Shah (January, 2008) has viewed on his article entitled “Banker’s perspectives on hydropower sector and traced out on the possibilities and problems associated with it. In his words, “the financial sector has identified hydropower development as a lucrative financial opportunity. The success stories of few hydropower projects developed by independent power producers in the recent past have also helped to create positive market interest and response. On the other hand, the risks are relatively high in this sector due to its technical nature, the necessity of huge finds and longer gestation as well as repayment periods. The financial sector is entering the energy sector gradually by taking some exposure, preferring to share the risk amongst various banks and developing consortium financing.

The funds available in the local market are able to support projects with a capacity of 20-50 MW only for mega projects we will have to seek help from foreign institutional investors. As such, a new market for debentures, bonds or even mutual funds will open up. This will spread to mass. In the event of an open market, by the year 2010 international banks will also enter Nepal. This, in turn, will increase the capacity of financial sector. Therefore, now is the right time to start lending in the sector to gain required experience and hold in the market.

In the magazine Hamro sampada, Mr. Baburam Bharadwaj (2064 Falgun) has written an article entitled some thought on hydropower development in Nepal. “In this article he has focused on the opportunities, challenges and issues.

He has added about opportunity on hydropower in Nepal that “From the study of 229 potential projects of different size in Nepal a technically feasible capacity of 42,133 MW has been derived. Among these 229 identified potential sites there are 157 projects between 10-100 MW, 47 between 100-300 MW; and 5 above 1000 MW. Total they make 176,764 GWh/year generations potential. Till now only 585

MW (less than 2% of the economically feasible capacity) has been harnessed. Availability of various sizes(pico, Micro, Mini, Small, Medium to large) ranging from few kilowatts to as big capacity as of 10,800 megawatts sites adds further attraction to different domestic as well as international investors. The Karnali and Mahakali River Basin that lies in the western part of Nepal has the largest potential (36,180 MW technically feasible and 25,125 MW economically feasible and the largest single scheme identified so far in Nepal the Karnali Chisapani storage scheme (10,800 MW) lies in this basin. The basin not only has highest potential but also has the highest percentage of economically feasible potential (59.63). the basin with second largest potential is Saptakoshi River basin with 20,650 MW technically 10,860 MW economically feasible potential.

Nepal not only has potential for hydropower development but also has secured market place to sell the electricity. The electricity hungry Indian market also secures power export possibilities.

He has also focused about the challenges of hydropower development of Nepal, he said that hydropower development in Nepal not only opportunities but also packed with numerous challenges. The youngest geological formations where the construction of large structures like dams, tunnels and powerhouses are always of a hydropower scheme is always packed with large number of geological problems that demands a great degree of care and expertise. The capital-intensive nature and long gestation period of the development stage of the hydro projects further add uncertainties of return of investment. The political instabilities and frequent changing government policies regarding the tax structure further repels the investment in hydro power development. The complex environmental sensitive and further difficulties in getting government approvals, at the same time the requirements of the environmental mitigation works are becoming extra financial and managerial burden for the project. Though there are ample opportunities in domestic as well as Indian market to sell the generated electrical energy but it is not that simple and easy. Securing a long-term power purchase agreement with

NEA and with Indian power trading corporation is another hurdle. As the hydropower project requires large initial investment the availability of fund in local financial institution is also not developed to the required extent. Though the list of difficulties is very long and frightening but they are still manageable and are within the reach of the developers.

2.3 Review of Previous Related Thesis:

Prior to this study, several theses works have been conducted by many other students regarding the financial performance such as resource mobilization, lending policy, interest rate structure, investment policy, working capital management, capital structure etc. the gifts concluded by them is relevant and supposed to be worthwhile to this study.

Shrestha (1996), had done a research entitled "financial Power Development of Nepal: A case study of NEA", points out that the power is a capital intensive sector for country likes Nepal but there was no clear-cut policy for its development and its financing prior to the era of planned development. The trend of financial in power development shows that the Nepalese government only covers about 15 to 25 percent of investment is covered by foreign aid. The share of international loan is greater than the grant. The study also ways that the main issues of financial in power development is Nepal are the shortage of capital, dependency on foreign aid, constraints in exporting power, risk of investment etc. Frequent changes in the government policies and adequate legal provision, geographical complexity, lack of trained manpower and modern technology are other constraints. According to the study, observing the power deficiency problem, it can be said that there is market within the county. But while analyzing the country's market with respect to the economically feasible power potential and with the large scale projects, the scarcity of the sizable market is in front.

Basyal(2001), had done research entitled "Financial Analysis of National Trading Limited" points out that the total management performance of the company had reflected unsatisfactory financial state of affairs and most of the fund were applied for meeting operating loss alone.

Chaudhary (2001), had done research entitled “A study of financial statement of Janakpur Cigarette factory limited” concluded that the main defect of this company should try to maximize its financial activities (financing and investment) in near future. The company should invest their sources where the return is optimum. It should generate maximum possible sources i.e. successful operation of the companies’ activities. Regarding financing and investment strategy J.C.F should have a proper long term planning investment on capital budgeting technique to evaluate every investment alternative on the basis of its incremental benefit.

Koirala (2005), had done research entitled “A Study of Financial Performance of Nepal Telecom” concluded that financial performance of NTC has satisfactory results. This shows that NTC is maintaining the good liquidity position and the financial capacity of the firm to repay current liabilities. All other ratios are seen in satisfactory position besides average collection period, so NTC should make effective strategy to collect the receivables. It also lacks proper utilization of fixed assets in generating sales. Khanal (1999), “A study on Capital Structure of Industrial Public Enterprises” have selected samples from industrial public enterprises of Nepal and used financial ratio and correlation analysis as the tool of analysis. He concluded that the capital investment and earnings were not correlated. Most of the public enterprises were in loss position. He suggested that the management should improve their performance efficiency.

Poudel(2002), had done a research entitled “Financial Performance of Nepal Electricity Authority,” says that there is no effective utilization of assets in NEA. It has been seriously facing the problem of outstanding debt collection. From the overall analysis, NEA has generated very low returns. Increasing cost in each fiscal year is an important issue of NEA. It has adopted the cost control tools and techniques.

Shrestha (2004) had done research entitled "study on Profit Planning and Control of Public Utility Sector, A comparative Study of Nepal Electricity Authority and Nepal Telecommunication Corporation," has tried to find out some major problems of NEA and NTC.

Mr. Shrestha has conducted the study covering the time period of five years. Some major findings pointed by Mr. Shrestha are as follows:

- NEA and NTC both have no in depth analysis of the company's strength and weakness. Electricity leakage, theft and wastage is major problem of NEA wereas high demand and low supply is problem of NTC.
- Huge amount of cash and bank balance of NTC indicates some deficiency of organization to utilize its liquid assets. Expenses are not identified as fixed and variable in NEA and NTC. Leverage ratio indicates NEA is taking high risk while NTC is not. NTC is efficient in utilization of working capital, fixed assets and capital employed in generation of sales in comparison of NEA. NTC has higher profitability ratio than NEA.]

Eliza Amatya (2005) had done a research entitled "An Evaluation of Financial Performance of Nepal Electricity Authority", says that there is no effective utilization of assets in NEA. NEA has been facing the problem of outstanding debt collection. Though is in control over some years, it has been highly receivable of NEA is recorded high. The capacity of assets in the generation is not satisfactory and the revenue earned is very low in comparison to the investments made in assets.

Poudel (2006), has done a research entitled on "A Comparative Ratio Analysis of Nepal Electricity Authority (NEA), Nepal Water Supply Corporation (NWSC) and Nepal Telecommunication (NTC)", Some major findings concluded by Mr. Poudel are as follows:

1. NEA is using large amount of external source in its capital structure due to which interest expenses is high. Capital structure of seems somehow better than the capital structure of NEA but it does not have ideal debt equity

relation. The capital structure of NTC seems satisfactory and it is seen that NTC emphasized internal funding.

2. NEA and KUKL are not able to meet their internal expenses through operating profit. Due to high interest expenses net profit of this organization also affected adversely.
3. NEA and NTC have satisfactory inventory turnover but KUKL has poor proper stock management is lacking in KUKL.

Those about researches have pointed out the two common problems in another lack of efficiency in utilization of fixed assets.

The researcher recommended that both bank need to be improved their capital structure like as shareholders equity long-term debt and short-term debt. Bank should try to provide the better service their customers for earning to reasonable profit.

2.4 Research Gap

Although various studies have been conducted and many articles are published in the trend of financing in power development, shortage of capital, dependency on foreign aid, financial performance of NEA, some of above stated are focused on debt collection, low returns and income and expenses trends. NEA have no in depth analysis of the company’s strength and weakness. Some study has done only in the power generation. However, this study has been carried out to cover all aspects. In the context of this study, mainly focused financial position like capital structure of NEA, profitability trends, turnover trends and liquidity position of NEA.

CHAPTER-3
RESEARCH-METHODOLOGY

3.1 Introduction

A simple words, research means to search or study about a phenomenon. The research in composed by ‘re’ and ‘search’ where‘re’ means repeatedly or again and again, and ‘search’ means to investigate or find. Thus, search again and again and again is research. Research methodology is the way to solve systematically about the research problem. It is the application of scientific methods to the study of the universe.

In this chapter focuses have been made on research design, sample and population, nature and sources of data collection and tools used for analysis. In this research, one of the strong measures likes arithmetic mean, trend analysis, correlation and regression and probable error.

3.2 Research Design

Research design is the plan structure and strategy of investigation conceived so as to obtain answer to research questions. In order to make any type of research, a well set research design is necessary, which fulfills the objective of the study. This research work is analytical and descriptive as per the need of classification and arrangement of research work.

Analysis is made on the basis of post, so the research is also historical in nature. The accumulated data is presented, tabulated and described systematically under specific heading so as to meet the objective of the study. Thus, research design is a plan to obtain the answer of research question through analysis of data.

3.3 Population and Sample:

Among the all service providing organization, Nepal Electricity Authority is selected for the study which is the most crucial infrastructure developing organization. The objective is mainly focused with the financial performance analysis of NEA. The study comprises financial statement i.e. only balance sheet and profit and loss account of NEA.

3.4 Nature and Sources of Data

The main source of data for the purpose of this study is the published financial statements the NEA. The study is thus mainly based on the secondary data. It constitutes mostly the annual reports, which comprises balance sheet and profit and loss account statement. Information has also been supplemented from various publications of NEA. Through the study basically covers the secondary data. All other available published and unpublished materials 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. Presented 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 available secondary data.

3.5 Method of Analysis:

In order to make an analysis of available data, following methods have been employed.

a. Various books, journals, publications and other related literatures were as the first step to begin the study.
b. In order to process the data, first of all financial statement and other economic data were reviewed. They were grouped into various tables and charts, according to their nature. After that condensed balance sheet and income statement are prepared.

c. On the basis of obtained financial statement, balance sheet and profit and loss accounts, different tables are prepared and presented as required.
d. From the collected data, ratios are analyzed.
e. With the help of analysis, conclusions were drawn and recommendations were suggested.

3.6 Tools for Analysis:

For the sake of analysis, various financial and statistical tools are used. The major tool employed for the analysis of this study is the ratio analysis that establishes the quantitative or numerical 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 used for the study. The financial as well as statistical tools have been studied in brief in the following stages:

3.6.1 Financial tools

Financial statements are prepared not as end in themselves, but to assist users to make decisions. The financial statements, therefore, need to be interpreted the commonly and widely used means of conducting financial analysis is ratio analysis. Ratio simply expresses a quantitative relationship between tow figures. It, in general is a statistical yardstick through which the relationship between two figures can be compared and measured. Ratio analysis is the process of determining, interpreting and presenting the relationship of items and groups of items from the financial statements. Financial ratios help describe the financial conditions of a business firm, efficiency of its comparable profitability, and the perception of investors as expressed by their behavior in financial market. They often permit analysts and decision makers in partying post reveal strengths and weaknesses of the firm. The ratios are expressed as percentages, fractions, or proportions. The way a particular ratio is used depends on the need of a particular user. Through there are many categories of financial ratios, each serving the particular purpose is commonly categorized in four classes, liquidity, activity, leverage and profitability.

Ratio analysis may be done for a variety of purposes, which ranges from a simple analysis of the short-term liquidity position of the firm to a comprehensive assessment of the strengths and weakness of the firm in various areas. In other words, ratio analysis helps the analyzer to make quantitative judgment on the firms' financial position as well as performance.

It presents the actual situation of the organization and provides guidelines especially in spotting trend towards better or poor performance.

Ratio analysis has many managerial uses also. Ratio analysis helps in assessing the operating efficiency of the business and measuring the financial solvency. Not only these it helps in making quantitative judgment while decision making, taking connective action and forecasting future.

3.6.2 Types of Ratio Used;

a) Liquidity Ratio
b) Turnover Ratio
c) Profitability Ratio
d) Leverage Ratio

A) Liquidity Ratios: -

Liquidity ratios are used to analyze a firm's efficiency to met short-term obligations. Short-term liquidity includes the relationship between current assets and current liabilities. Two ratios are mainly used to measure the liquidity position.

i. Current Ratio
ii. Quick/Acid –test Ratio

1. Current Ratio:

Current ratio is the proportion of current assets to the current liabilities. Current ratio is also known as working capital ratio.

$$\text{Current Ratio} = \frac{\textit{Current Assets}}{\textit{Current liabilities}}$$

Current asset includes cash and those assets that can be converted into cash within a year such as account receivables, marketable securities, inventories and prepaid expenses. Creditor's bills for payment, accrued expenses, bank overdraft, income tax, liability, interest and long term debt within a year are included in the current liability.

Higher the current ratio, greater is the probability of timely and full payment for current liability, low ratio value indicates the firm will not be able to pay its future bills. For an instance, 2:1 ratio is considered acceptable for many firms.

2. Quick/Acid Test Ratio;

Quick ratio is the proportion of quick assets to current liabilities which is more accurate measure of liquidity rather than the current ratio. The quick ratio is calculated by dividing the total quick assets by current liabilities.

$$\text{Quick Ratio} = \frac{\textit{Quick Assets}}{\textit{Current Liabilities}}$$

Quick Assets= Current- Inventories

Inventories and prepaid expenses are considered to be less liquid as the emphasis is on ready availability of cash. Quick ratio is considered to be better than current ratio for the test of financial soundness of a firm. As a guideline 1:1 quick ratio is believed optimum for many firms. Higher ratio indicates that the firm has excessive quick assets and indicates inefficient management. A ratio with a low value indicates that payments of bills on time would be difficult in future.

B) Turnover Ratio:

Turnover ratios involve comparison between the level of sales and investment of various assets. Funds of creditors and owners are invested in various assets to generate sales and profit. The better management of assets, the large amount of sales. The activity ratios are employed to evaluate the efficiency with which firm manages and utilizes its assets. A proper balance between sales and assets generally reflects that assets are managed well several activity ratios can be calculated to judge the effectiveness of asset utilization. Following four turnover ratios are generally used in practice.

1. Fixed Assets Turnover Ratio
2. Total Assets Turnover Ratio
3. Inventory Turnover Ratio
4. Average collection period

1. Fixed Assets Turnover Ratio;

Fixed assets turnover ratio measures the efficiency with which the firm utilizes its investment in its various net fixed assets. It is calculated as:

$$\text{Fixed Assets Turnover Ratio} = \frac{\textit{Total Sales in a Year}}{\textit{Net Fixed Assets in a Year}}$$

Net fixed asset is defined by difference between gross fixed assets and cost of depreciation. Generally high fixed asset turnover ratio indicates efficient utilization of fixed asset while inefficiency in utilization is shown by low fixed asset turnover ratio.

2. Total Assets Turnover Ratio:

Total assets turnover ratio indicates the sales generated per rupee of investment in the total assets.

$$\text{Total Assets Turnover Ratio} = \frac{\textit{Total Sales in a Year}}{\textit{Total Asset in a Year}}$$

Total assets constitute the fixed assets as well as current assets and investment of the firm. Generally higher turnover ratio shows efficiency in utilization of firm's scarce resources and vice-versa.

3. Inventory Turnover Ratio:

Inventory turnover ratio is defined as a ratio between sales and inventory.

$$\text{Inventory Turnover Ratio} = \frac{\textit{Total sales in a Year}}{\textit{Inventory in a Year}}$$

Inventory turnover ratio shows how rapidly the inventory is turning into receivable through sales. Generally, high inventory turnover is the indication of good inventory management and lower inventory. Turnover suggests an inefficient inventory management. A relatively higher inventory turnover ratio will overall a lower one that results frequent stock out and raises the cost of the firm.

4. Average Collection Period:

The average collection period provides the average turnover days of receivable and outstanding, the average times it takes to convert them into cash. The average collection period is computed in two steps.

a. Annual sales divided by number of days in a year (360 days) to get the average daily sales.

b. Account receivable is divided by daily sales to find out the number of days tied up in receivable.

$$\text{Sales per Day} = \frac{\textit{Total Sales in a Year}}{\textit{No. of Days in a Year}}$$

$$\text{Average Collection Period} = \frac{\textit{Receivable}}{\textit{Net Sales/365}}$$

Short average collection period shows the timely payment of debt but it may suggest an excessive and restrictive credit policy of firm. Too long average collection period indicates inefficiency of the firm in collection of receivables.

C) Profitability Ratio

Profitability ratio measures success of a firm to achieve return of the total sales or of the investment. It gives information regarding how effectively the firm is being managed. Profitability ratio can be classified in to following major groups.

1. Net Profit Margin
2. Operating Expenses Ratio
3. Return on Total Asset.

1. Net Profit Margin:

The net profit margin establishes the relationship between net profits as sales.

$$\text{Net Profit Margin} = \frac{\textit{Net Profit in a Year}}{\textit{Total sales in a Year}}$$

Net profit, here is defined as firm's profit after taxes excluding other charges such as dividend and other provisions. The ratio measures the firm's ability to change each rupee sales into net profit. In other words, if the net profit margin is inadequate the firm will fail to satisfactory returns on owner's equity.

2. Operating Expense Ratio:

Operating expense ratio is the yardstick of operating efficiency, which computed by dividing operating expenses by sales.

$$\text{Operating Expenses Ratio} = \frac{\textit{Operating Expenses in a Year}}{\textit{Sales in a Year}}$$

Operating expenses constitute administrative and selling expenses excluding interest. In general higher operating ratio indicates the inefficiency due to higher operating cost in terms of sales; lower operating ratio is favorable since it will generate higher operating income, which will be sufficient to meet interest, dividend and other expenses of the firm.

3. Return on Total Asset:

Return on total assets ratio is the proportion of net income after taxes plus interest expenses to total assets.

$$\text{Return on Total Assets} = \frac{\textit{Net Income after Tax} + \textit{Interest}}{\textit{Total Assets}}$$

It is the rate of return earned by the firm for all its investments including the lenders. Higher return on total assets ratio shows higher earning of the firm in terms of its total assets. Lower ratio indicates unsound financial position due to level of return.

D) Leverage Ratio:

Financial leverage ratios are calculated to judge the long-term financial position of the firm. This ratio indicates the mix of fund provided by owners and lenders. The short-term creditors like bankers and suppliers of new material are more concerned with the firms' current debt paying ability on the other hand, long-term creditors like debenture holders; bondholders etc. are 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. As a general rule, there should be an appropriate mix of debt and owner's equity in financial mix of the firm's assets.

The manner in which assets are financed has a number of implications. Debt is considered to be more risky in compare to equity. The firm has a legal obligation to pay interest to debt holders, irrespective of the profits made of losses incurred by the firm. If the firm fails to pay the debt holders in time, they can take legal action against to get payments and in extreme cases can force the firm into liquidation. On the other hand employment of debts is advantages for shareholders in two ways, they can retain control of the firm with a limited stake, and secondly their earning will be magnified when the firm earns a rate of return on the total capital employed. The process of magnifying the shareholders return through the employment of debt is called financial leverage:

The leverage ratio consists of:

1. Total Debt to Total Assets Ratio
2. Debt-Equity Ratio

1. Total Debt to Total Assets Ratio:

The ratio between total debt and net assets is called, total debt ratio. Total debt will include short and long term borrowings from financial institutions, debentures, bonus, deferred payment arrangements for buying capital equipments and bank borrowings, public deposits and any others interest bearing loan.

$$\text{Debt Ratio} = \frac{Total\ Debt}{Total\ Assets}$$

2. Debt-Equity Ratio:

The ratio between total debt and net worth is called debt-equity ratio.

$$\text{Debt-Equity Ratio} = \frac{Total\ Debt}{Net\ Worth}$$

3.6.3 Statistical Tools:

Statistical methods are the mathematical techniques used to facilitate the analysis and interpretation of numerical data scared from groups of individuals of groups of observations from a single individual. The statistical analysis is one particular language, which describes the data and figures and complicated problems can be studied in very simple way. It becomes possible to convert abstract problems into figures and complex data in the form of tables. There are various methods of statistical analysis of them, we use only trend analysis.

a. **Average:**

An average is the figure representing even distribution among the included elements or terms. It is calculated by dividing the sum of the elements with number of elements.

$$\text{Average Value} = \frac{\sum X}{N}$$

Where X is total summation of given sales, costs etc.

N is total number of years.

b. Trend Analysis:

Trend analysis is basically the analysis of time series in which the statistical data are arranged in accordance with their time of occurrence. It shows the relation between two variables and one of them is time. It mainly helps in understanding the past behavior of the variables in the data which helps in identification of the causes and circumstances which lead to a particular behavior of the data. It also helps in future forecasting and planning with the help of the past and present data and the factors affecting them. There are various methods of trend analysis among which the method of least square is widely used one. So, we have also chosen the same method in our analysis.

Methods of Least Square

This method is most widely used in practice for the purpose of finding the general movement of a variable or variables. It is the mathematical methods using for various purpose. With the help of this period, a trend line can be fitted to the data in a manner that the following two conditions are satisfied.

$\sum(Y-Yn) = 0$……………………..(i)

Where, Y= the actual value of dependent variable.

Yn= the computed value for different (n) periods.

N=1,2,3……………….n

$\sum(Y-Yn)^2$ is least i.e. the sum of the squares of the deviations of the actual and computed value is least from this line and hence, the method named least square. The line obtained by this method is the "the line of best fit". The method of least square may be used either to fit straight trend line or parabolic trend line. The straight trend line is represented by the equation.

$Y= a+bx$

Where, Y is used to designate the trend values to distinguish them form the actual 'a' is the intercept 'b' is slope of the trend line, and 'x' is independent variable. In order to determine the values of constants 'a' and 'b' the following two normal equations are to be solved.

$\sum Y$=Na + b $\sum x$……………………(i)

$\sum xy$= a$\sum x$ + b$\sum x^2$............................(ii)

Where, N= Total numbers of years.

It can be measured. The variable 'x' from any point of time in the origin such as the year, but the computation is very simple when using least square method. Under this method, the midpoint (in terms of time) is taken as the origin because the preceding and following values are negatives and positives accordingly, so that the summation of independent variable ($\sum x$) is equal to zero. In other words, the time variables as an independent variable is measured as a deviations from its mean which ultimately result to zero as a sum of deviations of 'x' from 'x' since $\sum$(X-X)=0, the above two normal equations would take the form as follows,

$\sum Y$= Na………………(iii)

$\sum XY$ =b$\sum X^2$…………….(iv)

The value of 'a' and 'b' can now be determine easily like this, since,

$\sum Y$ = Na

A= $\sum Y$/N…………….(v)

Since,

$\sum XY = b\sum X^2$

b =$\sum Y/\sum^2$

The constant 'a' simply equal to the mean of y vales and the constant 'b' is rate of change i

Graph: graph helps to show the general trend of the ratios in respect to the time period. A very common and simple way of presenting data for two variables. Which have a relationship, is in a figure or char or a graph? Graph works best when the data is continuous.

3.7 Method of Presentation and Analysis:

Simple methods of analysis have been used. Data presentation and analysis are divided into small sub-topics. Every result has been tabulated and clear interpretations have been given simultaneously. Details of calculation are presented at the end of the report. Tables, diagrams and graphs have been used to make report clear and easily understandable. Summary, conclusion and recommendations have been presented at the last chapter of the report.

CHAPTER-4

ANALYSIS AND INTERPRETATION OF DATA

4.1 Introduction

This chapter highlights the financial position of NEA the tools used of the purpose of the analysis have been discussed in detail in the research methodology. Some financial and statistical tools have been use to evaluate the financial position of NEA. The financial tools include ratio analysis between various variables where as the statistical tools include graphical presentation as well as regression analysis between some to the variables. The major variables 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 presentations and various financial ratios reflecting the relationship among variables affecting financial performance with the help of ratio analysis, the financial performance of NEA has been analyzed and interpreted so that the strengths and weakness of the NEA as well as its historical performance and current financial condition can be determined.

The operational target for the current fiscal year and the impact it will leave in the financial position in coming future can be ascertained. The single ratio cannot indicate the favorable or unfavorable condition of NEA. It should be compared with some standard for evaluation. Therefore the average ratio from the actual ratios of 9 years period have been calculated and used as a standard the ratios used have been described as below.

4.2 Liquidity position

Liquidity ratios are used to judge an organizations ability to meet its short-term obligations. 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 Current Ratio (CR):

Current ratio measures the liquidity position of the organization. The standard current ratio should be 2:1 and it is also defined by the nature of the organization. As already discussed in chapter three, the current ratio is a measure of liquidity calculated by dividing the firm's current assets by current liabilities. The position of current ratio and the values of current assets and current liabilities according to NEA balance sheet are tabulates as below.

Table No.1

Calculation of Current Ratio (Rs. In Millions)

Year	Current Assets	Current Liabilities	Current Ratio
2001	6313.60	6113.70	1.03:1
2002	7322.00	10096.99	0.73:1
2003	7690.48	12347.00	0.63:1
2004	7883.41	14538.09	0.54:1
2005	8491.60	17466.39	0.49:1
2006	8995.30	19854.19	0.45:1
2007	10322.91	22812.13	0.45;1
2008	11178.08	26213.39	0.43:1
2009	9736.55	28480.84	0.34:1
Average	8659.33	17546.96	0.56:1

Sources: NEA Balance sheet 2008/2009

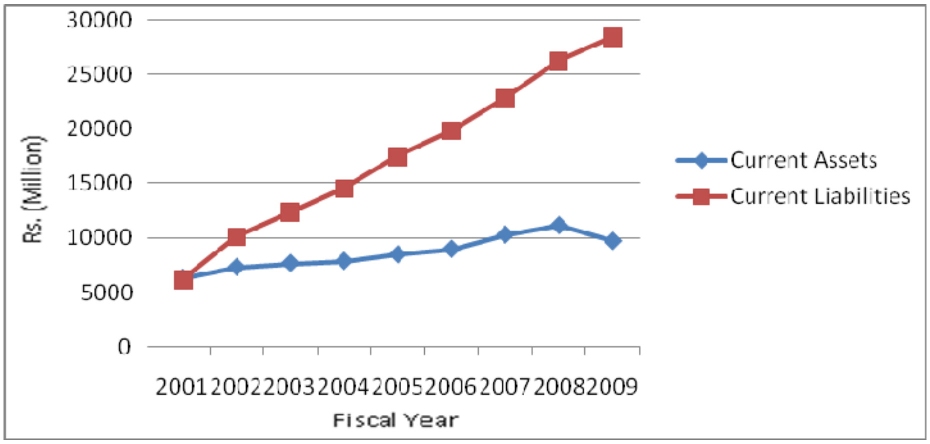
Analyzing over the trend of current ratio of NEA over 9 years, it can be observed that NEA's current ratio is always less than the standard norm of 2:1. Current ratio is decreasing phase. According to above table the current asset of NEA has increased from Rs. 6313.60 million to 11178.08 million in year 2001 to 2008 but has decreased in year 2009. Whereas current liabilities varied from Rs. 613.70 to Rs. 28480.84 increasing highly.

According to table no. 1 the average current ratio is 0.56 times. The current ratio in the year 2001 was recorded 1.03 times. Similarly the current ratios were recorded as 0.73, 0.63, 0.54, 0.49, 0.45, 0.5, 0.43 and 0.34 in the year 2002, 2003, 2004, 2005, 2006, 2007, 2008 and 2009 respectively. All over 9 years shows that the current ratio is below the average standard of 2:1 this shows that the liquidity position of NEA is very poor. It means that NEA was not in the position to meet its current obligations in the appropriate time that the current liabilities could not be covered by current assets, from the year 2001 to the year 2009 the current ratio has been in gradually declining position. It does not show the satisfactory position.

From the above table it can be seen that the volume of current assets from the year 2001 has been increasing gradually to the year 2008. Similarly the amount of current liabilities is increasing gradually form the year2001 to the year 2009.

Increasing rate of current liabilities is higher than the current assets. The analysis showed that NEA has tried to follow a consistent trend in its working capital management policy. There has been change in the current assets depending upon the changes in its production and sales.

Fig. 1 Graphical presentation of Current Assets and current Liabilities:



The graphical line of current assets and current liablities above shows that the current asset is increasing slightly from the starting year but decreasing after 2008. The current liabilities increasing very highly up ward slopping with regards to its overall liquidity position it can be considered that there is no satisfactory tradeoff between current assets and current liabilities i.e. current assets were not enough to pay off if current liabilities.

4.2.2 Quick Ratio:

The quick ratio is more accurate guide to measure the liquidity position of the firm. The ratio establishes the relationship between quick or liquid assets and current liabilities. Liquidity of an asset can be measured by it's virtue of immediate conversion into cash without the loss of value. Cash is the most liquid asset. Book debt and marketable securities are relatively, liquid whereas prepaid expenses are considered relatively less liquid. So, the calculation of quick ratio include only three types of assets those are relatively more liquid. It can be found out by dividing the total of quick assets by the total of current liabilities the quick ratio of NEA is presented in the table.

Table No. 2

Calculation of Quick Ratio(Rs. In Millions)

Year	Current Assets	Prepaid Exp.	Inventory	Quick Assets	Current Liabilities	Quick Ratio
2001	6313.60	2634.90	960.90	2717.80	6113.70	0.44:1
2002	7322.00	3314.40	1058.10	2949.50	10096.99	0.29:1
2003	7690.48	2216.91	1017.22	4456.35	12347.0	0.36:1
2004	7883.41	2063.27	1048.01	4772.13	14538.09	0.33:1
2005	8491.60	2098.60	1372.70	5020.30	17466.39	0.29:1
2006	8995.30	2293.90	1354.80	5346.60	19854.19	0.27:1
2007	10322.97	2225.53	1498.45	6598.99	22812.13	0.29:1
2008	11178.08	2319.72	1800.13	7058.22	26213.39	0.27:1
2009	9736.55	2417.15	1856.41	5462.99	28480.84	0.19:1
Average	8659.33	2398.36	1329.63	4931.43	17546.96	0.30:1

Source NEA Balance Sheet of FY 2008/09

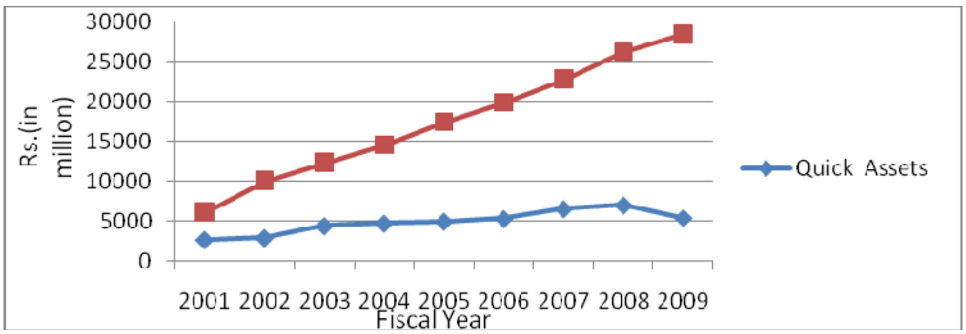
Quick ratio measures the liquidity position of the organization and the standard quick ratio should be 1:1, which is also defined by the nature of organization. The quick ratio shows the ability for payment of immediate current debt from current assets. Table-2 shows the quick ratio is very poor and unsatisfactory. Quick ratio is fluctuating from 2001 to 2009. The quick ratio less the 1:1 every year and also declining position. The average quick ratio is only 0.30 it is not satisfactory. Thus, NEA is in poor condition in meeting its current obligations.

Quick assets increased from Rs 2717.80 million to Rs 7058.22 million from the year 2001 to 2008 but in 2008 decreased to 5462.99 the increasing tendency in current liabilities is more than increasing tendency in quick assets. Throughout all these year NEA is considered unable to meet its short-term obligations and cannot pay immediate current debt, which may lead to unfavorable circumstances to the business.

It can be observed from the table that the quick assets have not grown at par with current assets primarily because; NEA has accrued a lot of less liquid assets like inventory and prepaid expenses.

There was not much difference between the trend of quick and current ratios. If inventories were unnecessarily tied up in the working capital of NEA, the case would be different. The analysis showed the comparison of these two current and quick ratios. The position of quick ratio was better than current ratios.

Fig,2-Graphical Presentation of Quick Assets and Current Liabilities.



The above graph shows that the quick assets is in fluctuating position as it is slowly increasing in year 2008 and then declines in 2009 similarly, the current liability is increasing highly every year.

4.3 Turn-over Ratios

How effectively the assets are utilized can be judged by using different types of turnover ratio. In the case of NEA, evaluation of fixed assets turnover ratio, Total assets turnover, debtor's turnover

And average collection period was made to judge the utilization assets.

4.3.1 Fixed Assets Turnover Ratio (FATOR):

Fixed assets turnover ratio measures the efficiency with which the firm is utiliz0ing its investment in its various ne fixed asset the ratio expresses that a rupee of investment in a net fixed asset generates the resulted sale. Generally, high fixed assets turnover ratio indicates efficient utilization of fixed asset while inefficiency in utilization is shown by low fixed turnover ratio. The FATOR of NEA has been calculated by taking revenue from sales and total fixed assets as in the following table to know how effectively the fixed assets are being utilized in NEA.

Table No.3

Calculation of Fixed Assets Turnover Ratio (Rs. In millions)

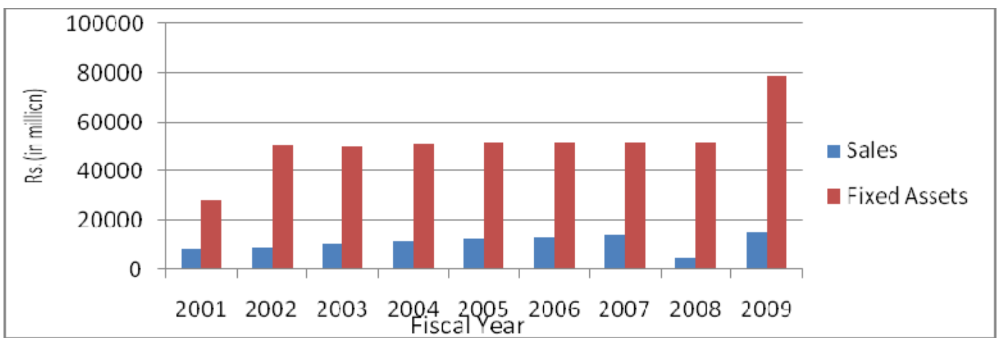
Year	Sales	Fixed Assets	FATOR
2001	8160.80	28238.26	0.29
2002	9476.20	51080.91	0.18
2003	11012.60	50094.75	0.22
2004	11874.70	51415.14	0.23
2005	12605.20	52166.56	0.24
2006	13331.90	51743.38	0.26
2007	14449.73	51781.76	0.28
2008	5041.49	52030.28	0.29
2009	15220.87	78678.89	0.19
Average	12352.61	51914.44	0.24

Sources: NEA Balance Sheet 2008/09

The fixed assets turnover ratio is calculated by dividing sales by total fixed assets. Above table no. 3 along with increase in the net sale of electricity, the fixed assets of NEA have also increase every year except year 2003. It has varied from Rs. 28238.26to Rs. 78678.89 million from the year 2001 to the year 2009. NEA has been expanding its services throughout the country for which it requires additional fixed assets like land and building, plant and machinery, solar power plant transmission line, substations etc. thus the fixed assets of NEA have been increased every year with addition plant and power generation capacity.

The fixed assets turnover ratio shows the poor utilization of fixed assets within the organization. The average FATOR is 0.24 that mean that a rupee investment in the fixed assets of NEA is generating sales worth of Rs. 0.24 only. This indicates the poor utilization of fixed assets may be the asset remaining idle without any use. Sales didn't seem to have expanded along with investments in fixed assets has increased by 2078 times in the year 2009, compared to 2001 and the increase sales was only 1086 times by 2009. One of the main causes for the low volume of electricity sales was also due to the leakage and theft for which NEA must make a god control system.

Fig.3 Graphical Presentation of Sales and Fixed Assets.



The fig. no. 3 the bar chart of sales and fixed assets above shows that the scale of NEA is increasing gradually in compare to fixed assets. The fixed asset of NEA declines in year 2003 and 2006 after which it inclines gradually till year 2009.

In conclusion, through the sale gradually increasing in respect of fixed asset, fixed assets turnover ratio of 0.24 is not a satisfactory turnover. The fixed asset comprises almost 90 percent of total assets of NEA and these assets are supposed to provide revenue to the firm. The poor assets turnover was the cause of inefficient utilization of these assets and there has been high investment in the unproductive fixed assets like land and building the low sale of electricity is the result of electricity leakage, low sales to the industrial sector etc. through the study shows the gradual improvement in the FATOR to meet its objective and goals, NEA should look for the effective utilization of available resources.

4.3.2 Total Assets Turnover Ratio (TATOR):

Total assets are the sums of fixed assets and current assets of the firm. Fixed assets have direct effect on the generation of the sales revenue. Total assets turnover ratio indicates the sales generated per rupee of investment in the total assets. Total assets constitute the fixed assets as well as current assets and investment of the firm. Generally, higher turnover ratio shows efficiency in utilization of firm's scare resources and vice-versa. The total assets turnover ratio of NEA has been computed by talking the data of net sales from the sale of electricity services.

Table No-4

Calculation of Total Assets Turnover Ratio (Rs. In Millions)

Year	Sales	Total Assets	TATOR
2001	8160.80	58708.96	0.14
2002	9476.20	63793.71	0.15
2003	11012.60	67053.72	.016
2004	11874.70	70631.10	0.17
2005	12605.20	77495.56	0.16
2006	13331.90	83550.08	0.16
2007	14449.73	92131.97	0.16
2008	15041.49	100528.26	0.15
2009	15220.87	108790.01	0.14
Average	12352.61	80298.15	0.15

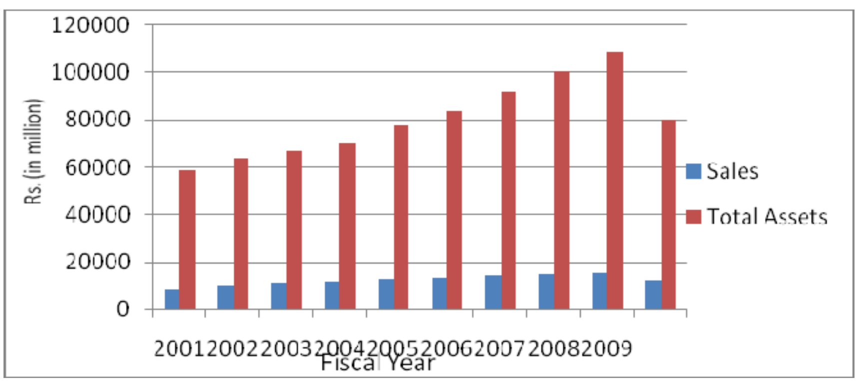
Sources: NEA Balance Sheet 2008/09

The investment on assets has increased in each year as compared to the revenue generating ability. According to the table no. 4 the gross operating revenue of

NEA has increased each year. Investment on assets has varied from Rs. 58708.96 to Rs. 108790.01 million from the year 2001 to the year 2009.

The total assets turnover ratio showed the ability of generating revenue from all the financial resources committed to the NEA. The total assets turnover ratio indicates the sales generated per rupee of investment in total assets. In 2001, NEA has earned Rs. 0.14 per rupee of its investment in total assets. The TATOR is fluctuating position. Looking some in same years, the result reflects, the very poor status of the ratio. The average fixed assets turnover ratio during these periods is calculated to be 0.15 as compare to rupee 1 investment in the total assets. The position of TATOR indicates that some major portion on NEA's assets is remaining idle or they were not properly utilized.

Fig.4 Graphical Presentation of Sales and Total Assets:



Total assets of the NEA are increasing gradually in every year and the sales of NEA are increasing slightly per year. The average return on total assets of NEA indicates that there has been up planned investment in the assets of NEA without making proper analysis of cost and benefits attention did not seem to be paid in the revenue generation aspects of assets and their effective utilization as well as the costs of investments. The main cause of decrease in total assets turnover ratio was in the low volume of sales in comparison to the investments made. NEA has remaining idle assets or they were not properly utilized. The result of total assets turnover ratio does not see to be satisfactory.

4.3.3 Inventory Turnover Ratio (ITR):

The inventory or stock turnover indicates the efficiency of the firms' inventory management. Inventory turnover ratio of NEA for the study period is presented in the table below:

Table NO.5

Calculation of Inventory Turnover Ratio (Rs. In millions)

Year	Sales	Inventory	ITR(in times)
2001	8160.80	960.90	8.49
2002	9476.20	1058.10	8.95
2003	11012.60	1017.22	10.83
2004	11874.70	1048.01	11.33
2005	12605.20	1372.70	9.18
2006	13331.90	1354.70	9.84
2007	14449.73	1498.45	9.64
2008	15041.49	1800.13	8.35
2009	15220.87	1856.41	8.19
Average	12352.61	1329.63	9.42

Sources: NEA Balance Sheet 2008/09

The study shows that the inventory ratio of the Nepal Electricity Authority is 9.42 times on average. It varied from 8.49 times in 2001 and 11.33 times in 2004 then decreased to 8.19 times in 2009. It followed fluctuating trend for the study period during 2001 to 2009. It showed that NEA's inventory management might be efficient. However, it needs to be recorded that NEA is not an organization that needs large amount of inventory. The only inventory required is parts and components.

4.3.4 Average Collection Period and Debtor's Turnover Ratio:

One of the major challenges with NEA at present in the problem of receivable management. It was due to mismatch of collection and its turnover. Observing the nine years data the important variables like receivable, net revenue from sales have been considered to show their relationship with each other on a period wise analysis.

The relationship between receivable and net revenue from sales. The receivable turnover ratio and average collection period were computes. The average collection period tally the average turnover of the days receivable and outstanding, the average times it takes to convert them into cash. Short average collection period shows the timely payment of debt and long average collection period indicates inefficiency of the firm in collection of receivables.

Table No.6

Calculation of Average Collection Period and Debtor's Turnover Ratio (Rs. In millions)

Year	Sundry Debtors and Receives	Sales	Collection period in days	Debtor's Turnover Ratio (Times)
2001	1678.05	8160.80	75.07	4.86
2002	2284.90	9476.20	88.00	4.14
2003	3350.20	11012.6	112.03	3.25
2004	3735.71	11874.7	114.83	3.18
2005	3697.10	12605.2	107.07	3.41
2006	4088.00	13331.9	111.92	3.26
2007	5154.41	1449.73	130.12	2.80
2008	5721.08	15041.49	138.83	2.63
2009	4765.88	15220.87	114.28	3.19
Average	3883.71	1235.61	110.24	3.41

Sources: NEA Balance sheet 2008/2009

$$\text{Average collection Period} = \frac{\textit{Receivable}}{\textit{Net Sales/365}}$$

$$\text{Debtor's turnover Ratio} = \frac{\textit{Sales}}{\textit{Receivable}}$$

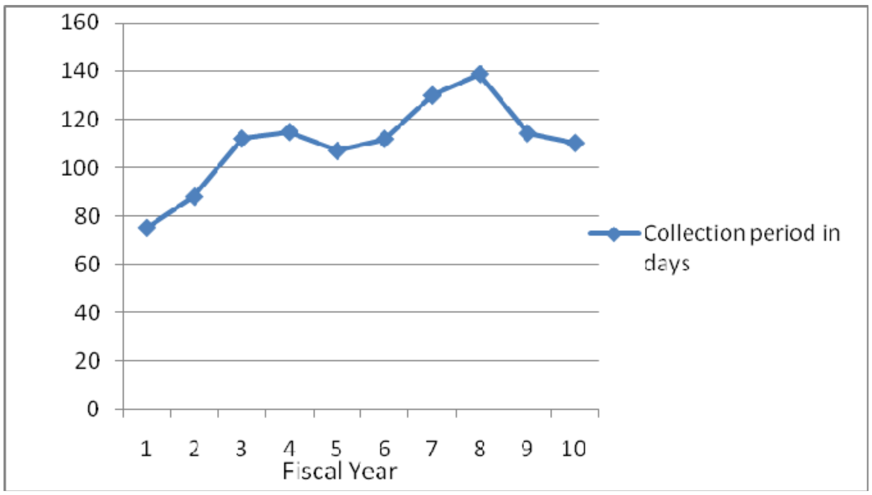
Average collection period provides the information about the liquidity of the shorter the collection period, better is the debtor's turnover ratio. Higher duration of collection period means tying the wealth of the business in the form of debtors.

We can see from the table No. 6 that the receivable is in increasing trend. The revenue from the sale of electricity is also in increasing trend. The average collection period for the period 2001 was 75 days and reached to 88 days in 2002. The average collection fluctuating, trend, looking poor collection condition. The collection period reached extremely higher in the year 2008 and reached to 138 days.

Collection period is almost consistent. However, the average collection period is 110.24 days in 9 years. There is no nay standard average collection interim government and ineffectiveness in revenue collection. NEA has realized the important of the expediting the collection period and has made same significant steps to improve the condition. It has used the discounting system for the timely submission of the bills. For those who pay bills in time, it offers 4% discount. Apart from that, it has also been using the technique of mobile team for the collection efforts.

There is adversely relationship between average collection period and debtors ratio. The table and graphs also shows same condition which is mentioned above. On the basis of this it may be concluded that lower the collection period means the NEA gets recovered its cost quickly and so the turnover will be high. It shows that such low turnover of receivable or longer receivable collection period has greatly blocked the amount required for the working capital. The amount of revenue from sales has increased higher than the increase in amount of receivable.

Fig.5 Graphical Presentation of Average Collection Period



The above graph shows average collection period of NEA. According to the trend line, the average collection period of NEA is fluctuating. It shows that the collection of bill is not satisfactory as it is increasing except in some of the years that show the satisfactory collection period. NEA being a government corporation although with an autonomous status did not seem to be serious in collecting the outstanding receivable looking at the various reports.

NEA should take it seriously in the matter of collection of revenue. The NEA should improve the behavior and culture of the staff and it should be client oriented on the other hand initiatives and corrective actions should be taken in revenue collection from different sectors especially dues with government agencies and institutions, which seemed to be the greatest defaulter. Finally it can be said that there is no any clear policy for debt management in Nepal Electricity Authority.

4.4 Profitability Ratios (PR):

A company must earn sufficient amount to survive and sustain in the future without profit n firm can exist and the future of the company will be dark. Therefore are the measures of a firms earning capacity and operation efficiency. Profitability ratios of the firm can be calculated in relation to sales and in relation to investment. Higher the profitability, better the financial position of the company and vice-versa.

4.4.1 Net Profit to Sales:

From this ratio the relation between sales and net profit becomes clear. The amount after subtracting the whole operating expenses, income tax, interest etc. from the gross profit is knows as net profit. The ratio measures the firm's ability to change each rupee sales in to net-profit.

Table No-7

Status of Net Profit on Sales Position (Rs. In Millions)

Year	Sales	Net Profit	Net Profit to Sales (%)
2001	8160.80	-51	-0.62
2002	9476.20	-860.70	-9.08
2003	11012.60	-1953.70	-17.74
2004	11874.70	-1760.30	-14.82
2005	12605.20	-1312.81	-10.41
2006	13331.90	-1267.80	-9.51
2007	14449.73	240.78	1.67
2008	15041.49	-961.47	-6.39
2009	15220.87	-4681.24	-30.75
Average	1235.61	-1400.91	-10.85

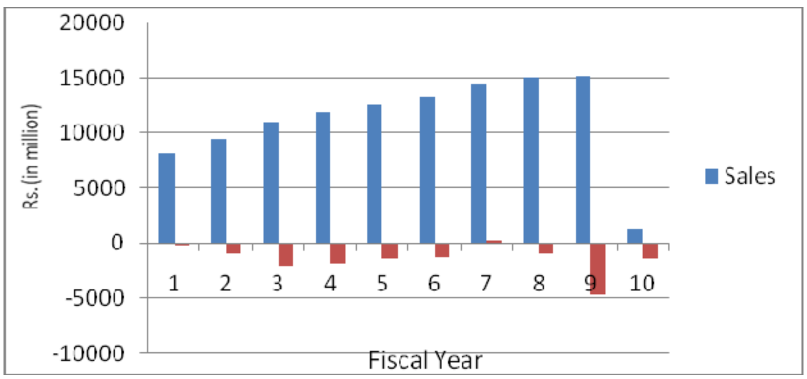
Source: NEA Balance Sheet 2008/09

The ratio of net profit to sales shows the profitability of corporations indicating that the only increase in sales doesn't mean anything unless it commands. Profit from this ratio it can also be acquired the information of the total expenses incurred auditors certain period of times.

According to the table-7 NEA has been suffering from heavy losses particularly in the year 2009 amounting nearly to 4700 million it is shows very critical condition. How the NEA operating its activities. Similarly the NEA was losses by 51 million in year 2001. The loss of NEA has been increasing every year but in year 2007 the NEA has been success to earn 240.78 million after that the losses has been increasing trend. The reason behind those after that the losses were heavy operating expenses, increasing burden of interest on long term loan and prior years expenses adjustment. Depreciation, doubtful debts and deferred expenditure have also become instruments to cut of profit margin.

It's really a matter to question that in this condition how can continue operate NEA. NEA has incurred heavy losses in the recent post in spite of sharp rise in its revenue. So, enhancement of revenue is not enough to earn the profit. The cost is going high especially because of the delayed projects which are really an area of paramount concern for NEA. If it can work in this area, the operating expenses, debt serving costs both would come down to declare a healthy financial statement by NEA.

Fig.6 Graphical Presentation of Profit and Sales



The above bar chart of profit and sales of NEA shows that the losses of NEA are increasing. NEA has been facing losses from 2001 but in 2007 seems to be satisfactory. The expenses in NEA still does not seems to be in due control therefore the management of NEA should take initiative actions to reduce unnecessary and wasteful expenses.

4.4.2 Net Operating Ratio (NOR)

This ratio shows the relation between operating expenses and sales value. The information about the cost structure can be obtained from this ratio. This ratio computed by dividing operating expenses by sales. The operating ratio is the yardstick of the operating efficiency of any firm. In general higher operating ratio is inefficient due to higher operation cost in terms of sales. Lower operation ratio is favorable, as it will generate higher operating income, which will be sufficient to meet interest divided and other expenses of the firm.

Table No.8

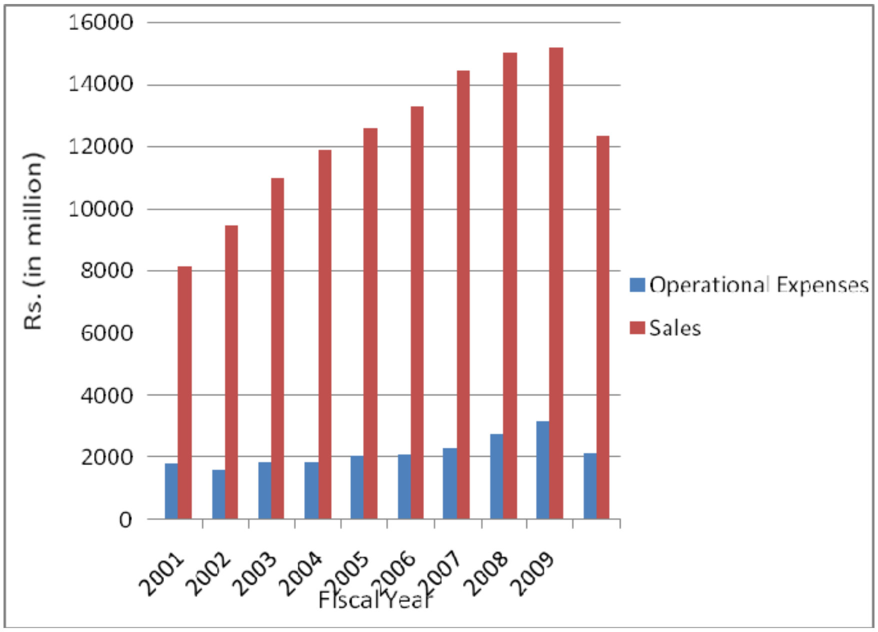
Calculation of Net Operating Ratio (Rs. In millions)

Year	Operational Expenses	Sales	NOR(%)
2001	1832.30	8160.80	22.45
2002	1621.80	9476.20	17.10
2003	1844.70	11012.60	16.75
2004	1865.20	11874.70	15.70
2005	2106.60	12605.20	16.71
2006	2123.20	13331.90	15.92
2007	2312.98	14449.73	16.01
2008	2793.99	15041.49	18.57
2009	3167.34	15220.87	20.81
Average	2185.46	12352.61	17.78

Source: NEA Balance Sheet 2008/09

The average operating ratio of NEA has remained 17.78% this means that 17.78% of revenue was consumed by operating expenses and allowed 82.22% of revenue to cover interest and other charges. The ingredients of operating expenses which have been instrumental in the rise of the operating expenses are the depreciation which rose the mendously because of the heavy purchase of assets without commensurate intensification in revenue. In all these study period good margin of revenue has been left. In conclusion, operating expenses of Nepal Electricity Authority (NEA) during the study period could be termed satisfactory as it showed sufficient operating income to meet interest dividend and other expenses of the organization.

Fig.7 Graphical Presentation of Operating Expenses and sales:



The above graph shows that the sales of electricity is increasing rapidly btu the operational expenses rise slightly in compare to its revenue.

4.4.3 Return on Total Assets (ROTA)

Return on total assets sets the relationship between total assets and net profit. It is calculated to measure the profit after tax against the amount invested in total assets to ascertain whether the assets are being utilized properly or not. The return on total assets ratio measures the profitability of all financial resources employed in the firm's assets. The return on the total assets is the rate of return earned by the firm and whole for its investments including the lenders. Higher return on total assets shows higher earning of the firm in terms of its total assets. Lower ratio indicates unsound financial position due to low level of return. The following table shows the return on total assets of NEA over the study period of 9 years.

Table No. 9

Calculation of Return on Total Assets. (Rs. In Millions)

Year	Net Profit Before Tax	Total Assets	ROTA(%)
2001	-1.9	58708.96	0.00
2002	-717.40	63793.71	-1.12
2003	-455.90	67053.72	-0.68
2004	-1486.10	70631.11	-2.10
2005	-1312.381	77495.56	-1.69
2006	-1267.80	83550.08	-1.52
2007	314.20	92131.97	0.34
2008	-1018.86	100528.26	-1.01
2009	-4681.24	108790.01	-4.30
Average	-1180.87	80298.15	-1.34

Source: NEA Balance sheet 2008/2009

The above table shows that the return on total assets of NEA for the year 2001 is -1.12% it shows the very weak condition of NEA. In every year it seems to be negative but in 2007 the ratio is positive. The trend is fluctuating in the year 2009 it seems very unsatisfactory. The ratio is -4.30% it shows for such a big enterprises though, it showed poor condition. These following ratios were the result of heavy and uncontrollable general and operating expenses. The average return on total assets on NEA is also negative by 1.34%, which is not good. The reason behind the low return on total assets of NEA was mainly the excess investment made on assets than actually required and the ineffective utilization of the assets.

The overall ratio analysis indicates relatively poor performance of NEA. Hydraulic plants and machines are purchased in heavy amounts but they have not been made the most of capital “work in process” is blocking a huge amount of profit. Due attention should be paid to effectively use these assets.

4.4 Leverage Ratios:

4.5.1 Debt-Equity Ratio

The ratio between total debt and net assets is called total debt ratio. The debt equity ratio of NEA is table below:

Table No. 10

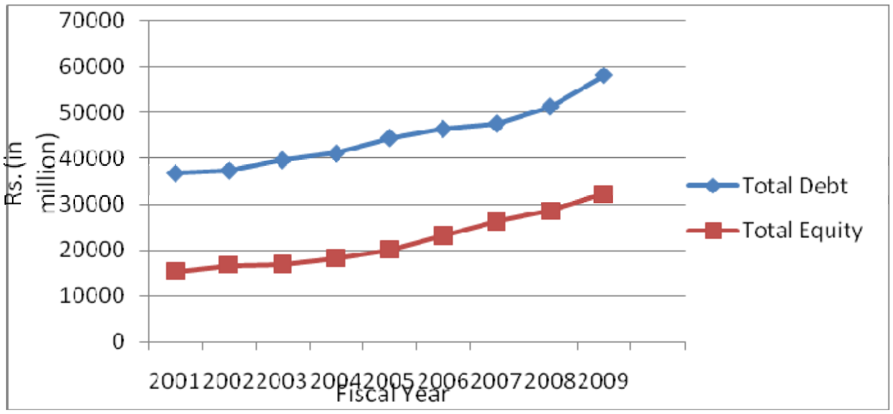
Calculation of Debt- Equity Ratio (Rs. In Millions)

Year	Total Debt	Total Equity	D/E Ratio
2001	36707.50	15360.30	2.39
2002	37325.61	16601.30	2.25
2003	39637.11	16976.87	2.33
3004	41103.14	18215.85	2.25
2005	44537.51	20161.80	2.21
2006	46487.91	23113.10	2.01
2007	47616.15	26382.18	1.80
2008	51368.84	28609.97	1.79
2009	58217.77	32273.67	1.80
Average	44777.95	21965.00	2.09

Sources: NEA Balance sheet 2008/2009

Form the above table debt increased form Rs. 36707.50 million to Rs. 58217.77 million form year 2001 to 2009. Similarly the total equity increased from Rs. 15360.30 million to Rs. 32273.67 million from the year 2001 to 2009. The result shows that the increasing tendency of debt is very high than equity. This indicates that the financial position of NEA is not in good position. NEA should pay huge amount of revenue for hiring long-term loan.

Fig No. 8 Graphical presentation Debt and Equity



The above graph shows that the realation between total debt and total equity of NEA. From above it can be seem that the increasing tendency of total debt is very high than total equity. This shows the poor condition unsatisfactory performance to cover its long term debts as its equity is decreasing in proportion to the debt.

4.5.2 Total Debt Ratio:

It is also called the debt-total assets ratio the ratio between total debt and net worth.

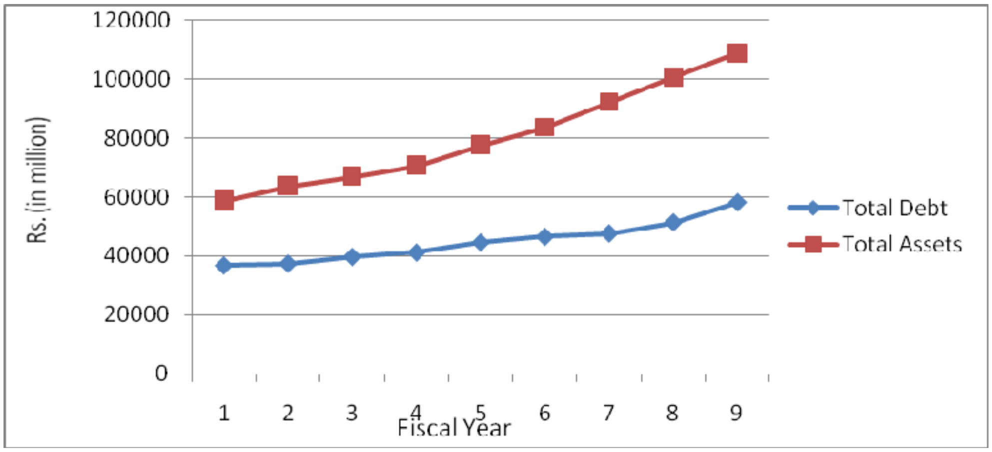
Table No. 11

Calculation of Total Debt Ratio (Rs. In millions)

Year	Total Debt	Total Assets	D/TA Ratio
2001	36707.50	58708.96	0.63
2002	37325.61	63793.71	0.59
2003	39637.11	67053.72	0.59
2004	41103.14	70631.11	0.58
2005	44537.51	77495.56	0.57
2006	46487.91	83550.08	0.56
2007	47616.15	92131.97	0.52
2008	51368.84	100528.26	0.51
2009	58217.77	108790.01	0.53
Average	44777.95	80298.15	0.56

From the above table it can be seem that the total debt ratio remained constant at 0.59 in the year 2002 and the year 2003. The total debt ratio is 0.63 in the year 2003. The total debt ratio is 0.63 in the year 2001. The above table shows that the decreasing tendency to the year 2008. The amount of total debt increased from Rs. 36707.30 million to Rs. 58217.77 million from the year 2001 to the year 2009, which is 1.58 times more than the starting year. Similarly, the total assets increased from Rs. 58708.96 million to the year Rs. 108790.01 million from the year 2001 to the year 2009, which is 1.85 times more than the starting year. The above table shows that the both total debt and total assets is in increasing trend, but the increasing trend of debt is higher than increasing trend of total assets.

Fig. No. 9 Graphical Presentation of Debt and Total Assets:



The above graph shows the both debt and total assets increasing trend. The increasing trend of total assets is higher than the total debt. The result shows that the condition of NEA is not good to meet its long-term debt.

4.6 Trend Analysis:

Here, we are using the technique to forecast the future trend of sales revenue and operational expenses of NEA the trend forecast will be based on the past data of study period.

To forecast the trend of sales revenue of NEA we have chosen two variables. One of them is time and other is the sales revenue. So, we have taken the data of sales revenue over our study period (201 to2009).

Table No-12

Trend Analysis for Sales Revenue (Rs. In millions):

Year (X)	Sales Revenue (Y)	X=X-2005	X^2	XY
2001	8160.80	-4	16	-32643.20
2002	9476.20	-3	9	-28428.60
2003	11012.60	-2	4	-22025.20
2004	11874.70	-1	1	-11874.70
2005	12605.20	0	0	0
2006	13331.90	1	1	13331.90
2007	14449.73	2	4	28899.46
2008	15041.49	3	9	45124.47
2009	15220.87	4	16	60883.48
N=9	$\sum y=111173.49$	$\sum x=0$	$\sum x^2=60$	$\sum xy=53267.61$

Sources: NEA Balance Sheet 2008/09

Let the straight line trend y= a+bx…………………(i)

Since,

$\sum x=0$, so, $a=\sum y/n=111173.49/9=12352.61$

$b= \sum xy/\sum x^2=53267.61/60=887.79$

Substituting the value of a, b in (i), the equation of the trend line is

Y= a+ bx

Y=12352.61+ 887.78.x

Trend Values

For the year 2010x=5,Hence,Y=12352.61+887.79*5=Rs. 16791.56

For the year 2012x=7,Hence,Y+12352.61+887.79*7=Rs. 18567.14

From the above analysis the sales trend is increasing the sales will be Rs. 16791.56 million in 2010 and the sales will be Rs. 18567.14 million in 2012.

Table No. -13

Trend Analysis for Operating Expenses (Rs. In millions)

Year(X)	Operational Expenses(Y)	X=X -2005	X^2	XY
2001	1832.30	-4	16	-7329.20
2002	1621.80	-3	9	-4865.40
2003	1844.70	-2	4	-3689.40
2004	1865.20	-1	1	-1865.20
2005	2106.60	0	0	0
2006	2123.20	1	1	2123.20
2007	2313.98	2	4	4627.96
2008	2793.99	3	9	8381.97
2009	3167.34	4	16	12669.36
N=9	∑Y=19669.11	∑X=0	$\sum X^2$=60	∑XY=10053.29

Sources: NEA Balance Sheet 2008/09

Let the straight line trend be, y= a+bx…………..(i)

Since,

∑X=0

So, a = ∑Y/n= 19669.11/9 =2185.46

b =$\sum XY/\sum X^2$ = 10053.29/60 = 167.55

substituting the values of a and b in (i), the equation of the trend line is y =a + bx

Y= 2185.46 +167.55X

Trend value:

For the year 2010X =5 Hence Y=2185.46 + 167.55*5=Rs. 3023.21

For the year 2012 X=7 Hence Y=2185.46+ 167.55*7=Rs.3358.31

From the above analysis it can be seen that the operating expenses is increasing tendency.

For 2010 the operating expenses will be Rs. 3023.21 million and
For 2012 the operating expenses will be Rs. 3358.31 million.

4.7 Description of Major Findings:

- The average current ratio being 0.56, and the average quick ratio though the trend suggests the their needs some more attention in this direction.
- Throughout the study period, the current assets have remained more or at least equal to the current liability that further evidences that NEA and any point of time has been good enough to oblige its current liabilities.
- However, there have been few years like 2001 in the study period where in the liquidity position is considerable and NEA could have rather used its funds elsewhere.
- The quick ratio, which is even more stringent measurement of the liquidity, also suggests that NEA is by and large able to live its liquidity obligations.
- The average total assets turnover ratio is 0.15, which means that own rupee of assets is contributing only 0.15 of sales revenue. As such, it implies that there is huge amount of excess revenue and ideally, NEA can run additional projects even without much addition of the capital. So, there is under utilization of the existing assets.
- With respect to the base year 2001, the inventory turnover ratio of NEA showed a fluctuating trend. It started form 8.49 in the base year 2001 attained the maximum of 11.33 in the year 2004 and lowered to the level of 8.19 in the year 2009. The average inventory turnover ratio of NEA in the study period is 9.42 days, which is a good ratio. However, the trend has not been consistent.
- The average collection period of NEA is 110.24 days, which confirms average receivable management is the problematic area of NEA. The average collection period has been in and around 74 to 139 days, however in the year 2008 the ratio has all of sudden for organization like NEA. Due

to relatively longer collection period, the debtor's turnover ratio is low which averages 3.41 for the study period.

- From the above analysis of net profit to sales position, it can be known that NEA has achieved poor results and in most of the years losses were recorded from operation. It has not been able to pay interest charges on long-term debts form its operation and EBIT was also unsatisfactory because the inefficient utilization of fixed assets resulted in low profitability position threatening the existence of NEA in long-run.
- Net operating ratio in case of NEA is found to follow a fixed trend of the operating expenses be in generally 90% of the operating revenue.
- Return on total assets records relationship between total assets of NEA for the study period is -0.0134. The ratio has shown a fluctuating trend. It has started form -0.00003 the beginning of the study period, attained the maximum of -0.043 in the year 2009 except year 2007, it is seemed negative all the year (2001 to 2009).

CHAPTER-5
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The perception of the government and its role in public welfare has helped to establish public enterprises engaged in public utilities. Role of the government owned enterprises is supposed to be undermined in the present context of worldwide privatization, liberation and globalization. But in developing country like Nepal where private sector is not strong and in sound position to provide public utilities to the people, public utility concern's role cannot be undermined. Though Nepal is rich in water resources, we Nepalese people are in the condition of "shadow under light". There is consensus that development of its abundant water resources could largely benefit the nation. Though hydro-electric potentiality of Nepal is 83000 MW, but so far only about 650 MW was generated including from diesel and multi fuel plant. Many changes are talking place in the power sector in the concept of competition, choice in the process of commercialization and management are being changed. In such situation, the proper utilization and management of our available water resources is essential for the all round development of the nation. In this regard, Nepal electricity authority is only an institution engaged for the development of essential for the better utilization of available water resources of the country. NEA has a challenge to operate in a manner that improves the key business processes, maximizes the revenue generation and profitability of the organization.

The commercial goals of NEA should also be financially viable, fully autonomous, and accountable and majority owned government business entity. In this sense, the research is made whether NEA is in the way to achieve those goals or not. If NEA is seen to be financially sick for 10 years financial supports. So this

study is made to sketch a clear financial picture of NEA, which definitely supports the stakeholders and other researchers for their analytical purpose.
Overall picture and trend of the financial condition by the end of FY 2008/09 is crippling and asks for urgent and effective financial restricting for the sustainability of the organization. Gradual recovery of accumulated financial losses and generation of investment funds for expansion may be possible only by reviewing tariff, reducing interest rate on government loans, capitalization of grant project at average coast estimate of the region, reduction of system losses and management of seasonal surplus energy.

The liquidity position of NEA is not likely position. The average current ratio which is below 0.56 shows that is suffering from liquidity problem from a long-term, it has been failure to meet its short-term obligations which has severely damaged its reputation in the eye of its creditors. Analyzing the turnover ratio of NEA sales of electricity and other equipments is increasing day by day. NEA is failed to meet the demand of electricity, because there limited hydropower stations generating electricity. In average NEA is earning Rs. 0.154 for its one rupee investment in total assets. It shows that NEA has failed to complete its major hydro-projects in time. The installed plants are not been appropriately utilized. Similar results have obtained in case of fixed assets turnover ratio. NEA by its nature certainly has to install plants, which to utilize for above 50 years. The installed one of the transmission of line can work for several hydro-projects. Under the completion of those hydro-projects many vehicles, equipments furniture etc. can go under "bidding process". So, manor hydro-projects are completed it time it helps to its turnover. Besides this the inventory ratio is quite satisfactory, but it does not have any financial meaning. Because the major selling product is electricity which are be put as an inventory goods only meter boxes, cables etc. are inventory of NEA.

Analyzing the average collection period, the average collection period is 110.24 days, although there is no any standard collection period, but NEA reads the customer meters in 2 month, and with adding one month of delaying in payment, it should be around 60 days, but it is nearly double. NEA can't imply obligations in collecting its receivables which harms itself it meet its current obligations. Higher AVP results to lower debtors' turnover ratio.

Analyzing NEA's profitability position, only in year 2007 NEA has earned a profit near 1.67 million. Besides this all NEA base huge losses. The reason behind heavy losses are heavy operating expenses, increasing burden of interest on debt, deferred expenditure, underutilization of plants, leakage theft of electricity, high collection periods, extended time in completion of mega-projects etc, which cause more than double cost. An example of Middle-Marsyangdi hydro-project is sufficient to prove it. The total debt of NEA is increasing day to day which insert a huge burden of interest. But the debt is not properly used to generate high sales. The ratio of debt's increment is higher than rate of assets increment and only a short vacancy is seen between total assets and total debt, which itself is not bad condition but a harmful condition too.

The trend analysis on forecasting sales cost shows a satisfactory future, but it is followed by similarly increasing operational cost. NEA is a organization which can sell its product by the raw material as water only. So, there will not be scarcity of raw material for years and years. Only the utilization of raw material (water) is major thing. It can sell its electricity in neighbor countries too. So, there is no tension on future demands, only the tension is how to establish major projects and generate hydropower likewise decreasing the operational cost may be a issue to generate a huge profit in near future.

5.2 Conclusion

Based on the major findings, it is found that there are various problems in NEA. Problems that are affecting to greater extent to the financial position of NEA are listed below as major issues and gaps. Major issues can be concludes the following:

1. The NEA has high amount of fixed costs and the interest payable on long term loans every show the considerable portion of fixed costs.
2. According to the fixed assets turnover ratio it seems that the assets are not used effectively.
3. NEA has been facing the problem of outstanding debt collection, it has been highly increasing tendency. The account receivable of NEA is recorded high.
4. Leakage, outage and theft are one of the major consideration in NEA. Due to this leakage there is a vast gap between sales production and this leakage is reducing the NEA's profit annually.
5. All the expenses, such as; manufacturing administrative and selling and distribution are not separated systematically. Authority has combined all these expenses together and named it, operation and maintenance expenditure budget.
6. Operation and maintenance expenditure is very high due to the higher amount of fixed cost and interest on long-term loan.
7. NEA hasn't adequately considered the strength and weakness, which affect the enterprises.
8. Higher amount of account receivable in balance sheet indicates the inefficiency of authority to collect the debt.
9. Long term liability is very high but current liability is lower than current assets.
10. There are no clear-cut boundaries to separate cost in to fixed and variable. The cost classification is not scientific and systematic.

11. The authority is not able to maintain a proper co-ordination between various directorates in regard of the goals, objectives and strategies of the organization.
12. From the overall analysis, NEA has generated very low returns with the negative profitability. Increasing cost in each fiscal year is important issue of NEA. They have not adopted the cost control program.

5.3 Recommendation: -

Based on the above study, the following suggestions are recommended to improve the financial position of Nepal Electricity Authority.

1. The corporation, liquidity position is not sufficient though the current ratio shows the problem in the liquidity position. This indicates that the NEA must show some seriousness to improve its liquidity position by adopting effective mechanism. The company should adopt efficient working capital policy to make the stability in liquidity position.

2. NEA should try to increase the sales volume and should reduce the power purchases. It can be done by either reducing leakage, establishing new plants or by increasing the capacity utilization.

3. NEA is paying a huge amount as interest on long term loan, which is not good for authority. So it should emphasized internal financing to minimize such burden. Therefore NEA must restructure its capital structure and for this it can issue the shares and can refund the debt.

4. NEA should improve in human resources:- human resources is the key to success of any organization. The organization staffs are the main brain to utilize the organizational assets more effectively and efficiently through

which NEA can increase its profit earning capacity. A spirited, motivated, skillful honest and delight staff is bound to perform well which can achieve organizational goals and objectives effectively. Thus NEA should always try to maintain high spirit in its staff by providing right appointments motivation, training and promotional opportunities.

5. Leakage of the electricity should be controlled. For this meter reading and meter joining system should be improved. The most important aspect is to motive its employees engaged in transmission and distribution line to control the leakage. Staffs who are they engaged in encouraging power leakage should be strictly demoralized.

6. NEA should try to maximize its operating profit. For this cost control program can be launched in one respect and the alternative should be established. It should maintain the discipline of budget.

7. In NEA planning should be communicated to lower level management and coordinating among them should be established.

8. Load shedding is a big issue in Nepal. The authority should try to avoid load shedding.

9. It should bring the effective program. The receivable from government sector is very high. So government should help to NEA for collection.

10. NEA should be careful in selecting investment projects. Higher IRR and other criteria are definitely complimentary in high efficiency in mobilization of resources. Because of some contract of projects, NEA

should bare maximum level of losses so, should be contract those projects who give certain level of Profits.

11. NEA as public utility concern, it should serve public however it should run in commercial principle and has to be self sustainable by its own income, it must carry out the objective of surplus generation with full commitment and responsibility.

12. NEA has invested big amount in fixed assets but the fixed assets turnover ratio shows the poor utilization of fixed assets. Therefore, NEA should put stress on effective utilization of fixed assets. Thus, NEA should adopt the discounting modern technique of capital budgeting.

13. NEA must show efficiency in reducing the loss which can increase its profit definitely. But over the period, NEA has not been able to achieve progress in loss reduction activities despite clear instruction from electricity tariff commission to maintain its loss rate at less than 15% percent.

14. The development of organization and management system on the part of NEA should be efficient. It should develop on the basis of its post experience effective target- oriented project planning incorporation proper cost benefit and financial plan so that target are achievable and profitability is ensured at least to minimum extent.

15. NEA should develop efficient system of revenue collection. It should make well-defined rules and regulation in regard of revenue collection and if the customer of any category delays or denies, it should charge a penalty. In

revenue collection any kind of pressure, hypnotism and biases should strictly be undermined.

16. In the recent 10 years, there is not practice about increased and decreased based price system in the NEA's history, so NEA have faced huge losses. That' why NEA should be apply increased and decreased based price system.

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