CHAPTER 1
INTRODUCTION

1.1 Background of the Study

Cash is the most important factor of business life. It refers to cash on hand and bank deposits. Effective circulation of blood is required for human body. In the same way effective circulation of cash should be required in most of the organization. Cash equivalents are short term, highly liquid investments that are readily convertibles into cash and which are subject to an insignificant risk of changes in value. Cash flows are movement and change in position of cash. A study of cash flows provides information about the inflows and outflows of cash in an accounting period. A cash flows study is an important task since it is taken as reference in various economic decisions. Investors, for example, need information about future cash flows, because the value of their investment is the present value of the future cash flows to them. In the same way, the ability of a company to generate cash flows reflects the value of its shares. Thus cash flows allow investors to predict stock prices. Cash flows play a pivotal role in all of these issues. A cash flows study provides useful information to evaluate a firm's ability to have sufficient cash in both short term and long-term basis. It is the analysis of events and transactions that affects the cash position of company. Cash flows studies are done through statement of cash flow. Cash flow studies help to evaluate financial policies and cash positions. It assesses a company's ability to generate positive future cash flows. It helps in evaluating firm's ability to meet its obligation, its ability to pay dividends and its need for external financing. Through past trends of cash flows, one can analyze, evaluate and predict future cash flows which is the ultimate goal of the study. In terms of tile importance of cash flows data, cash flows as a measure of a firm's performance is less subject to distortion than is the net profit figure. Because the calculation of cash flows from operations removes the causes of the distortion such as depreciation methods, deferred taxes, and goodwill amortization, whereas the determination of net profit under accrual accounting requires approximations, deferrals, allocations and valuations. These procedures allow managers to manipulate their company's profits. That is, they can choose an accounting method, from among various methods of calculating depreciation and valuing inventories, or produce high or low profit as they want. As a result, analysts usually consider cash flows to evaluate firms performance in addition to the profit.

Most researchers have attempted to investigate the predictive ability of cash flows. However, previous research findings have shown controversial results. Most research has focused narrowly on operating cash flows, earnings and accrual components of earnings. Those previous studies have ignored the potential of other cash flows variables, particularly cash flows ratios. A cash flows ratio is a tool for analyzing a firm's performance. Cash flows ratios are calculated by using data from both the cash flow statement prepared on a cash basis and the income statement and balance sheet

prepared on the accrual basis. Hence, this study focuses on cash flows and cash flows ratios-Besides, this thesis provides an overview of Nepal Electricity Authority. It also Includes generalize knowledge of Nepal Electricity history and similar operational functions.

1.2 An Overview of Nepa1 Electricity Authority (NEA)

NEA is one of the largest public corporations in Nepal. It deals with generating and supplying of electricity. The government of Nepal established Nepal Electricity Authority by introducing new corporation policy with the vision to boost up performance of public enterprises during the sixth five year plan (1980-1985). Nepal Electricity Authority (NEA) is created on Bhavera 1, 2042 under the Nepal Electricity Authority Act. 1984, by merging the Department of Electricity of Ministry of Water Resources, Nepal Electricity Corporation and related Development Boards.

1.2.1 Objective and Responsibility of NEA

The primary objective of NEA is to generate, transmit and distribute adequate,

reliable and affordable power by planning, constructing, operating and maintaining all generation, transmission and distribution facilities in Nepal's power system.

Similarly, NEA's major responsibilities are:

- to recommend, determine and realize tariff structure for electricity consumption with prior approval of Nepal Government.
- to recommend to Government of Nepal, long and short- term plans and policies in the power sector;
- to arrange for training and study so as to produce skilled manpower in generation, transmission, distribution and other sectors.

1.2.2 Board of Directors of NEA

Management of NEA is entrusted to a Board of Directors, which is constituted as follows:

- The Minister/State Minister of Water resources or person appointed by Nepal Government: Chairman
- Secretary, Ministry of Water Resources : Member
- Secretary, Ministry of Finance : Member
- One prominent person from commerce, industry, or financial sector : Member

- One person from consumers group : Member
- Two prominent persons with experience in power sector from outside government Member
- Managing Director, NEA : Member Secretary
- Managing Director, NEA ; Member
- The Managing Director acts as member secretary as well as chief executive officer.

1.2.3 Present Performance of NEA

NEA presently serves 1670610 customers (a growth of about 10.13% over that of the previous Fiscal Year) across all the 75 districts of the country including bulk supply in India. Electricity supply is provided through ten medium-sized and forty small hydropower plants owned by NEA and ten hydropower plants. Besides, four diesel and two multi-fuel thermal power plants under the ownership of NEA also cater to the demand. NEA continues to be the sole purchaser of IPP's power production. Electricity sales till FY 2008/09 is 2308.91 (GWH) and sales revenue is Rs. 16212.65 millions.

1.2.4 Issues and Perspectives of NEA

The extremely limited investment capability of the country continues to remain one of the major impediments in the development of the Nepalese power sector. Resource mobilization in recent years to finance development plans in the public sector has been ineffective. Similarly the current trend of private sector investment in the power sector is also not very encouraging. The continuing investment of the private sector in only small capacity paints in the 1- 5 MW range does not provide any substantial relief in meeting the growing needs of the country's power system.

The dominance of run-off-river (ROR) and daily pond age hydropower plants in the Nepal power system has led to the creation of difficult periods of acute capacity shortage during the dry season when the demand rises sharply while the wet season sees a glut of energy available in the system which has yet to find a market.

1.2.5 Electricity Demand Forecast (Load Forecast)

The electricity demand forecast, covering the period up to the FY 2019/20 is prepared considering the country's macro" economic indicators and rural electrification expansion program. Power consumption data of the FY 2004/05 has been taken as a basis for *his load forecast. Total energy requirement in Nepal is projected to grow by an average of 8 percent per annum over the forecast period, from 2.299.9 GWh in the FY 2003/04 to 7894 GWh in the FY 2019/20. Peak demand is projected to grow from 512.2 MW in the FY 2003/04 to 1733 MW in the FY 2019/20. The result of the Load Forecast Siidy-2004/05 is presented as follows:

Table: 1.1

Table of Load Forecast Study FY 2004-05

Fiscal Year	Total Generation Requirement (GWh)	System Peak Load (MW)	Peak Load Growth (%)
2003-04	2299.90	512.20	
2004-05	2457.60	556.30	8.60
2005-06	2600.10	593.60	6.70
2006-07	2777.60	634.20	6.80
2007-08	3055.90	697.70	10.00
2008-09	3317.40	757.40	8.60
2009-10	3598.90	821.70	8.50

Power Demand and Supply Situation (till 2009/10):

The capacity balance at the time of system peak up to FY 2009/2010 incorporating the planned projects as given in the Generation Expansion Plan is presented in Table 1-2.

Table: 1.2

Table of Capacity Balance with Planned Projects and peak demand

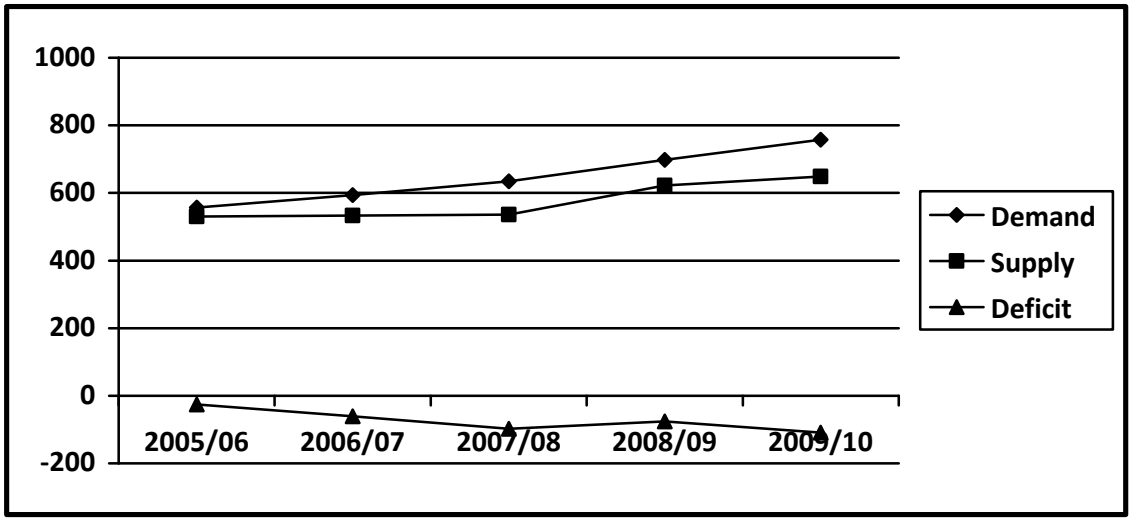
MW/Year	2005/06	2006/07	2007/08	2008/09	2009/10
Peaking Capacity/Supply	530.24	532.74	536.34	621.64	648.64
Peak Demand	556.30	593.60	634.20	697.70	757.40
Surplus (Deficit)	(26.06)	(60.86)	(97.86)	(76.06)	(108.76)
import Availability	50.00	50.00	50.00	50.00	50.00
Net Surplus(Deficit)	23.94	(10.86)	(47,86)	(26.06)	(58.76)

Source: Demand/supply forecasts on the FY 2005/2006 by NEA

The Capacity Balance presented above shows that there is shortfall of supply over demand from the FY 2005/06 even after utilizing the existing thermal generating capacity of NEA, the 50 MW import available under the Power Exchange Agreement with India and the limited number of planned projects that could be made available for generation in the FY 2008/09 and 2009/10. Contingency measures such as increased import, utilization of available captive generation of industrial establishments and demand side management need to be explored in those years- It is note worthy that above data is reliable only if contingency is not taken into consideration. IE can more clearly presented by a following trend chart.

Figure: 1.1

Trend Chart of Demand, Supply and deficit from the FY 2005/06 to 2009/10



The above trend line pretends to present demand, supply and deficit in term of Mega Watt. It is note worthy that above chart is only reliable if contingency is not taken into consideration. For example, like in present scenario, if water level of river falls down or Indian government does not sell its power as per 'power agreement or transmission line is damaged, and then above data does not have any significance.

Despite of studies made on the FY2005/06, rt is not significant till the FY 2008/09 due to a lot of obstacle. Recently, the change in political power is a major challenge to our Government of Nepal- Till to date. a lot of planning is going on but major step toward repair and construction has not been taken. Besides that due to winter season, the water level of damn has fallen sharply which leads to 16 hours a day load shedding every day. It can be further presented in chart by demand and supply chart,

1.2.6 Power Generation Expansion Plan

A new Generation Expansion Plan study for the planning period FY 2005/06 2019/20 is carried out. The results of the Study are presented in Table-1.3.

Table: 1.3

Table of Generation Expansion Plan

Fiscal Year	Projects	Installed Capacity (MW)	Comments
2005/06	Chaku Khola	1.50	PPA concluded.
2006/07	Baramchi	Q.98	PPA concluded.
	Khudi	3.50	PPA concluded.
	Sisne Khola	0.75	PPA concluded.
2007/08	Pheme	Q.95	PPA concluded.
	Lower Nyadi	4.50	PPA concluded.
	Lower indrawati	4.50	PPA concluded.
	Mailung	5	PPA concluded.
	Mardi	3.10	PPA concluded
	Thoppal Khola	1.40	PPA concluded.
	Middle Marsyangdi	70	NEA, Under construction.
2008/09	Daram Kho!a	5	PPA concluded.
	Upper Modi	14	PPA concluded.
	Kulekhani -111	14	NEA, Planned.
2009/10	Madi-1	10	PPA concluded.
	Hewa	10	NEA, Planned-
	Mewa	18	NEA, Planned.
	Lower Modi	19	Private.
2010/11	Kabeli-A	30	Private-
	Upper Marsyangdi -A	50	Private.
	Rahughat	27	Private-
2011/12	Tamur	83	NEA. Planned-
	Likhu-4	51	Private.
	Upper Modi A	42	NEA-PrMate Joint
	Chameliya	30	NEA-Private Joint
	Budhi Ganga	20	Private.
2012/13	Upper Karnaii -A	75	NEA-Private Joint
	Upper Seti (ST)	122	NEA, Planned.
2013/14	West Seti	75	Private.
2014/15	Upper Tamakoshi	309	NEA-Private Joint
2015/16	-	-	
2016/17	-	-	
2017/18	Dudh Koshi-1 (ST)	300	
2018/19	-	-	
2019/20	And hi Khoia (ST)	180	

Source: NEA corporate pian

1.2.7 Institutional Strengthening

The changing scenario in the country's power sector brought about by liberalization of policies by government of Nepal to attract private sector participation pressed NEA to earnestly reassess itself and prepare to confront a competitive environment in the near future. With this objective in mind NEA chose to mould itself to operate in a more commercial environment and embarked on the path of institutional strengthening by means of internal unbundling in its organizational structure by first restructuring NEA into key distinct business entities of Generation, Transmission and System Operation, Distribution and Customer Services, Electrification and Engineering Services, each headed by a General Manager. The functions of Planning, Monitoring and Information Technology as well as Finance & Administration are retained as central services each of which is headed by a Deputy-Managing Director. Over the coming years, the functioning of NEA will therefore see significant changes in terms of development of a commercial culture within itself.

NEA will continue its efforts to introduce computerization to enhance efficiency in its operations. In this regard a separate Information and Technology Department established under the Deputy Managing Director of Planning, Monitoring and Information Technology with its broader vision of establishing a sound state of art IT infrastructure of hardware as well as software system, which is open, expandable, seamless and cost effective has been fully functional. In the area of customer services, computerization of the billing system completed in 9 distribution centers and branches in base format is undergoing up gradation into Oracle.

Realizing that its human resources are most important assets and that training is a critical component of its institutional development, NEA is on the way to attaining self-sufficiency as a corporate body and has embarked on a corporate approach to training by focusing on technical and management skills for improved performance. Now welt equipped NEA Training Centre, which is under the Engineering Services business group is to be strengthened each year to become an autonomous training institution capable to fulfill training requirements of power sector of the country. Training programs are being continuously developed with a view to meet training requirements of different levels of technicians, engineers, managers, finance and administrative personal working in the power sector. The upgraded computerized Personnel Data Bank that has come into operation will also contribute to realize a more efficient management of NEA's human resources.

1.2.8 Strategies for Improving NEA's Corporate Financial Performance

Payables to Government of Nepal are also increasing significantly due to the decrease in internal cash flows- For the FY 2004/05 the audited figures show outstanding payables to Government of Nepal at more than 6.5 billion rupees.

This continues to rise in coming years. A huge increase in tariff will be required to meet ail the financial covenants and to bring down the outstanding payables to

Government of Nepal at desirable level, which does not seem to be realizable in near future. There has been ever increasing trend in cost of service due to increase in power purchase price and operation and maintenance expenditures. At the same time, there is decreasing trend in realization of average revenue rate. This has resulted into continuous operational loss for the past three years. Overall, the financial statements of the past couple of years show that the financial performance of NEA is far below the satisfactory level. Hence the present financial condition of NEA urgently demands serious measures to be undertaken for turning around this deteriorating financial performance and improving financial health in future.

One of such measures is to adjust the existing tariff to recover cost of service from its users. However, despite various efforts, NEA has not been able to get approval for tariff increment since September 2001. It is also true that tariff increment alone shall not be a single solution for eradicating the existing problem- In this context, action plan on financial management with focus on revenue increment, decrease in cost and proper working capital management as well as investment and financing decision for future project should be worked out properly. Experience shows that there is still room for increasing internal cash generation if improvement takes place in loss reduction, control of operating expenses and working capital- management. Loss reduction shall contribute significantly in generating additional revenue. Similarly decrease in financing cost and IPP price is one of the major issues for decreasing cost of service of electricity. Moreover, creating market for the available power but not sold in the system could also generate additional revenue.

1.2.9 Electricity Loss Reduction

To avoid loss NEA is putting concerted effort over the years to reduce non-technical losses. In the past, desired results could not be obtained for the reason that electricity theft is not legally accepted as a crime-Following the enactment of Anti-theft Act 2001 and promulgation and enforcement of Anti-theft Regulation, NEA is more confident to tackle the problem of electricity pilferage and improve revenue base.

1.2.10 Mobilization of Local Resources

NEA's fund requirement for financing capital investment in new generation facilities, transmission and distribution system expansion and in the capacity up-gradation and maintenance of existing system is increasing day-by-day. Furthermore, future liabilities are likely to increase significantly due to debt repayment obligation as well as to meet power purchase obligation. Therefore, NEA is exploring alternative sources of financing to meet its future investment requirement.

1.2.11 Demand side Management

It is envisaged earlier that there would be more private sector participation at least in

generation. But private sector participation has been slow and has not been able to generate as per the demand. So the alternatives to cope with the demand are few. One of the most important methods is to utilize the efficient consumption methodology. This will help reduce consumption from NEA's perspective. There will be less istage of energy used thereby providing direct benefit to the consumers and indirect benefit to the economy.

The present expectation of load shedding can be avoided from partial to full level by application of this efficient consumption methodology, innovative methods will be developed to make the consumption pattern positive.

1.3 Statement of the problems

A Cash Flows study is an important part of the decision-making process, because decision-making reflects what will happen in the future. In economic decision-making, financial prediction is a prime activity. Every economic decision entails a choice among alternative means of achieving a given goal. Each alternative involves an expectation of receiving greater benefits in the future. The decision makers need to predict the consequences of the alternatives and choose the alternative, which is expected to provide the greater benefits in various economic decisions because cash flows play vital role in almost all the decision making of many parties including security Analysts, creditors and managers. Additionally, the decision makers are interested in a firm's cash flows because they expect that current cash flows may affect their future cash flows and they will have an interest in assessing the firm's future cash flows to the extent that these provide a clearer indication of the firm's cash flows in the future. The cash return includes cash from either share dividends or capital gains when shares are sold. This decision deals with which shares to buy, retain, or sell and the appropriate time for purchase or sale of those shares. The ability of a company to pay dividends is reflected by the ability of the company to generate its future cash flows. Therefore, in making investment decisions, predicting the cash flows of a company issuing shares is a primary task in indicating the company's ability to pay dividends for the future period. in creditors lending decisions, predicting bankruptcy problems of a client or customer can help creditors prevent losses due to bad debts. There are a number of early warning signs indicating that a company is experiencing financial distress. Cash flows is an important financial indicator of a financial problem. A decline in cash flows can provide an early warning signal of a bankruptcy to creditors and other interested parties. With respect to business management, cash flows are viewed as the 'lifeblood' of a business as cash must be available when it is needed. Therefore, a company's ability to manage cash is vital to survival and wealth. Analyzing cash flows can help a manager identify future financial problems. Cash flows allow the company to know its cash position and to make the necessary expenditures for such items as debt repayment, acquisitions and payment of expenses. In addition, the difference between forecast and actual cash

flows need to be analyzed to understand and measure a fm-no's performance. Hence, this research is trying to verify the needful of cash flows, which can be summarized as follows:

- What are the sources of NEA to generate sufficient cash flows?
- Does Nepal Electricity Authority generate sufficient operating cash flows to meet its cash flows needs?
- Does Nepal Electricity Authority is able to invest proper cash in investing activities?
- Where NEA is investing its source of fund?
- Does Nepal Electricity Authority is able to create sufficient finance to meet its financing activities?
- Can past earning helps to predict future cash flows of Nepal Electricity Authority?
- What are the policy regarding investment and finance that affects cash flows of the corporation?

1.4 Objectives of the Study

The present study has been conducted-to examine cash flows of public manufacturing enterprises of Nepal, based on the case study of Nepal Electricity Authority. It focuses on the investment and financing decision of the company and in particular, the cash flows in short run business operation of the firms, i.e. management of the individual current assets like; cash and bank balance, receivable and inventory in the short-run.

The specific objectives of the study are as follows:

- To examine the cash flow statement of Nepal Electricity Authority.
- To examine the sufficiency of cash flows to meet its basic cash need.
- To analyze the efficiency of generating cash flows.
- To examine and critically analyze the cash flows practices in Nepal Electricity Authority.

1.5 Significance of the Study

Analysis of cash flows is a vital part of the business enterprise. Poor systems of cash flows adversely affect planning cash management of the organization. Thus periodical analysis and review of cash flows is necessary in order to ensure smooth functioning of the organization. Cash flows are the key to productive financial planning. The present study is intended to analyze and evaluate the cash flows system and its application in Nepal Electricity Authority. The study will be useful to provide information and to draw attention of Nepal Electricity Authority regarding what can be done for the future prediction of cash inflows and outflows.

1.6 Limitations of the Study

There are some possible limitations of this research. These limitations may affect the generalisability and validity of this research. These limitations are as follows:

- The data employed in this research is obtained from the annual report of NEA. The period covered by the study extend to five years only. Data available for the FY 2008/09 is provisional figure.
- This research rouses solely on Nepal Electricity Authority. Therefore, the results of this research cannot be generalized to all public Companies.
- The study is completely based on secondary data.
- The study is canceled only with cash flows of NEA. However profit can be affected.
- Simple regression analysis is used to construct a prediction model.
- The figures after the decimal are kept as per requirement.
- There is always a restraint of time and resource in the study.

1.7 Organization of the Study

The study is organized into five chapters, each devoted to the relevant aspect of the study on Cash flows of Nepal Electricity Authority. The tittles of these chapters are as follows:

Chapter 1: Introduction

Background of the study is presented on the subject matter of the research to provide a general idea- This section included a brief introduction to Nepal Electricity Authority, rout and objectives of Nepal Electricity Authority in Nepalese economy, then proceeding .through an updated information of the existing Nepalese Electricity Authority. The statements of the problems, objectives of the study are followed by scope and limitation of the study.

Chapter 2: Review of Literature

This chapter included the review of the relevant previous writing and studies to find the existing gap. Reviews of textbooks, dissertations/ theses are included.

Chapter 3: Research Methodology

In this chapter, the method employed to gather data and the tools used in its interpretation is followed by research design, the population and sample, nature and sources of data and financial and statistical tools for analysis of data.

Chapter 4: Data Presentation and Analysis

This chapter is the one of the most important and core of the thesis. It dealt systematic presentation and analysis of financial statements employing financial and statistical tools. Then, the major findings are presented.

Chapter 5: Summary, Conclusion and Recommendations

This chapter dealt with summary, conclusion, and viable recommendations.

Bibliography:

Lists of published and unpublished books, articles, thesis etc, are presented in bibliography.

Appendix:

The relevant materials, which are, however, not much worth mentioning are presented in appendix. It Includes cash flow statement, Profit/Loss a/c, and balance sheets. Resume is the last page of the thesis, which presents a brief biographical introduction of this researcher.

CHAPTER 2
REVIEW OF LITERATURE

2.1 Conceptual Framework

Funds can be categorized in two types; either in the form of working capital or in cash. If the fund is considered as working capital then we have to prepare funds flow statement and if the fund is taken as cash then we have to prepare cash flow statement. Cash flow statement is the main body for the cash flows analysis. Fair analysis of cash can only be done with the cash flow statement. Funds flow statement describes the sources of funds, amount of funds and the use of funds. Cash flow statement is designed to convert the accruals basis of accounting used to prepare the income statement and balance sheet back to a cash basis.

Cash is the most important part of any business organization without which business cannot be operated. Cash is a ready money in the bank or in the business. It is not inventory, it is not accounts receivable and it is not property but they can be converted to cash at some point in time. A business must have an adequate amount of cash to operate. Therefore, analysis of liquidity position is an important aspect of business organization. Cash flow statement is the reconciliation of opening and closing of cash. It is a statement of company's ability to generate cash from varipus activities such as operating, investing and financing activities.

A cash flows study provides useful information to evaluate a firm's ability to have sufficient cash in both short term and long-term basis- ft is the analysis of events and transactions that affects the cash position of company. Cash flows analysis is done through statement of cash flows. Cash flows analysis helps to evaluate financial policies and cash positions. It assesses a company's ability to generate positive future cash flows. It helps in evaluating firm's ability to meet its obligation, its ability to pay dividends and its need for external financing. Through past trends of cash flows, one can analyses, evaluate and predict future cash flows, which is the ultimate goal of the study.

In terms of the importance of cash flows data, cash flows as a measure of a Deli's performance Is less subject to distortion than is the net profit figure, because the calculation of cash flows from operations removes the causes of the distortion such as depreciation methods, deferred taxes, and goodwill amortization, whereas the determination of net profit under accrual accounting requires approximations, deferrals, allocations and valuations. These procedures allow managers to manipulate their company's profits. That .is, they can choose an accounting method, from among various methods of calculating depreciation and valuing inventories, or produce high or low profit as they want. As a result, analysts usually consider cash flows to evaluate firm performance in addition to the profit.

Cash flows from operations are used to calculate free cash flows. Free cash flows are money earned from operations after provision for capital Expenditures at the end of an accounting period. It is basically defined as net cash flows from operating activities less capital expenditures and dividends on preferred stock. It shows the ability of the company to generate cash from its operations after spending money on the capital expenditures. Without free cash flows, it is difficult for a business to pursue new opportunities, acquire other businesses or pay dividends. Free cash flows analysis helps managers identify the capital available for reinvestment in enhancing the company's growth. In turn, analyzing free cash flows can separate the firms with a high ability to internally grow from firms with a low ability to grow. In addition to reinvestment, the company can distribute free cash flows to pay dividends to shareholders. As a result, the free cash flows may be considered to assess the ability of companies to pay dividends on common stock.

The importance of cash flows prediction is supported by statements of accounting standards. Both Institute of Chartered Accountant of Nepal (ICAN) and the International Accounting Standard Committee (IASC) provided a fundamental guideline for preparing and presenting financial statements, that the objective of reporting financial statements is to provide financial information for users to predict the amount, timing and uncertainty of the future cash flows of a company. The primary objective of accounting data is to provide information to help present and potential investors, creditors and others assess the amounts, timing and uncertainty of prospective net cash inflows to the related enterprise. The statements suggest that accounting information from financial statements is useful in analyzing cash flows of a company. Here, income statements and balance sheets report information are on an accrual basis and cash flow statements are on a cash basis.

2.2 Concept of Accrual Accounting

The accrual accounting basis is a basic accounting assumption dealing with the accounting process of recognizing the effects of financial transactions in the period in which events occur, rather than focusing only on cash receipts or payments. The transactions are recorded and reported in financial Statements of the period they occur whether or not cash has been received or paid. As a result, accounting information reported in financial statements consists of both the effect of credit and cash transactions.

2.2.1 Usefulness of Accrual Accounting

'In practice, accounting financial information on an accrual basis is supported for many reasons. First, it is considered relevant in measuring a firm's performance. For example, a manager needs data on past transactions in order to evaluate past operating performance. Accounting information from past transactions can be used as a measure

of the past performance. Secondly, the cost of assets recorded based on historical cost is derived from actual transactions, not estimated.

Thirdly, the concept of matching expenses and revenue reflects the uses of assets in generating revenue. This can measure the efficiency of utilizing the .assets of the company. Fourthly, it reports assets or future benefits and liabilities or obligations of a company, allowing the company to estimate future cash receipts and payments. In addition, reporting financial statements on an accrual basis meets taxation requirements.

2.3 Concept of Cash flow Accounting.

Cash flows are represented by profit and depredation suggested that cash flows accounting might be helpful to investor decision-making. Cash flows accounting can avoid uncertain accounting allocations present in the accrual system, produce more objective financial information and provide users with fundamental and critical financial data because cash flows accounting does not involve allocation and matching problems. Payments and receipts are recorded when the transaction of receipts or payments are made. As a result, it is expected that cash flows are less vulnerable to manipulation than accrual information. For similar reasons, cash flows are seen as the superior instrument for predictive purposes, particularly for predicting future cash flows.

2.3.1 Definition of Cash flow Statement

“The cash flow statement is the accounting report that provides information about cash receipts, cash payments and net change in cash balances during a period. Previously, companies are required to present a fund flow statement that reported sources and uses of funds. Funds can be defined in three ways, including cash, working capital and total resources” (Henderson & Pearson, 1994:41). Funds presented on fund statements are interpreted as working capital, which is measured as current assets less current liabilities, whereas funds reported on cash flow statements refer to cash. The meanings of cash and cash equivalents presented on statements of cash flows are defined in NAS (7) as: "Cash comprises cash on hand and demand deposits. Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value".

Cash flow statements replaced the fund flow statement for two main reasons. First, it resolved disputes over the definition of funds, and the purposes and presentation of the fund flow statement. The fund flow statements are not considered to provide sufficient information, for investors and other financial Statement users due to form and the definition of funds used. Secondly, they improved the reliability and

usefulness of reported financial information-

Moreover, they omit the effects of some transactions that may be very Important.

2.3.2 Preparation of Cash flow Statement

Cash flows on the cash flow statement must be identified with three main activities of enterprises as required by NAS No. 03 :10

- Cash flows from operating activities,
- Cash flows from investing activities,
- And Cash flows from financing activities.

The basis for the classification is derived from finance theory, that is, enterprises derive the cash used for investing activities and settlement of outstanding financial obligations in an accounting period from internal and external sources. Therefore, the three main activities involve in cash flows are:

Operating activities

Operating activities are the main activities involved in the revenue producing activities of the company. Cash flows from operations are often seen as the most important category among the three categories because it results from the main income-producing activity. Cash generated from the operating activity provides an indication of the capacity of the company to produce cash from its main activity- The Company must generate sufficient cash from its operating activities to finance its daily activities. Moreover, cash flows from operations primarily support capital expenditures and dividends. !f the company cannot generate any cash to repay loans, pay dividend or make new investment; the company would lend cash from external sources, causing future cash outflows. Cash available for investments and external financing shows the firm's ability to make new investments and external financing shows the firm's ability to make new investments. It also indicates to investors the dividend-paying ability of the firm.

In addition, the cash flows from operations can be used to evaluate the quality of profits on income statements. The difference between net cash flows from operations and net profit is helpful in interpreting the quality of earnings. A Large difference between net profits and cash flows from operations reflects a low quality of profits- perhaps net income has increased without an increase in cash flows from operations. This may result from increases In sales on credit, causing increases in accounts receivable, indicating that the company may have a cash collection problem in the future.

Investing Activities

Investing activities involve the acquisition and disposal of long-term assets and other

investment except short term investments. All the cash flows from investing activities can be determined by the long term assets and investment of two accounting periods. Any increase in assets shall be considered as having purchased and cash paid for it unless any information contrary to the same is provided. At the same time, decrease in assets accounts the sale of those assets and cash inflows unless information opposing to that is provided. The gain or loss on sale need to be adjusted to calculate the exact amount cash received. Cash from investing activities includes:

a. Cash receipt from sale of property, plant and equipment

b. Cash payment to acquire property, plant and equipment

c. Cash payment to purchase of equity and debenture

d. Cash receipt from sale of equity and debenture

Financing Activities

Financing activities are activities that result in changes in the size and composition of the equity capital and borrowings of the enterprise (IASC 2000). Cash flows from financing activities are calculated by analyzing the liabilities side of the balance sheet. The amounts of secured loans, unsecured loans, the amount of share capital and retained earnings accounts are analyzed to calculate the inflows and outflows from financing activities- The increase in these amounts can be taken as inflows and the decrease in these amounts can be taken as outflows. Besides capital and loan amounts. Another financing activity is dividend paid or drawings by the owners. Dividend may be in the form of cash dividend or stock dividends. Since stock dividends do not deal with cash, only cash dividend should be considered for cash flow statement. Cash from financing activities includes:

a. cash payment to redeem preference shares / debentures

b. cash receipt in terms of loan taken

c. cash payment for borrowing of loan

2.3.3 Types of cash flow statement

Flows from operating activities can be reported by two methods, the direct or indirect methods.

Direct Method

The direct method shows cash receipts and cash payment to supplier's employees, government and other creditors. Under this method, cash flow statement is prepared by talking sales revenue. It shows cash collected from customer and deducted cash used for various expenses. Here major class of gross cash receipt and gross cash payment are disclosed .while deriving cash from operating activities, expenses related to purchase , operating activities , interest , tax etc are deducted from sales revenue and collection from customers . the derivation of cash from investing and financing activities are similar to the indirect method.

Table: 2.1

Cash flow statement under Direct Method

Particulars	Amount	Amount
A. Cash from operating activities (CFOA)		
i. Cash collection from sales & debtors		
cash sales	xxx	
Increase in debtors /receivable	(xxx)	
Decrease in debtors /receivable	xxx	
Increase in provision for doubtful debt	xxx	
Decrease in provision for doubtful debt	(xxx)	
Bad debt recover	xxx	xxx
ii. Cash paid to suppliers		
cost of goods sold	xxx	
Increase in Inventory	(xxx)	
Decrease in Inventory	xxx	
Increase in payable/creditors	xxx	
Decrease in payable/creditors	(xxx)	(xxx)
iii. Cash paid to employees others		
Payment to employee	(xxx)	
other operating cash expenses	(xxx)	
Increase in outstanding expenses	xxx	
Decrease in outstanding expenses	(xxx)	
Increase in prepaid expenses	(xxx)	
Decrease in prepaid expenses	xxx	(xxx)
iv. Interest payment		(xxx)
v. Tax payment		(xxx)
vi. Cash from extra ordinary activities		
sales of marketable securities	xxx	
purchase of marketable securities	(xxx)	(xxx)
A. Cash from operating activities		xxx
B. Cash from investing activities		
sales of fixed assets/ Investment	xxx	
purchase of fixed assets/ Investment	(xxx)	
B) CFIA		$\pm$ xxx

C. Cash from financing activities		
Issue of share/debenture	xxx	
Redemptions of share/debenture	(xxx)	
Share premium on issue of share	xxx	
Premium on redemption of debenture	(xxx)	
Dividend paid	xxx	
C) CFFA		± xxx
Cash or Cash equivalent A+B+C		± xxx
Add: Beginning balance of cash		xxx
Ending balance of cash		xxx

Nowadays the cash flows statements is accepted as a necessary component of complete financial reporting by nation and international accounting standards because finical statement uses note that the balance sheet income statement and retained earnings statement do not always shows the while financial condition of a company . The balanced sheet show the financed at the end of period but the source of activity related to those items during the

Indirect Method

the indirect method start with net profit or loss based on the accrual basis and adjusts for the effect of non cash transaction such as deprecation and abortions expenses and changes in current assets and liberties the indirect methods is preferred over the direct method . The indirect method reflects conversion from accrual – basis profit to cash – basis profit in other words . it shows the association between the cash flow statement and two financial statements based on accrual basis. That is cash flows from operations related to revenues and expenses on income statement and current assets and liabilities on balance sheets. therefore a reason for supporting the indirect methods is that it is more informative than the direct method because it emphasizes the difference between net income and operating cash flows which can reduce the ability of management to manipulate the income statement numbers.

Table : 2.2

cash flow statement under Indirect Method

Particulars	Amount	Amount
A. Cash from operating activities (CFOA)		
NP from income statement or net profit change in balance sheet	xxx	
Add. non cash/non operating expenses		
depreciation	xxx	
Amortization of fictitious assets	xxx	
Amortization of Intangible assets	xxx	
Loss on sale of fixed assets /Investment	xxx	
Discount on issue of share/debenture	xxx	
premium on redemption of share/debenture	xxx	
	xxx	
Less: Non cash/non operating income		
gain on sale of fixed assets/investment	(xxx)	
premium on sale of share/debenture	(xxx)	
	xxx	
Add. decrease in current assets	xxx	
Add. increase in current liabilities	xxx	
Less increase in current assets	(xxx)	
Less decrease in current liabilities	(xxx)	
A. Cash from operating activities		xxx
B. Cash from investing activities		
sales of fixed assets/ Investment	xxx	
purchase of fixed assets/ Investment	(xxx)	
B) CFIA		± xxx
C. Cash from financing activities		
Issue of share/debenture	xxx	
Redemptions of share/debenture	(xxx)	
Share premium on issue of share	xxx	
Premium on redemption of debenture	(xxx)	
Dividend paid	xxx	
C) CFFA		± xxx
Cash or Cash equivalent A+B+C		± xxx
Add: Beginning balance of cash		xxx
Ending balance of cash		xxx

2.4 Review of Books Journal, and publication

2.4.1 "Water resource development in Nepalese perspective" (Thapa and Pradhan: 2000) is one of the important treatise in respect of the hydro power of Nepal some of the relevant finding are as following.

- Forest in Nepal provide more than 95 percent of the rural energy needs about 20-25 percent of the fodder for livestock and all the domestic timber needs .
- Nepal's energy scenario refracts an imbalance between energy consumption and energy resource endowment.
- The theoretical power potential of the water resource in Nepal is estimated to be the output of technical and economically viable schemes .the installed capacity of hydro power of the station developed till now works out to less than one percent of the potential identified up to date . thus Nepal enormous potential of water resources to generated hydro power is in the early stage of exploitation.
- 4. Future development of agro industries and processing facilities would also need reliable supply of power generation for large scale year round irrigation as well as hydro power generation for export and use in power intensive industries.
- Development of water resource is essential unit order to meet human needs like increasing agriculture and industrial production meeting energy needs and earning foreign exchange from power export
- The strategy for power development in Nepal should aim at maximizing the economic benefit from hydro power development through an optimum development of country's river basins. Optimum utilization of this resource calls for meaningful co- operation among the riparian co –operation among the riparian countries.
- High investment requirement for the development of hydro power and the lack of financial resources are the major constraints at present.

Flows item such depreciation expenses and gain or loss on the sale of operating assets. Profit reported on income statement may be a subjective distortion because it includes these items. It has been argued that traditional ratios from income statements and balance sheets such as the liquidity ratio and quick to ratio may not provide a comprehensive of a company's ability to retire its debts because current assets including accounts receivable and inventory may not be converted into cash. Therefore the cash flows ratios are advocated because they can give users better insights into the financial performance of a company. Cash flows return ratios as described below.

1. Cash flows sufficiency ratios these ratios are;
    - Cash flows adequacy ratios
    - Debt coverage ratios
    - Repayment of burrowing ratios

- Reinvestment ratios

2. Cash flows return ratios these ratios are as follows:
   - Cash flows on revenues ratio
   - Cash flows to net income ratio

Cash flows return on stockholders' equity ratio these ratios are advocated as being to help users of financial statements in making decisions for example cash flows on revenue ratio assists credit managers in analyzing the credit risk of the firm. Generally, the higher the ratio, the better the credit risks .In addition, it is suggested that the cash flows on revenue ratio are considered in analytical procedures to detect financial statement fraud.

Period are not provided, profit in the income statement does not reflect an increase in cash. Moreover, the profitability and financing issues are reported separated on income statements and balance sheet respectively this causes misleading and confusing results to users the requirements of cash flow statements are based on the assumption that past flows are useful for assessing future cash flows and the cash flow statements supplements and presents information differently to the information provided in the cash flow statements used in conjunction with other financial statement, the balance sheet and income statement, provides so many benefits

2.4.2 Type of cash flow ratios

Financial ratio analysis is a tool used in financial statement analysis. Financial ratios can be used to predict financial variables and to evaluate relative performance such as predicting bankruptcy, stock prices and the probability of loan default. Ratios are developed to help users of financial statements compare performances of companies on a year – to year basis and across companies. cash flow statements provide new measures to evaluate firm in financial analysis before the regulation of reporting cash flow statements in that time, surrogates of cash flows are used, such as net income plus depreciation, resulting in a lack of uniformity and misdirected analyses currently, statements of cash flows have the ready availability of cash flows data with consistent performance measures of cash flows from operations cash flows ratios are based on the flows from the operations (CFO) of the company. Also ratios can contain accrual-based accounting data. the cash flows ratio provide a clearer picture of a company's performance highlighting an organizations cash flows strengths and weaknesses cash flows ratios could be a better measure of firm performance than financial ratios from income statements and balance sheets, because cash flows from operations as a main component of the ratios, exclude the effect of non- cash flows items such as depreciation expenses and gain or loss on the sale of operating assets. profit reported on income statements may be a subjective distortion because it includes these items . it has been argued that traditional rations from income statements and balance sheets

such as the liquidity ratio and quick ratio may not provide a comprehensive measure of a company's ability to reline its debits because currents assets , including accounts receivable and inventory, may not be converted into cash. Therefore, the cash flows ratios are advocated because they can give users better insight into the financial performance of a company. Cash flows may be categorized into two groups. cash flows sufficiency and cash flows return ratios as described below

1. Cash flows sufficiency ratios these ratios are
   - Cash flows adequacy ratios
   - Debt coverage ratios
   - Repayments of borrowing ratios
2. Cash flows return ratios
   - These ratios are as follows
   - Cash flows on revenue ratio
   - Cash flows return on assets ratio
   - Cash flows return on stockholders' equity ratio

These ratios are advocated as being able to help users of financial statements in making decisions. For example cash flows on revenue ratio assets credit managers in analyzing the cried risk of the firm. Generally, the higher the ratio, the revenue ratio and the debt coverage ratio are considered in analytical procedures to financial statement fraud.

2.4.3 " Hydropower in Nepal issues and concept of development" (Shrestha: 2003) has also noted the following major finding.

- Major achievements in the economic development of Nepal could be realized through proper harvesting of the vast water resources. But nearly hundred percent dependencies on overseas professions and a failure to gradually develop our own manpower prevent realization of this goal.
- The opportunities in hydropower development do not connote nearly approaching new projects but also commitment to maintaining and optimizing the efficiencies such opportunities means institutional development \, but this has been grossly overlooked for obvious reasons
- An alternative strategy for the hydropower in Nepal would be to open the doors for privatization where there would be a chance for development through competition and decrease of bureaucratic control.
- To demonstrate the assessments of conditions that have been made through out the history of developments of hydro power in Nepal , facts and figure suggest that many past mistakes continue into the decision making process
- To demonstrate the assessments of conditions that have been made through out the

history of development of hydro power in Nepal , facts and figures suggest that many past mistakes continue into the decision making process.

- Because of improper information management, non – existent human resource: development and myopic decisions making, we have made ourselves vulnerable to the dictates of outside help where terms , we terms are drawn up to the advantages of multi- national funding agencies
- As the development of hydro in Nepal has always been dictated by many constraints and conditions, projects are selected by planning procedure which is deliberately designed to produce a no option situation in decision making

2.4.4 "towards a power sector strategy" (HUGUS: 2004) the main finding of this reports are :

- Existing power system in Nepal is small fragment and unable to meet the existing demand for electricity
- Lack of an abundant power supply aggravates the energy problems which are characterized by a high usage of fuel wood and disappearance of forest cover and by a growing dependence on imported hydro carbons which is exerting pressure on the country's balance hydro carbons which is exerting pressure on the country's balance of payments situation
- Nepal has abundant water recourse which is largely untapped. the cost of hydroelectricity at optimally sized plants located in the accessible areas of the main river basins is low compared to thermal generation.
- Development of hydro Electricity resource could mitigate the energy problems contributes to industrial expansion and increase export by direct sales of energy or by selective development for energy intensive industries.
- While there is obvious need to develop the hydro electric resources there are a number of constraints, the main constrain is the high capital investment required relative to resource: available other constraints are lack of information for evaluation of alternative courses which could be followed in hydro power development the need for international agreement on water sharing and the lack of trained manpower.

2.4.5 “Comprehensive study done the World Bank on "Nepal power" (subsection Review, 2005:10) is another useful document for the review some of the findings are as follows

- Nepal's power system is still in the early stages development. The average consumption of Electricity is 25 kwh/month which is one of the lowest in the world.
- Nepal's power sub scores faces numerous impediments to its development chef of which are the lack of well defined trifled policy and institutional weaknesses in

the NEA (the national public power utility).

- His majesty's government of Nepal (HMG/N) views. The efficient exploitation of this resources as one of the Nepal's most important economic priorities because of the need to reduce substantially the cost and improve the available to the domestic market and the potential for export of compressively priced hydro power to India
- NEA needs to address three key issues
  a. improvement on NEA manager's understanding and application of basic utility management concepts and tools
  b. preparation of the corporate development plan
  c. improvement of conditions of service for its employees

Electric corporate of service for its cost of supply to consumers while satisfying Nepal governments social objectives and taking into account NEA's financial viability and financing requirement

- While load forecasting and generation paining are of a high standard at NEA, more attention needs to be paid transmission distribution and operational planning
- Although bulk export of competitively priced hydro power to India represents Nepal's Moet attractive medium and long term foreign exchange earning option, Nepal government does not yet have a detailed strategy to achieve this goal
- Only two percent of the rural population has access to Electricity however Nepal Government does not give a master plan for rural energy need at least cost. Analysis indicates that carefully designated schemes can be cost effective, Financially and competitive with alternative fuels

2.4.6 Youkishi Ozaki (2009) Present the important article entitled "National wide master plan study on storage type hydroelectric power development". The major findings of this article are:

1. The total hydroelectric potential has been estimated at 83000 MW which approximately 42000 MW is considered as economically feasible potential.
2. There is heavy load shedding up to 16 hours per day. So, Nepal should import the power from India.
3. At present Nepal has only one seasonal storage project, Kulekhani -1 (60 MW).

Jha (2009A.D), "Social Issues and Hydropower development in 2009 Bhavera.

The main findings of this report are:

1. The first ever elected government of Nepal after the election of constituent Assembly has a vision of developing 10000 MW of Hydropower in following 10 years.

2. The present government has done a step further and recently declared its vision of developing 25000 MW of hydropower in next 20 years.
3. Acquisition of land of people by providing compensation is also another issue.

2.4.7 As per Instituted of charted accountant of Nepal (NAS) different terminology of cash flows has been defined as follows;

Cash compress cash on hand and demand deposits

Cash equivalents are short – term highly liquid investment that are readily convertible to know amounts of cash and which are subject to an insignificant risk of changes in value.

An insignificant risk of change in value .

Cash flow is inflows and outflows of cash and equivalents

Financing activities are the acquisition and disposal of long – term assets and other investment not included in cash equivalents.

Operating activities are the principal revenue – producing activities of the entity and other activities that are not investing or financing activities.

2.5 Review of the previous research work

2.5.1 **Mr. Dill Ram Bhattarai** (2002) has submitted his research report on "profit planning in Nepal Electricity Authority" to Faculty of Managements, Shanker Dev campus in the partial fulfillment of the requirements for the degree of Master of Business studies. In his study, he has pointed out following major findings and recommendations:

Major finding

- The authority fails to maintain its periodic performance report systematically Goals and objectives are limited only to the high.
- Specific goals and objectives are not conveyed to lower level staffs and it denotes the absence of MBO principle of management in the organization
- Only the top level executives are involved in planning and decision making and participation of lower level staffs is not encouraged .
- Return on sales acid test ratio and return on net capital employed are not perfectly satisfactory through total assets turnover ratio seems better
- NEA is suffering from high fixed cost.
- Overheads are not classified systematically and it creates problem to analyze its expenses property.
- NEA is suffering from the high rate of power loss. Sales are below than production in the range of 22-24% during the study period.

Recommendations

- NEA must restructure its capital structure and should emphasize the internal financing to minimize the burden of high interest of long term loans. for this , it can issue shares and can refund the debt
- Leakage of Electricity should be controlled. for this meter reading and meter joining system should be improved Rules and regulations should be strictly implemented to control the leakage and those staffs who are themselves engaged in encouraging power leakage should be investigated and strictly be demoralized.
- The liquidity position is not satisfactory. So it should be corrected NEA should try to maximize its operating profit. For this , cost control program can be launched in one respect and the alternative for the replacement of long loans term loans should be searched.
- NEA should develop efficient system of revenue collection .In revenue collection , any kind of pressure and biases should strictly be undermined .Huge amount of account receivable especially of Municipality metropolis , sub metropolis consumed in street lights should be managed and receivable can be collected by imposing its expenditures to the neighboring community people
- Cost volume profit relationship and flexible budgeting system should be considered while formulating profit plans

2.5.2 **Ghana Shyam Thapa** (2004) has submitted report on profit planning in Nepalese public Enterprises. A case study of Nepal Electricity Authority to Faculty of Management Nepal commerce campus of business studies. In his study ha has pointed out following major findings and recommendations:

Major Findings

- NEA prepares both tactical and strategic profit plan but strategic plan is confined only to the level executives.
- Achievement of capital expenditure budget is satisfactory.
- Operating costs have not been controlled effectively during the study period.
- NEA has not maintained sound liquidity during the study period.
- NEA has not prepared plan and program for agriculture sector's consumption of Electricity
- NEA has not considered demand determinates such as family income price of Electricity, connection charge cost of alternatives available and reliability of NEA service while forecasting demand.

Recommendations

- A systems approach to comprehensive profit planning and control is essential. To adopt these approach existing planners should be trained and new planner should be hired. these can contribute to increase the profitability of NEA
- NEA should reduce the long – term loan to reduce the high interest amount.
- Cost volume profit relationship should be considered while developing the sales plan and pricing strategy. Maintains the breakeven point NEA should control fixed and variable cost and should increase sales volume
- It is suggested that NEA should invest in small hydro project to ensure profitability such projects do not require much fund start to give return in investment quickly.
- NEA should adopt discounted flows techniques to evaluate the large projects

2.5.3 **Mr. Badri Nath Sharma** (2005) has submitted his research report on "profit planning in Nepal Electricity Authority to Faculty of Management Nepal commerce campus in the partial fulfillment of the requirements for the degree of Master of Business studies. In his study he has pointed out following major findings and recommendations

Major Finding

- Actual sales is favorable than budgeted sales .Rate of the Electricity per unit is cheaper in supply too India than internal sales price per unit
- There is absence of overhead budget.
- NEA is paying huge amount of interest and is suffering from high fixed cost.
- Revenue collection has also been one of the main problem as well as profitability and net profit ratio is not satisfactory.
- 5. Lack of the use of the concept of profit planning and control and lack of proper co-ordination among department of NEA

Recommendations

- NEA should have an efficient management system to have control over costs .it must maintain fixed cost to minimums standard level.
- NEA should restructure its capital structure and should emphasis the internal financing to avoid burden a high interest on long term loan by issuing shares.
- NEA should give priority to domestic project invested by local investors rather than giving priority to foreign investors.
- Sales budget should be prepared on the realistic ground .It should be made after analyzing all variable that affect the sales of NEA.

- NEA should following tight collection policy account receivable in time collection policy should not be influenced by political pressures
- Load shedding by developing and investing in as many hydro projects as it can and controlling in its which help to increase its profit in long run.
- NEA should maintain should sound liquidity management by the help of increasing current assets and decreasing current liabilities.

2.5.4 **Mr. Gaha Nath Koirala** (2007) has submitted his research report on " Managerial Budgeting as the tool of increasing efficiency of public enterprises (A case study of Nepal Electricity Authority)" to faculty of management, Shanker Dev campus in the partial fulfillment of the requirements of degree of Master of Business studies .in his study he has pointed out following major findings and recommendations.

Major findings

- NEA has not considered major demand departments of Electricity such as family income, price of Electricity, connection charges and cost of alternative.
- NEA has not adopted practice of preparing monthly budget
- NEA has no practice of cost segregation.
- NEA is unable to meet its BEP sales therefore, it faces loss every year.
- NEA has not maintained its periodic performance report systematically

Recommendations

- NEA should have an efficient management system to have control over costs.
- NEA should utilize all its available capacity , with helps to increase its sales revenue by the help of effective capacity management
- Leakage of the Electricity should be controlled.
- NEA should maintain sound liquidity management by the help of increasing current assets and decreasing current liabilities.
- NEA should invest in various consider cost benefit ratio while selecting and investing projects.

2.6 Research Gap

Research gap lies on research variety and lack of research on cash flows Most of previous researches are focused on cash management, and narrowly explain an essential of cash flows studies. Therefore, this thesis will identify cash flows of the corporation to analyses them and recommended viable suggestion to NEA.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Research design

A. Research design is aimed to ensure the research can clearly answer the research problem and involved systematizing the research activity. Many research methods can be used to collect data such as survey experimental and using secondary however the use of secondary data in which data already exists is the most appropriate for this research. The major purpose of this research is to examine historical cash flows. Descriptive and analytical research design is used in this study. To clarify conceptualization of the problem descriptive research approach have been adopted and analytical approach have been used to analysis accounting data and relationship among the variables.

3.2 population and sample

The existing number of public manufacturing enterprise in Nepal refer to the population and Nepal Electricity Authority (NEA) is the sample since NEA is the oldest public company and it is most likely to represent all; other public company, however this is a descriptive case study and thus the findings couldn't be extensively generalized to all other public company

3.3 Nature and Type collection

The existing number of public manufacturing enterprise in Nepal refers to the population and Nepal Electricity Authority (NEA) is the sample . Since NEA is the oldest public company, and it is most likely to represent all other public company however this is a descriptive case study , and thus the findings couldn't be extensively generalized to all other company.

3.4 Nature and Type

Since the aim of this study is to study cash flows NEA, the nature of data have been primarily secondary data. Using secondary data has the advantage of saving time and costs.

3.5 Source of Data Collection

Data is collected from web site Nepal electricity Authority. The website of Nepal Electricity www.nea.org.np besides various magazines journal of ICAN Annual report and personal experience have been always helpful To focus on the statements of cash flows cash flows from operating activities are directly from cash flow statements. Earnings are derived from income statement. Total assets, sales and other variables are selected from balance sheets and income statements.

3.6 Data gathering procedure

After the identification of sources of data the required data for the study have been gathered by using following procedures:

- First of all nature of data have been identified
- For the collection of secondary data, yearly annual report of NEA have been taken for the period of five years.
- This research utilized quantitative methods in which the data are analyzed based on statistical techniques which descriptive statistics provide an initial summary data of the essential features of the sample the correlation analysis is used to fundamentally examine the relationship between dependent and independent variables . Regression analysis , both simple liner and multiple regressions is applied to test the prediction models depending upon the ability predictor to explain future cash flows on the other hands this research utilized financial and cash flow ratios to analyze secondary data

3.7 Financial tools for analyzing cash flows

3.7.1 Cash flow sufficiency ratios

It shows the ability of a generate operating cash flows. All ratios indicate whether a company's cash flows are sufficiency for the payment of debt acquisitions of assets and payment of dividends. These ratios are

Cash flows adequacy ratios

Debt coverage ratios:

Repayment of borrowing ratio

Reinvestment ratio

The cash flows adequacy ratio is an attempt to assess the entity's ability to produce sufficient operating cash flows to over its cash requirement specifically the payment of debt, the acquisition of assets and the payment of dividends. Here

$$\text{Cash flows cash adequacy} = \frac{\text{cash flows from operation}}{\text{Repayment of borrowings+ Assets acquired +Dividends paid}}$$

Repayment of borrowings ratio

This ratio indicates the ability of a firm to generate cash operating activates for covering long –term debt commitments in the current year .Here

$$\text{Repayment of borrowings ratio} = \frac{\text{repayment for property plant and equipment}}{\text{Cash flow from operation}}$$

Reinvestment Ratio

The reinvestment ratio presents the ability of a company to generate cash from

operating activities for covering asset acquisition payments. Here

$$\text{Reinvestment ratio} = \frac{\text{Payment for property plant and equipment}}{\text{Cash flow from operations}}$$

3.7.2 Cash flows returns ratios

This group is sometime called efficiency ratios. It shows the ability of a company to generate operating cash flows. Cash flows efficiency ratios are used to assess the relationship between items in the income statement and balance sheet with cash flows from operations as disclosed as disclosed in the cash flow statement these are as follows.

- Cash flows on revenue ratios
- Cash flows to net income ratio
- Cash flows return on assets ratio
- Cash flows return on stockholders' equity ratio
- Cash flows to net income ratio

This ratio is aimed at showing the ability of the company to turn revenue into cash. The higher the ratio, the better the ability . this ratio am ploys information provided by the statement of cash flows and the income statement .it is computed by dividing cash from operating activities by revenues

$$\text{Here, cash flows to revenues} = \frac{\text{Cash flows from operation}}{\text{Revenue}}$$

Cash Flows to net income ratio

This ratio is sometime called the operating index. it compares the company's profit with cash flows from operations and attempts to provide an index of the cash generating productivity of operations it is calculated as cash flows from operations divided by profit after income tax

$$\text{Here, Operations index} = \frac{\text{cash flows from operations}}{\text{profit}}$$

Cash flows return on assets ratio

This ratio attempts to measure the company's return on assets in term of the cash flows generated from operations. Here,

$$\text{Cash flows return on assets} = \frac{\text{cash from operation + Income tax+ interest}}{\text{Average total assets}}$$

Cash flows return on stockholders' equity ratio

This ratio shows the ability of the company to generate a sufficient cash return for stockholder here,

Cash flows return on stockholder equity ratio = $\frac{\text{Cash flows from Operation}}{\text{Average stockholders equity}}$

3.7.3 Cash inflows to outflows ratio

Cash turnover ratio basically analysis the relation between cash inflows and outflows from operating investing and financing activities overall. Higher the ratio higher will be the cash inflows and vice – versa

Here, cash turnover ratio = $\frac{\text{Cash inflows}}{\text{Cash outflows}}$

3.7.4 Cash flows liquidity ratio

This ratio used to test the company's short – term debt paying ability , Here

Cash flows margin ratio = $\frac{\text{cash and bank Balance}}{\text{sales}}$

3.8 statistic Tools for analyzing cash flows

The statistic tools used for the quantitative analysis of secondary data are as follows

3.8.1 Standard Deviation (S.D)

Standard deviation measures scatter, spread and provides idea of homogeneity or heterogeneity of the distribution .Out of various methods of studying dispersions such as, range quartile deviation mean deviation

Standard deviation and variance the most popular method

S.D. = $\sqrt{\frac{1}{N}\phi\ (X - X)^2}$

N=number of observations/ time periods

X= Expected return of the historical data

3.8.2 The least square Methods

A. widely and most commonly used methods to describe the trend is the methods of least square Under this method a trend line is is fitted to the data satisfying the following two conditions.

Let the trend line between the dependent variable Y and the independent variable x be represented by

$y = a + bx$ ……. (i)

Then for any given of independent variable x, the estimate of y denote by $y = a+bx$

Where

a= y intercept or value of y when x=0

b= slope of the trend line or amount of change that comes in y for unit change in x.

To determine the straight – line trend it is required to determine the values of a and b

To find the values of and b, solving the following two equations

$\phi y = na + b \phi x$ ……. (i)

And $\phi XY = a\phi X + b \phi X^2$ ……..…….. (ii) |

The equation (ii) is obtained by taking sum on both sides of equation (i) the equation (ii) is obtained (i) and (ii) are substituted in equation (i) gives the equation of make calculation easier the devotion of the independent variable are taken from the middle of the time period so that $\phi X = 0$ |

Then the above two equations changes to.

$\phi Y = na$

$a = \frac{\phi y}{n}$ |

And

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

$b = \frac{\phi XY}{\phi X^2}$ |

3.8.3. Karl person's coefficient of correlation(r)

Correlation analysis refers to the statistical technique , which measures the degree of relationship or association between the variables .To put it differently , It helps in analyzing the co variation of two or more variables .It is to be noted that a high degree of correlation between two variables doesn't always necessary imply that changes in one variation cause changes in the other .Out of several methods of calculating correlation, Karl Pearson's coefficient of correlation (r) measure the degrees of association between the two variables suppose x and y given by

$r = \frac{\phi \hat{\Pi} V}{\sqrt{\phi \hat{\Pi}^2 . \phi v^2}}$

Where;

r = Karl Pearson's coefficient of Correlation between X and Y.

$\hat{\Pi} = X - \overline{X}$

$V = Y - \overline{Y}$ |

$\overline{X} = \frac{\phi X}{N}$, $\overline{Y} = \frac{\phi Y}{N}$

n= Number of Years

Interpretation of correlation coefficient (r)

The value of 'r' lies between + 1.00 to -1.00

When r = + 1, there is positively perfect correlation between the two variables.

When r = - 1, there is a negatively perfect correlation between the two variables.

When r = 0 the variables are uncorrelated i.e. increase or decrease in one variable results no impact on another variable and vice-versa. Together with Karl Pearson's coefficients of correlation probable error(P.E) of the correlation coefficients is also computed P.E is the measure of testing the reliability of the calculated value of 'r' it is given by $P.E = 0.6745 \frac{1 - r^2}{\sqrt{n}}$

Where P.E = probable error of correlation it is given coefficient

n= number of pair of observations

r= correlation coefficient

It is used in interpretation whether calculated value of 'r' is significant or not It
r< 6P.E. it is insignificant.

But when P.E< r< 6 (P.E) the value of 'r' is inconclusive as to statistically significant / insignificant correlation

The upper and lower limits which the coefficient 'r' with but when is always in positive value's module or |r| =0.5 this positive value of 'r' is compared with P.E and 6 (P.E) to derive to a conclusion of practically significant/ insignificant correlation

3.8.4 Regression Analysis

Regression is the statistical tool which is used to and to make estimation of one variable based on the other variable (s) . The closer the relationship between the two variables the more accurate the estimated value is . The unknown variable to be estimated is called dependent variable and the known variable is called independent variable.

Noteworthy here is that correlation analysis indicates to what degree the variable are related and regression analysis indicates how the variables are variable are related and regression and regression analysis indicates how the variables are related

Regression line of X variable on Y variable is given by;

$$(X - \overline{X}) = r \frac{\exists X}{\exists Y} (Y - \overline{Y})$$

Where;

$\overline{X}$ = Mean of X variable

$\overline{Y}$ = Mean of Y variable

$\exists X$ = Standard deviation of X variable

$\exists Y$ = Standard deviation of Y variable

r = Karl Pearson's coefficient of Correlation

Likewise, the regression line of Y variable on X variable is given by;

$$(Y - \overline{Y}) = r.\frac{\exists Y}{\exists X}(X - \overline{X})$$

3.9 Research Hypotheses

Testing of hydro these is one of the most important aspects of the theory of decision making. It consists of decision rules for drawing probabilistic inferences about the population parameters. Hypotheses are an assumption that is made about the population parameter and then its validity is tested the act of verification involves testing the validity of such assumption which when undertaken based on sample evidence is called statistical hypothesis or testing of hypotheses or test of significance. By testing the hypothesis, it can be found out whether it deserves the acceptance or rejection of the hypotheses. Generally two complementary hypotheses are set up at one time. If one of the hypotheses is accepted then other hypotheses is rejected and vice versa. The two complementary hypotheses that are set up in the testing of hypotheses are thee null hypothesis and the alternatives hypothesis

Procedure of the testing of hypothesis (test of significance)

The following steps should be considered while testing hypotheses:

Step: 1 set up to the hypotheses

Step: 2 compute appropriate test statistic or test criterion i.e for large sample (n>30) Z test is applied and for small samples (n>30), t-test can be applied.

Step 3: choose level of significant i.e. determining the level of significant, at which the hypothesis is to be tested,

Step4. Find the critical value of test statistic i.e. identifying significant value of test statistic

Step 5.conclusion i.e. if calculated value of test statistic is less or equal the tabulated value then null hypothesis is accepted and vice versa similarly if calculated value of test statistic is great than the tabulated value then alternative is accepted.

3.10 Diagrammatic and graphical represent ion

Presentation of statistical data using diagram is known as diagrammatic presentation. Data is presented through diagrams and graphs provide importance at a glance. Picture speaks itself, there is no need to explain they show visual indications of magnitudes, grouping, strengths trends and patterns of visual indications, grouping, strengths trends and patterns of presented data. Diagrams generally provide fixed information about the data whereas a graph provides more precise and accurate information than diagrams.

CHAPTER - 4
DATA PRESENTATION AND ANALYSIS

4.1 presentation of Cash flow statement of NEA

The cash flow statement below reflects the change in financial position from the F\Y 2004/05 to 2008/09 by classifying transactions into statement under indirect method. Under indirect methoid.net profit\loss is adjusted by the transactions of a non – cash nature deferrals or accruals of past or future operation cash receipts or payments and items of income or expenses associated with investing or financing cash flows . The following table shows the cash flow statement of NEA during the study period.

Table: 4.1

Cash Flow Statement of Nepal Electricity Authority (2004/05 - 2008/09)

(Rs. in million)

Particulars	2004/05	2005/06	2006/07	2007/08	2008/09
A. cash from Operating Activities					
Profit transfer to balance sheet	-1312.81	-1267.80	314.19	-1018.86	-4681.24
Net profit (loss) for the year	-1312.81	-1267.80	314.19	-1018.86	-4681.24
Add: Non cash and non operating expenses					
Depreciation for the Year	1733.50	1816.9	1856.47	1895.17	2231.40
Loss on foreign exchange	0.00	42.70	0.00	484.10	800.24
Provision for losses on property, plant and equipment	40.00	65.00	60.00	60.00	70.00
Deferred revenue expenditure written off	123.30	105.40	42.56	108.51	110.00
Less Non operating gain					
Gain on foreign exchange	-230.00	0.00	-493.39	0.00	0.00
Funds from Operation (FFO)	354.00	762.20	1779.83	1528.92	- 1469.60
Add: Decrease in working capital except cash (item wise)					
Inventory		17.90			
Debtors	38.01				955.20
Prepaid/ Advance					
Creditors	2912.08	2375.70	2974.61	3363.01	
Less Increase in working capital except cash (item wise)					
Inventory	-324.69		-143.65	-301.68	-56.28
Debtors		-390.3	-1063.41	-569.67	
Prepaid/Advance	-35.33	-195.3		-94.19	-97.43
A. cash from Operating Activities	2944.07	2570.20	3547.38	3926.39	-668.11

Sale/(purchase of property, plant & Equipment	-7570.20	423.18	38.38	-298.52	-26648.61
Increase in Capital WIP	-5440.85	-5931.10	-7153.69	-6554.52	1764.57
Increase in investment	-63.99	-42.90	-62.15	-738.14	-700.00
B. cash from investing Activities	-6256.26	-5550.80	-7254.22	-7541.18	-25584.07
C. cash from Financing Activities					
Add. issue of shares/debentures	1945.95	2951.30	3269.08	2032.81	3663.70
Add: Secured Long Term Loan Borrowed	3434.37	1950.40	1128.24	3752.69	6848.93
Less (Repayment of borrowing	1781.95	1985.08	569.87	1790.40	1846.55
C. cash from Financing Activities	3598.37	2916.62	3827.45	39251.10	8666.08
Net cash from Increase/ Decrease (A+B+C)	286.18	-64.00	120.61	380.22	-640.77
Add: Opening cash/bank balance	1036.42	1322.60	1258.60	1447.58	1337.88
Closing cash / bank balance	1322.60	1258.60	1379.21	1827.80	697.11

4.2 Analysis of Cash flow Operating Activating

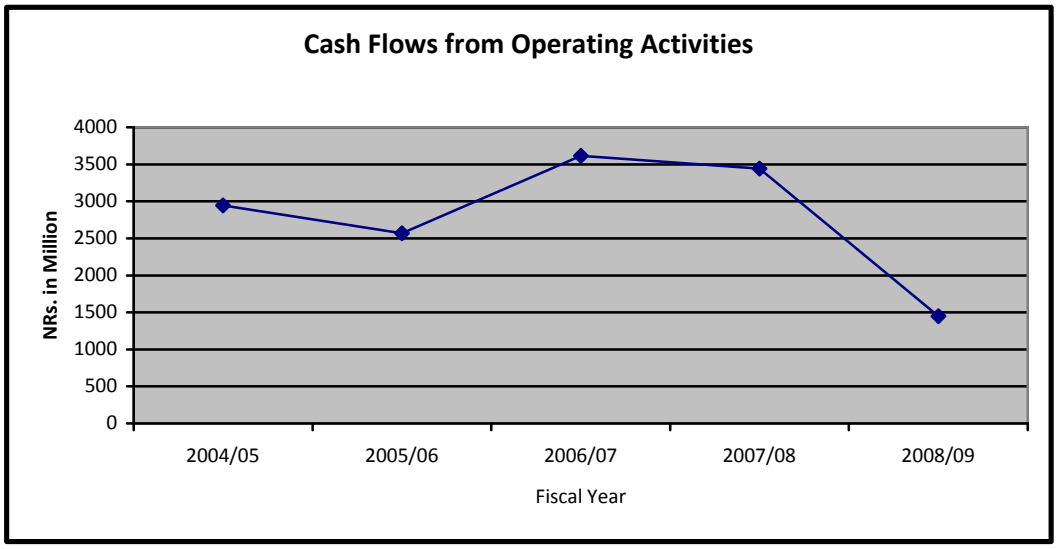
Cash flows from operating activities include all those activities of the corporation which makes cash flows. If the cash inflow is greater than of the outflow it is considered satisfactory because it shows the company have sufficient cash to bear all the expenses and overhead but if cash outflow is greater than inflow then it is considered poor performance.

Net cash from operating activities of NEA is Rs 2944.07 million in the F/Y 2004/05. In the F/Y 2005/06 it decreased to Rs. 2570.2 million i.e. it decreased by 12.7% it is increased to Rs 3547.38 million in the F/Y2006/07 i.e. it increased by 38.01%. It is due to increase in working capital i.e. increase in current assets and decrease in current liabilities. It is the highest cash from operating activities abstained in the last 5 years and it is due to achieving net profit after a long period of time and also due to increase in current liabilities. However ,NEA is again in loss in the FY 2007/08 and in the same year, current assets increased , thus Cash flows from operating activities have been increased by 378.92 to Rs.3926.30 million in the FY 2007/08 thought there have been increased in current liabilities. In 2008/09 cash from operating activities is in negative. It largely decreased to 668.11 million because of large portion of cash have spent in street light.

The above interpretation to the data shows that NEA have maintained the positive cash flows from operating activating beside FY 2008/09 but it is fluctuating during the study period NEA is facing loss in each year despite cash inflow from operating activities it decreased in 2005/06 and again increased in 2006/07 and decreased in 2007/08 and largely decreased in 2008/09 it indicates that NEA failed to maintain increasing trend of cash flows from operating activities , The reason behind this is

NEA faild to abstain profit every year and does' give much importance to current assets and current liabilities. However, the overall performance the enterprise is satisfactory since it generates positive cash inflow from operating activities except the FY 2008/09 which ensures the ability of paying debts and investing in a hydro projects in FY 2004/05, 2005/06 & 2007/08. The cash flows operating activities of NEA during the study period can be shown in a graphical representation as follows

Figure: 4.1



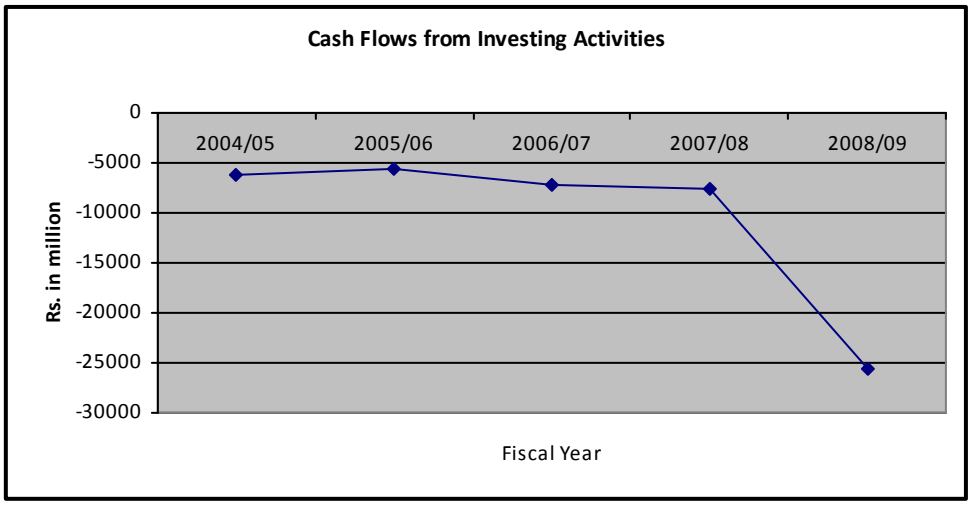
4.3 Analysis of cash flows from Investing Activities

Cash flows investing activates of NEA are observed negative during the study period the pattern of cash flows are Rs (6256.26) Rs. (5550.82) Rs (7254.22) (7541.18) and (8638.74) million respectively in respective the FY 2004/05, 2005/06 2006/07 2007/08 & 2008/09 from the above figure it is seemed that cash flows from investing activities in the FY 2005/06 is decreased by 11.28% and it is due to the sale of plant and machinery. However made in the purchase of plant and machinery as well as investment are made in the FY 2006/o7, 2007/08 and 2008/09 thus CFIA is increased by 30.69%, 3.96%, 74.55% respectively.

During the study period the main investing activities involved is acquisitions of plant & machinery and investment .it states that NEA has enhanced future growth opportunities and is able to expand its services.

The CFIA during the study period can be graphical representation as follows.

Figure: 4.2

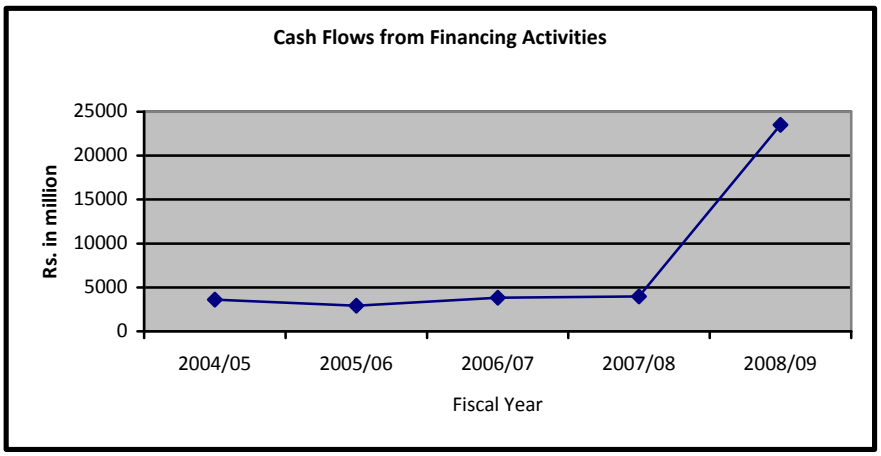


4.4 Analysis of cash flow from financing Activities

cash flows from financing activities of NEA are crash outflows 3598.37 Rs. 2916.62 Rs. 3827.45 Rs. 3995.1 and 8666.08 in the FY 2004/05, 2005/06 2006/07 2007/08 ,2008/09 respectively . The amount decreased by 18.95% in 2005/06. It increased by 31.23% in the FY 2006/07 by 4.38% in the FY 2007/08 and by 116.91% in FY 2008/09.The reason behind decrease in cash flows from financing activities are redemption of preference shares/ debenture and repayment of loan since NEA have not issue preference shares and debentures yet , the reason for decrease in cash flows from financing activities in the FY 2005/06 is repayment of loan/In that year ,NEA have replayed huge amount of borrowing in the remaining years ,NEA have issued share capital every year and the proportionate of borrowing of loan is higher than repayment of loan. That is why cash flows from financing activities are in increasing trend in the FY2008/09.

It can be show in graphical representation as follows

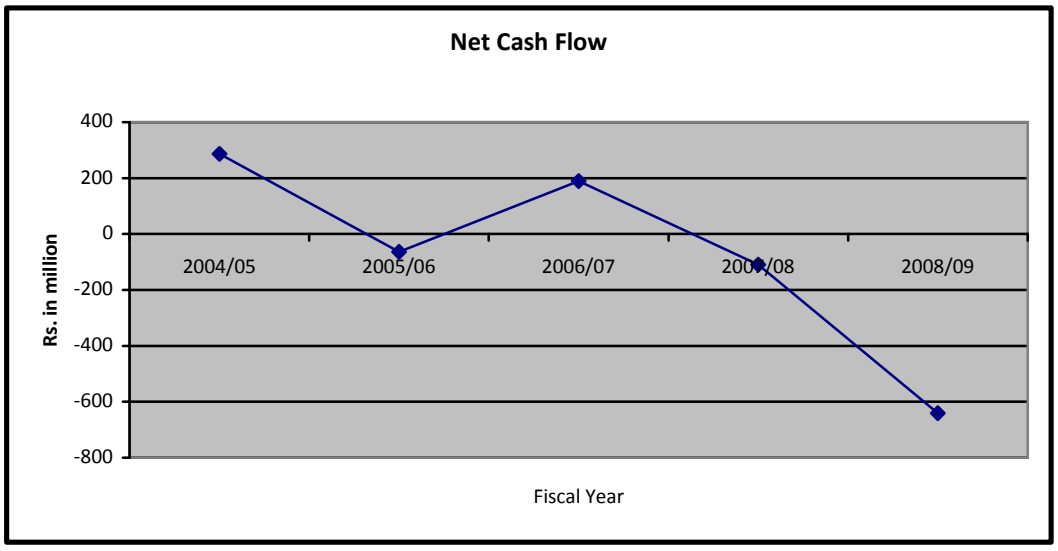
Figure: 4.3



4.5 Analysis of Net cash Flow

The net cash flows of NEA are calculated from accumulating net cash flow from operating, investing and financing activities. The net cash flows of NEA are very fluctuating during the study period. It can be show with following line.

Figure: 4.4



From the above trend line, it seemed in the FY 2008/09 net cash Flow decreased in a heavy amount. It is due to the large amount of cash expenditure, payment to plant and machinery and investment.

4.6 Analysis of profit and loss

Profit is the positive difference between income and expenses. If income is greater than profit and vice- versa. Profit is the amount money expected to make if all customers paid on and if expenses are spread out evenly over the time being measured. Profits of the firm depend on many factors such as depreciation non-operating gains, and losses, simply it can be said that when manufacturing, selling distribution and administrative cost are subtracted from sales revenue then occurred either profit or loss. Profit and loss can be computed either by using profit and loss a/c or by income statement. Profit and loss a/c generally used by trading company and manufacturing company uses income statement. Thus NEA has used income statement, which ascertained or loss.

However, profit has less if the firm has negative cash flow. It is the cash not the profit which is required to operate the business. Profit is accounting measures that may not reflect the economic reality of the firm the following table shows the profit and loss of NEA

Table: 4.2

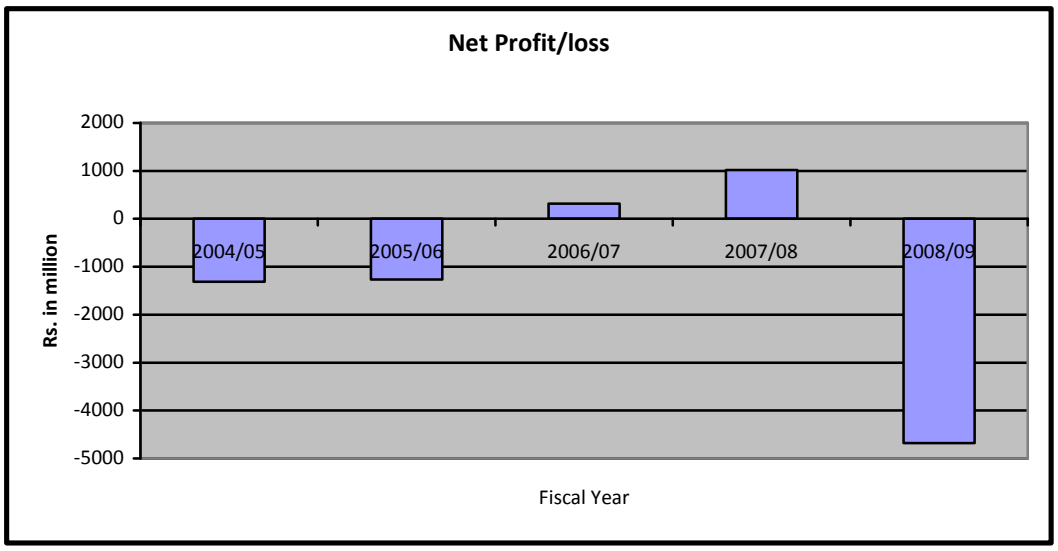
Profit and loss of NEA

NRS. In million

Fiscal year	Profit(loss)
2004/05	- 1312.80
2005/0	- 1267.80
2006/07	314.19
2007/08	- 1018.86
2008/09	- 4681.24
Average	- 1593.302

in first year 2004/05 NEA have loss of Rs. 1312.8 million in the FY 2005/06 and it reduced to Rs. 1267.8 million in the FY 2006/07 NEA is able to get profit of Rs. 314.19 million but again in the FY 2007/08 NEA suffered from loss of 1018.16 million due to weakness of managerial control and receivable collection NEA suffered by large amount of loss in 2008/09 of Rs. 4681.24. The corporation has average loss of Rs. 1593.302 millions, which shows NEA financial position is very weak it can be shown with the following diagram.

Figure no: 4.5



The above diagram shows that NEA has been suffering from loss on every fiscal year except in the FY 2006/07. It showed that NEA has poor financial status .through it has monopoly in the market, it field to collect its revenue. It failed to collect its electricity charges from its customers from the beginning. NEA didn't have tight collection policy .That is why it is forced to suffer from loss .however, NEA is able to minimize the; loss in the FY 2006/07 because of increase on foreign exchange gain.

The net profit/ loss not only include operating expenses but also include non operating expenses. Operating expenses directly deals with cash such as expenses related to generation of electricity, power purchase, transmission distribution expenses is the expenses etc . on the other hand , non operating expenses is the expenses that excludes non cash expenses for example deprecation , profit/loss on foreign exchange deferred revenue expenditure written off, loss on sale of fixed assets etc since non operating expenses are also treated while computing profit . it can be said that profit is not the correct base for the decision making about the firm's performance after adjusting or adding back these non operating expenses and non operating gain , the cash flows from operating activities before change in working capital which is shown in the table.

Table: 4.3

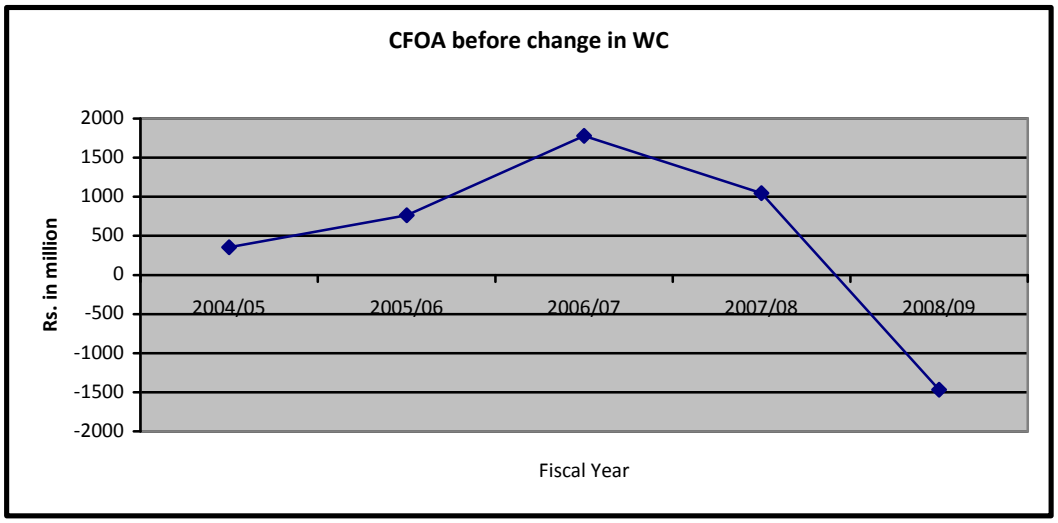
Cash flows from operating activities before change in work capital

NRS in million

Fiscal year	Cash flows from operating activities before change in working capital
2004/05	354.00
2005/0	762.20
2006/07	1779.83
2007/08	1528.92
2008/09	-1469.60
Average	591.07

It can be said that NEA has obtained positive cash flows from operating activities before change in working capital from FY 2004/05 to 2007/08 but negative CF in 2008/09 because of suffering from loss NEA have average Rs. 591.07 million cash from operating activities before change in working capital. The profit after adjusting non operating expenses/incomes, Rs. 354, Rs. 762.2 million, Rs. 1779.83 million Rs 1528.92 million & -1469.6 million respectively. Non operating gains are firstly increasing then decreasing trend. Thus it can be said that NEA is not able to provide its satisfactory services. The following trend line clearly shows its actual operating profit.

Figure: 4.6



The diagram indicates that NEA has in fluctuating trend of actual operating profit and it is because the distribution cost and administrative cost increased and other income decreased in the FY.

4.7 Comparison of profit /loss and CFOA before in working capital

Profit /loss are derived after deducting non operating expenses and adding non operating gain. And cash flows from operating activities before change in working capital is obtained by adding non operating expenses. Here it is trying to analyses whether these expanses affects our decision or not the below table shows both the profit

Table: 4.4

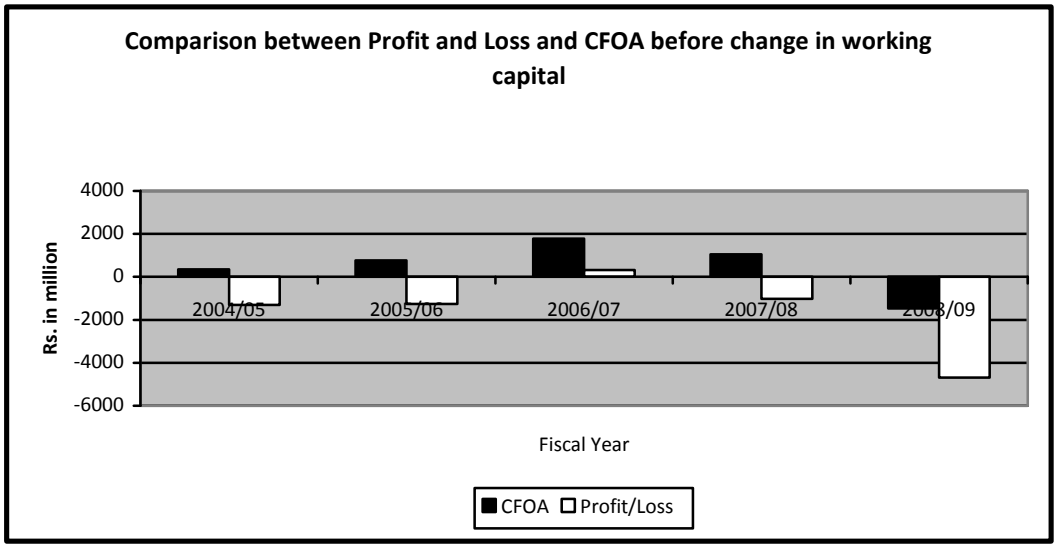
Comparison of profit/loss and cash flows operating activities before change in working capital

NRs. in million

Fiscal year	Profit/loss	CFOA before change
2004/05	-1312.00	354.00
2005/06	-1267.80	762.20
2006/07	314.19	1779.83
2007/08	1018.86	1528.92
2008/09	4681.24	-1469.60
Average		591.07

The above table showed there is significant difference in the profit derived after deducting non operating expenses and before deducting non operating expenses. It is observed that from the income statement, NEA suffered loss but actually NEA has been gaining operating profit from the beginning of its operation. The below diagram clearly shows the difference between the two profit/loss.

Figure: 4.7



The above diagram, shows is actually able to obtain operating profit NEA have been succeeded to achieve its profit. NEA showed loss due to deduction of depreciation, provision for loss. Deferred revenue expenditure and loss on foreign exchange. Because of non operating and non cash expenses ,NEA is in loss .But in fact ,NEA have been operating successfully After adjusting as funds from operation , the enterprise earned operating in cash flow statement as funds from operation , the enterprise earned operating profit of Rs.354 million in the FY 2004/05 but income statement showed the loss of Rs 1312.8 million .It is because while preparing income statement there is deduction of depreciation of RS 1733.5 million and deferred revenue expenditure written off Rs.320.1 million similarly , cash flow statement showed operating profit of RS 762.2 million , Rs 1779.83 million Rs 1528.92 million and 1469.6 from the FY 2005/06 to the FY 2008/09 whereas income statement showed the loss figures except in the 2006/07 thus the above interpretation and analysis of the data make clear that non operating and no cash expenses very much affect in the decision making these expenses give wrong information about the corporation . That is why; net profit/loss should be analysis on the basis of the operating profit derived from cash flow statement. In fact operating profit derived from cash flow statement .in fact operating profit derived from cash flow statement is the most genuine figure to their important decision.

4.8 Analysis of cash /bank balance

Cash is the most important component of current asset the operation of a business, No enterprise can operate without cash .it is the cash from all transaction are done. Manufacturing or trading of product or services is held through cash .thus cash is the most important component of current assets of every organization. However, company should keep only sufficient cash. More cash balance reduces rate of return on equity and less cash balance reduces investment opportunities. So every company should be very careful while holding cash.

The following table shows the cash / bank balance of NEA during the study period:

Table: 4.5

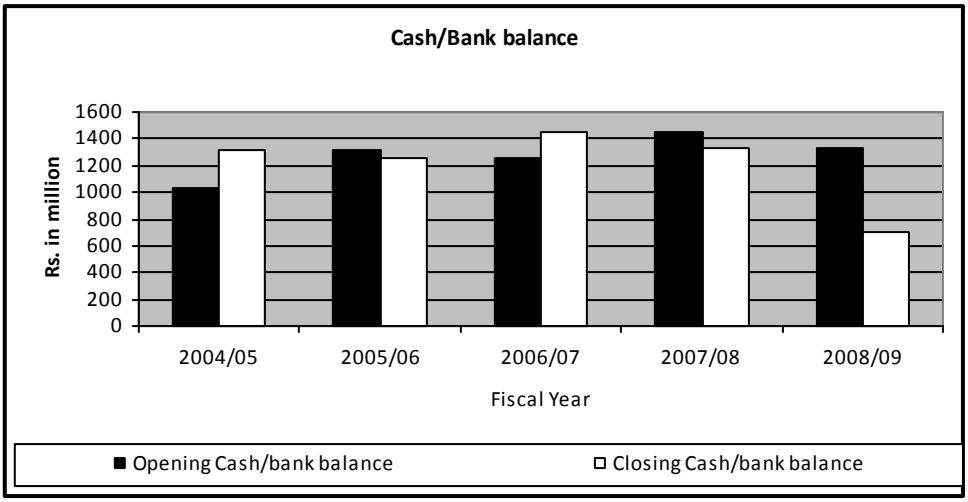
Cash and bank balance

NRs in million

Fiscal year	Opening cash /bank balance	Closing cash/bank balance	Increase/(decrease in percentage)
2004/05	1036.42	1322.60	27.61
2005/06	1322.60	1258.60	(4.84)
2006/07	1258.60	1379.25	15.02
2007/08	1379.21	1827.80	(7.63)
2008/09	1827.80	-697.11	(47.86)

The above table shows the cash/bank balance of NEA the opening cash/bank balance are Rs. 133.15, Rs 1322.6 million, Rs 1258.6 million& 1447.58 million 1337.15 million. Closing cash/bank balance are 1337.15 million , Rs 1322.6 million, Rs 1258.6 million ,Rs 1447.58 million & Rs million and 697.11 million from FY 2004/05 to 2008/09 respectively cash balances where in fluctuate trend as revealed diagram.

Figure: 4.8



Closing cash balance is derived by adding opening cash balances to the net cash generation shown by cash flow statement. Increase in net cash increase makes increases in closing cash balance and vice versed 2003/04 closing cash balances are lesser than opening balance. In the FY 2004/05 the closing cash balances are increased by 27.61%. it means there is positive cash generation and it is due to more cash inflow from operating and in financing activity closing cash balance decreased by 4.845% in FY 2005/06 it is because in this year Hugh amount of cash is spend for purchase of capital work in progress & investment. In 2006/07 it increased by 15.02% and in the last two year it again decreased by 7.63% 47.86% due to increase in plant & machinery and investment.

It can be concluded that NEA is holing cash inconsistently and utilizing it not property. There is very fluctuation in the cash which might not be in the favor of corporation

4.9 Analysis of cash flow ratios

Various cash flow ratios have been used for the analysis of performance of NEA. Cash flow ratios are generally generated from operating activities excludes none and no n operating expenses. The cash flow ratios used in this study are

4.9.1 cash flow sufficiency ratio

Cash flow sufficiency ratios aim at assessing a company's relative ability to generated sufficient cash to meet its cash flow needs all ratios indicate whether a company's cash flows are sufficient for the payment of debt acquisitions of assets and payment of dividends. These ratios are;

A. Cash flow adequacy ratio

Cash flow adequacy ratio measures from operating activates with respect to their repayment of borrowing and assets required in the present study. This ratio is calculated and analyzed to measure the entity's ability to produce sufficient cash for the payment of debt the acquisition of assets and the payment of dividends. It is calculated by using the following formula

$$\text{Cash flow adequacy} = \frac{\text{Cash flow from operations}}{\text{Repay borrowings} + \text{Assets acquired} + \text{dividends}}$$

Table: 4.6

Cash flow adequacy ratio

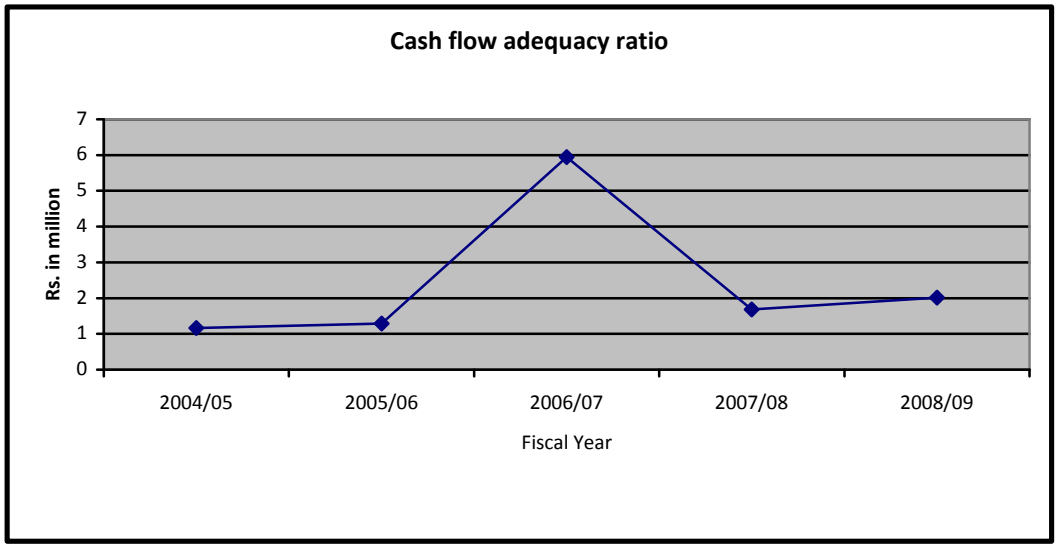
(Rs. in million)

Fiscal year	CFOA	Repayment	Assets acquired	Dividend	Ratio
2004/05	2944.07	1781.95	751.42	0.00	1.16
2005/0	2570.20	1985.08	0.00	0.00	1.29
2006/07	3547.38	569.87	38.38	0.00	5.83
2007/08	3926.30	1790.40	248.52	0.00	1.92
2008/09	-668.11	1846.55	26648.61	0.00	-0.02
				Average	2.036

Assets acquired refer to the assets purchase. Dividend payment is nil because NEA didn't pay dividend. It owned by the government. That's why all the capital contributions are made of the government. The cash flow adequacy is in increasing trend from FY 2004/05 to 2006/07 and decreasing in the last two years. It indicates that NEA have obtained sound cash purchase needed assets except in the FY 2008/09. Negative ratio of FY 2008/09 indicates that NEA couldn't pay for purchase

of assets and for repayment of borrowing. The cause of negative adequacy ratio is that in FY 2008/09. There is largely increased in debtor and purchase of plant and machinery is also in large amount. Cash flow adequacy should be 1 more than 1. Following trend line shows the cash flow adequacy ratio of different years.

Figure: 4.9



It can be clearly defined that cash flow adequacy ratio is more than one in the first year of the study. then it attracted to increase till the FY 2006/07 having the ratio above one and finally in the final year, it again downfall to below one from this

interpretation it can be said that an corporation is able to generate cash inflow to repay the borrowings and to acquire assets to some extent but it is not satisfactory since there is up and down in the ratio. We found the satisfactory cash flows adequacy ratio is in fiscal year 2006/07 i.e. 5.83.

b. Repayment of borrowing ratio

this ratio indicates the ability of to repay its borrowing out of long term debt in other words the ratio is calculated for the purpose of converting long term debt commitments in the current year

$$\text{Repayment of borrowing ratio} = \frac{\text{Repayment of borrowing}}{\text{Long term debt}}$$

The following table shows the repayment of borrowing ratio

Table: 4.7

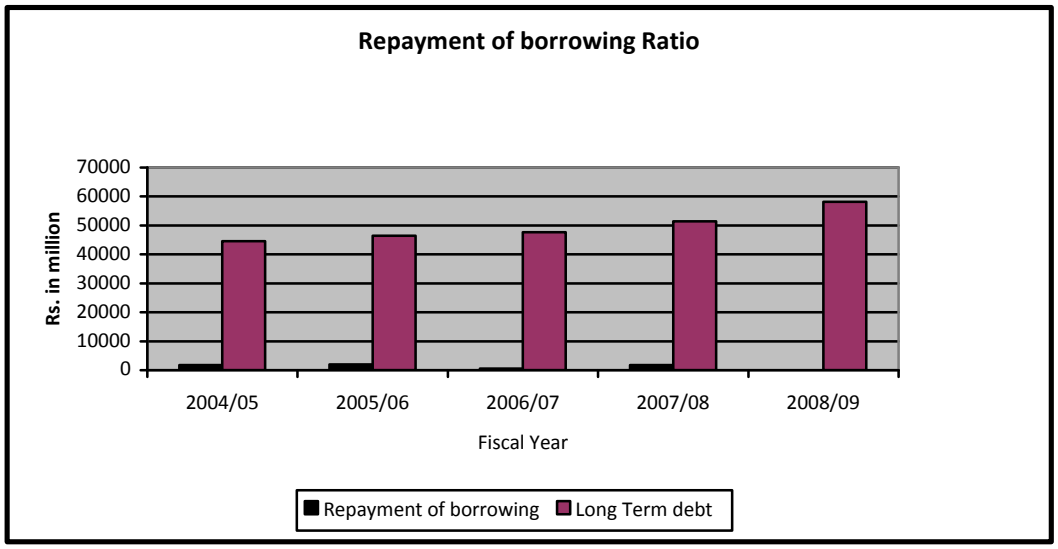
Repayment of Borrowing Ratio

NRs. in million

Fiscal year	Payment borrowing	Long term debt	Ratio%
2004/05	1781.95	44537.51	4.00
2005/0	1985.08	46487.91	4.27
2006/07	569.87	47616.15	1.20
2007/08	1790.4	51368.84	3.48
2008/09	181278.5	58217.77	2.60
Average			8.98

Higher the ratio higher will be the repayment of borrowing and vice –versa .the table shows the repayment of borrowing ratio of NEA 4% ,4.27% 1.2% 3.48% and 32% from 2004/05 to 2008/09 respectively. The average repayment of borrowing ratio of debt out of its total amount of long-term debt. It signified long term debt of NEA is increasing every year which is not good for the corporation. To show healthy position NEA should minimize its long term debt by paying it. Hoping these long term debt increase more cost to the enterprise because more you delayed to repay the loan more you have to pay the interest amount and which ultimate decreased net profit as well as cash inflow it can be presented by the diagram as follow

Figure: 4.10



The diagram shows there is very less contribution in paying the debt Borrowing is taken by the NEA in huge value but there is low repayment capacity, which showed. NEA is not able to generate enough cash from operating activates it pay its debt.

c. Re-investment ratio

The reinvestment ratio presents the ability of accompany to generate cash from operating activities for the purpose if conversing asset acquisition payments.

$$\text{Re-investment ratio} = \frac{\text{payment for property plant and equipment}}{\text{cash flow from operations}}$$

Table: 4.8

Reinvestment Ratio

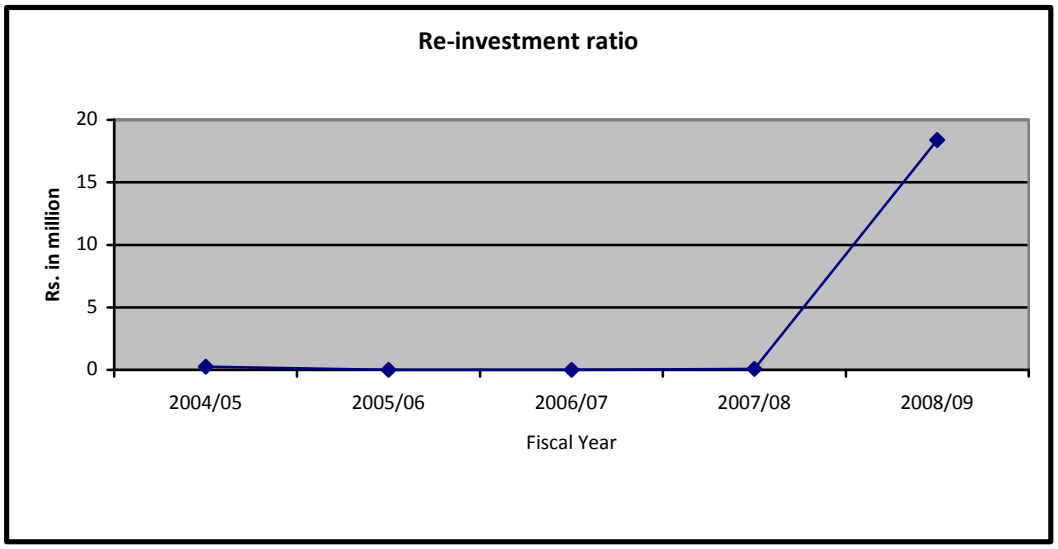
NRs. in million

Fiscal year	Purchase of property plant & equipment	Cash flow from operation	Ratio
2004/05	751.42	2944.07	0.26
2005/06	0.00	2570.20	0.00
2006/07	38.38	3547.38	0.07
2007/08	248.52	3926.30	0.07
2008/09	26648.61	-668.11	-39.88
Average			-7.98

The main purpose of computing this ratio is to figure out how much money the NEA have spent in purchasing or investing in property plant and equipment average of

reinvestment ratio is -7.98 the table shows in the FY 2004/05 more than 20% of cash is spent on purchase of fixed assets . In that year the ratio is 0.26 i.e. 26% in the subsequent years, NEA slowed down its purchasing capability .In the FY 2005/06 NEA didn't purchase any fixed assets and that is why the ratio is zero. In the FY year 2007/08 the ratio increased by 1% more ever in that year, NEA sold its assets for Rs 423.18 million .however in, the FY 2007/08 the reinvestment ratio increased from 0.01 to 0.07 which indicated NEA have invested some of its cash to acquire plant and equipment. In FY 2008/2009 co. purchase machine and equipment by spending large amount of cash, but NEA earned less CFOA than other years. It means NEA spending its cash by using debt from internal or external sector.

Figure: 4.11



The trend line shows that the reinvestment ratio of the NEA is decreased in FY 2005/06 but started to increase from FY 2006/07 reinvestment to ratio increased largely to 0.07 to 18.39 from FY 007/08 to 008/009. It means high amount of cash it's spent to invest in fixed assets investment in FA increased highly in last year but problem of load shedding its not decreased.

4.9.2 Cash Flow Return Ratio

Cash flow return ratio is also called efficiency ratios. It shows the ability of a company to generate operating cash flows, cash flow efficiency ratios are used to sheet with cash flow from operations as disclosed in the cash flow statement these ratios are follows.

This ratio aims at showing the ability of the company to turn revenue into cash. Higher the ratio, better the ability. This ratio employs information provided by the statement of cash flow and the income statement. It is computed by dividing cash

from operating activities by revenue.

$$\text{Cash flow to revenue} = \frac{\text{Cash flow from operation}}{\text{Revenue}}$$

The following table shows cash flows on revenue ratio as:

Table: 4.9

Cash Flow on revenue ratio

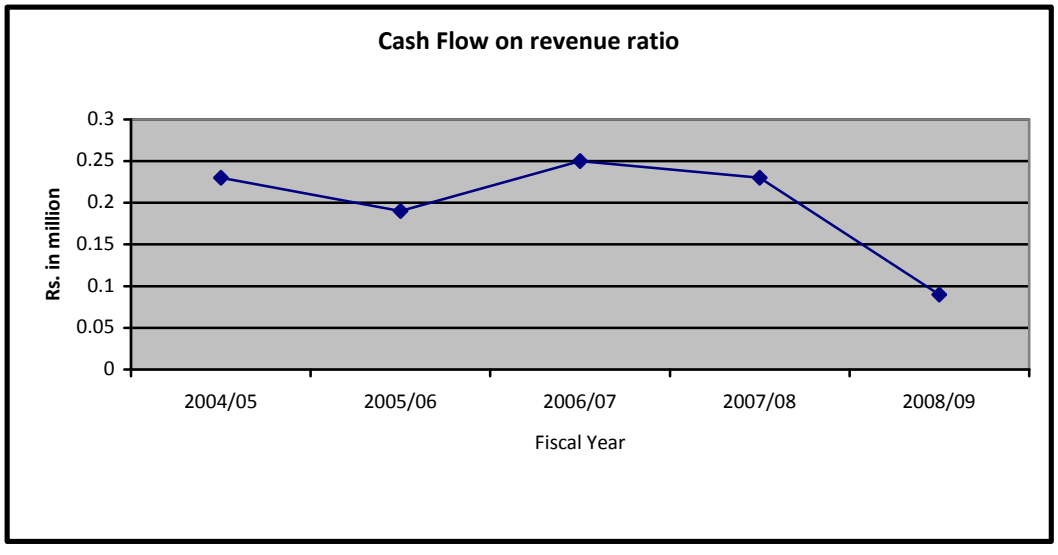
NRs. in million

Fiscal year	Cash flow from operation	Revenue	Ratio
2004/05	2944.07	12605.2	0.23
2005/0	2570.2	13331.9	0.19
2006/07	3547.38	14449.73	0.25
2007/08	3926.30	15041.49	0.26
2008/09	-668.11	15220.87	-0.043
Average			0.17

Revenue refers to cash generation from sale of electricity and cash from operation refers to the net cash generation from operating activities cash revenue. Direct method, cash from operating activities is computed from revenue. Cash from operation also can be called as operating profit. Thus it is important to know how much cash from operation generated out of total revenue since revenue excludes all the expenses.

The below trend line shows the cash flow on revenue ratio as

Figure: 4.12



The table and trend line shows cash generated from revenue are less than 0.5 that is 50%. the average of cash flows on revenue is only 0.17 that is 17% In the FY 2004/05 the ratio is 0.23 which indicates only 23% cash is generated out of 100% which showed the NEA 's weak ability to turn revenue 19% in the FY 2005/06 which indicates NEA is not improving in its performance . the ratio however increased to 25% in the FY 2006/07 showing some positive sign but again it increased to 26% in the FY 2007/08 again ratio decreased to -0.043 it also indicate that cash revenue generation is fluctuating continuously from 004/05 to 008/09 thus NEA is not fully able to convert its revenue to cash. Moreover, it is not consistent in generating cash from revenue which can be seen in the above trend line. The line moves upward and downward in each year which signifies the fluctuation in the generating cash from revenue. Negative cash flow revenue ratio is occurred in FY 2008/09 but revenue is increased in same year. Which indicates that there is not consistency in CF and sales revenue.

Statistical Tool

The relation between sales revenue and cash from operating activities –CFOA also can be shown by using some statically tools here. Correlation between sales revenue and CFOA are tested

Correlation

Correlation analysis refers to the statistical technique which measures the degree of relationship between two or variables. It is to be noted that a high defer of correlation between two variables doesn't always necessarily imply that changes in one variation cause changes in the other. Out of several methods of calculating correlation, Karl Pearson’s coefficient of correlation is one of the best methods.

Since CFO is directly dependent on revenue, revenue is considered as independent variable and CFO as dependent variable.

Table: 4.10

Computation of Correlation and Its Reliability between Sales and CFOA

NRs. in million

Sales (X)	CFOA (Y)	X = X -14449.73	Y	X^2	Y^2	XY
12605.20	2944.07	-1844.53	- 603.31	3402290.92	363982.96	112823.39
13331.90	2570.2	-1117.83	- 977.38	1249543.90	955271.66	1092544.69
14449.73	3547.38	0	0	0	0	0
15041.49	3926.3	591.76	378.92	350179.89	143580.36	224229.69
15220.87	- 668.11	771.14	-4215.49	594656.89	17770355.94	-3250732.96
	|	ϕX = -1599.46|	ϕXY =-516.96	ϕX^2=5596679.71 |	ϕy^2 = 19233190.92|	ϕxy = ZPΛKKMEHK2|

Here, correlation coefficient

$$\text{Here } (r) = \frac{n\phi xy - \phi x \phi y}{\sqrt{n\,\phi x^2 - (\phi x)^2 .\; n\phi y^2 - (\phi y)^2}}$$

$$= \frac{5\,(-821135.19) - (-1599.46) \times (-5416.96)}{\sqrt{(5 \times 5596679.71 - (-1599.46)^2\,(5 \times 19233190.92 - (-5416.9)^2))}}$$

$$= \frac{-12769886.79}{\sqrt{25425126.26 \times 66822715.64}}$$

$$= -0.30$$

Since the correlation coefficient (r) is -0.30. It can be said that there is law degree of positive relation between the two variables sales revenue and CFOA. It signifies if sales Revenue increased CFOA is decrease. In another word 1% increase in sales revenue will result 0.47% change in CFOA. It can be used probable error (P.E.) of the correlation coefficient to test the reliability of correlation (r) in the following way.

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

$$= 0.6745 \times \frac{1 - (-0.30)^2}{\sqrt{5}} = 0.27$$

$$6\,PE = 0.27 \times 6$$

$$= 1.63$$

Since r < 6PE, so the value of r is insignificant. Perhaps there is no avoidance of correlation between revenue & CFOA.

Cash Flow to Net Income Ratio

Cash flow to net income ratio compares the company's profit with cash flow from operations and attempts to provide an index of the cash generating productivity of operations. The main purpose to calculate this ratio is to find out whether the ratio is capable enough to carry out decisions.

Net income and cash from operation are two different .Net income is computed preparing income statement where as cash from operation is derived from cash flow statement when cost of goods sold selling and administrative expenses and all the non operating and non cash expenses are deeded back and non operating income are deducted from net profit, funds from operation (FFO) is obtained when decrease in working capital is added except cash deduct increase in working capital except cash. Cash from operating activities is ascertained which is already discussed in review of literature. It is calculated as cash flows from operations divided by profit after income tax.

Here, operation index= $\frac{\text{cash flows operation}}{\text{profit}}$

Table: 4.11

Cash Flow on net income ratio

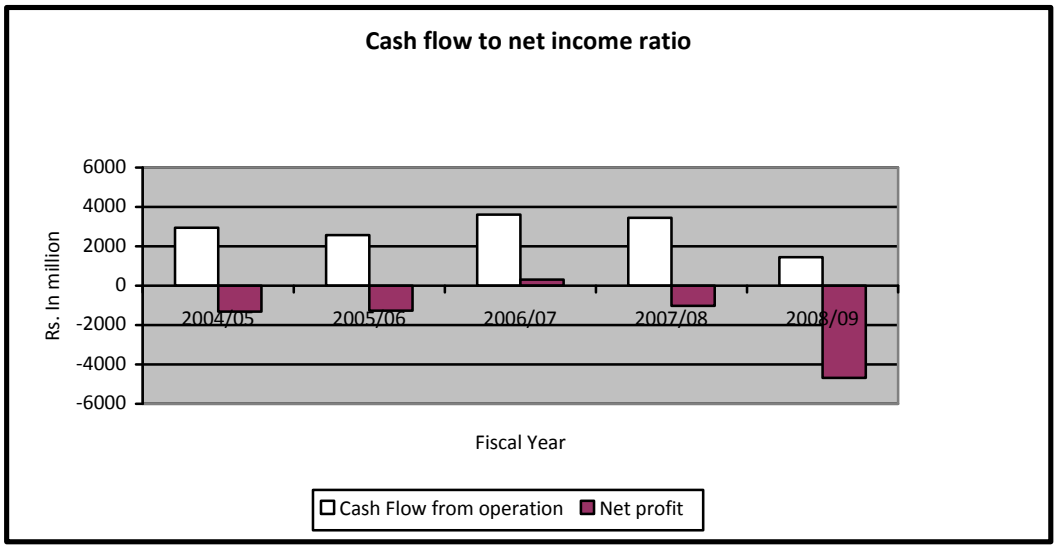
(Rs. in million)

Fiscal year	Cash flow operation	Net profit	Ratio
2004/05	2944.07	-1312.80	-2.24
2005/06	2570.20	-1267.80	-2.02
2006/07	3547.38	314.19	11.50
2007/08	3926.30	-1018.86	-3.38
2008/09	-688.11	-1481.24	0.45
		Average	0.86

In the table it is found that the ratio is in negative in every year except in FY 2006/07. The average of cash flow to net income ratio is 0.862 since net profit is in negative figure but cash flow operation is positive in the all years. It signifies that though the corporation there is loss it can generate positive cash inflow. It also signifies that non operating expenses very much affects net profit, in addition to, it net profit is not the only source of cash inflow, cash inflow also can be obtained from working capital. That is why cash from operating activities is a strong tool than net profit for decision making when cash is received from the debtors or creditors, it is cash inflow for the firm. Since such activity do not affect in computation of net profit decision shouldn't based on net profit of the firm. it is also require to analyses the cash flow from operating activities.

The ratio can be shown with the following diagram.

Figure: 4.13



The above diagram clearly shows that cash is generated by NEA even it bearded loss in subsequent years.

Statistical tool

The relation between net profit and cash flows from operating activities is ascertained by using correlation which is as follows

Table: 4. 12

Correlation between Net profit & CFOA

Rs. in million

Net Profit (X)	CFOA (Y)	X =X-(-1018.36)	Y=y-3926.30	X^2	Y^2	XY
-1312.80	2944.07	-294.45	-982.23	86700.80	964775.78	289217.62
-1267.80	2570.20	-248.94	-1356.10	61971.12	1839007.20	337587.53
314.19	3547.38	1332.55	-378.92	1775689.50	143580.36	-504929.84
-1018.86	3926.30	0.00	0.00	0.00	0.00	0.00
-1481.24	- 668.11	-426.38	-4594.41	213795.26	21108603.25	1958964.53
	|	ϕX = 326.78|	ϕy = -311.66	ϕX^2= 2138156.68 |	ϕy^2= 24055966.59|	ϕxy = 1791622.22|

Here $(r) = \dfrac{n\phi xy - \phi x \phi y}{\sqrt{n\,\phi x^2 - (\phi x)^2 .\, n\phi y^2 - (\phi y)^2}}$

$$= \frac{5 \times 1791622.22 - (326.78) \times (-7311.66)}{\sqrt{(5 \times 2138156.68 - (326.78)^2\,(5 \times 24055966.59 - (-7311.66)^2))}}$$

$= 0.08$

Since the value of r is 0.08 we can say that there is law degree of positive correlation between Net Profit and CFOA. It means 1% increase in Net Profit will result 0.08% increased in CFOA & vice versa.

Here, it can be probable error (P.E.) of correction coefficient to test the reliability of correlation (r) in the following way.

$$\text{P.E.} = 0.675 \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.675 \times \frac{1 - (0.08)^2}{\sqrt{5}}$$

$$= 0.29$$

Now,

$$6 \text{ P.E.} = 6 \times 0.29$$

$$= 1.79$$

Since r> 6 PE, i.e. 0.08 < 1.37 we can say that above ascertained value of corrections coefficient (r) is insignificant. It means perhaps there is no evidence of correlation between Net Profit & CFOA.

4.9.3. Cash flow return on assets ratio

This ratio attempts to measure the company's return on term of the cash flow generated from operations. It evaluates how much cash been generated before deducting interest expenses and income tax expenses from using certain amount of total assets .Total assets includes both current and fixed assets . currents assets is the assets which can be converted into cash within a year such as sundry debtors a/c receivable , inventories , cash and bank balance etc and fixed assets is long term assets such plant & machinery, furniture's & fixtures .investments etc.

The formula for computing cash flow return on assets ratio is:

$$\text{Cash flow return on assets} = \frac{\text{cash flows from operation +income tax + interest}}{\text{average total assets}}$$

Table: 4.13

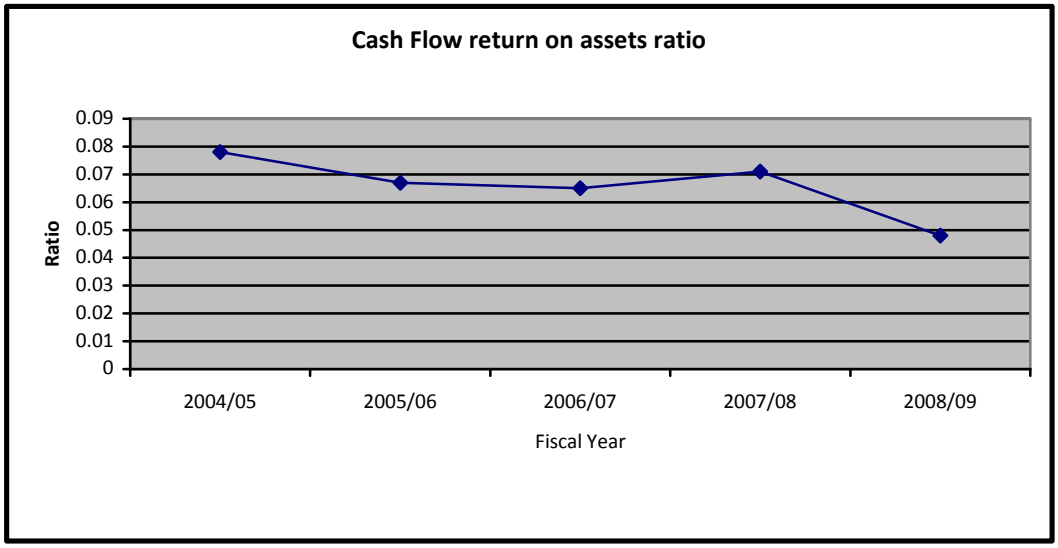
Cash flow return on assets

(Rs. in million)

Fiscal year	Cash flow from operation	Income paid	Interest paid	Total Assets	Ratio
2004/05	2944.07	-	3079.80	77495.56	0.078
2005/06	2570.20	-	3050.90	83550.08	0.067
2006/07	3547.38	-	2385.41	92131.97	0.065
2007/08	3926.30	-	2274.37	88415.44	0.070
2008/09	-668.11	-	2809.46	100528.26	-0.020
Average				8842.24	0.0518

The table that cash flow on assets ratio are 0.078, 0.067, 0.065, 0.070 and 0.02 from the FY 2004/05 to the FY 2008/09 the FY 2008/09 respectively the average of cash flow return on assets ratio is 0.0518 that is 5.0% Higher ratio implies higher cash generation from the utilization of total assets thus it can be said that the highest cash is generated in the FY 2004/05 since the ratio obtained in FY 2004/05is higher than the rest. Then it gradually started to fall down which showed NEA's inability to utilize its assets properly. It can be presented with the following trend line.

Figure: 4.14



the above trend line shows that the ratio moved in a decreasing trend it from FY 004/05 to FY 2007/08 in FY 007/08 it increase then in FY 008/09 it again decrease NEA is unable to use its recourse to the fullest . A higher ratio usually indicates efficiency in the utilization of its available resources and vice versa from above derivation , it is found that NEA have failed consistently to generated cash from its resources it also tells that NEA have a poor management and weak strategic sources of property management .

D. cash flow return on stockholders' equity ratio

This ratio shows the ability of the company to generate a sufficient cash return for stockholders. The ratio evaluates the amount of cash generation by utilizing stockholders. Since there is only Nepal government's capital contribution in NEA and it is totally controlled the government profit if is taken as a part of retune

$$\text{Cash flow return on stockholders' equity ratio} = \frac{\text{Cash flows from operation}}{\text{Average stockholders' equity}}$$

Table: 4.14

Cash flow return on stockholders equity ratio

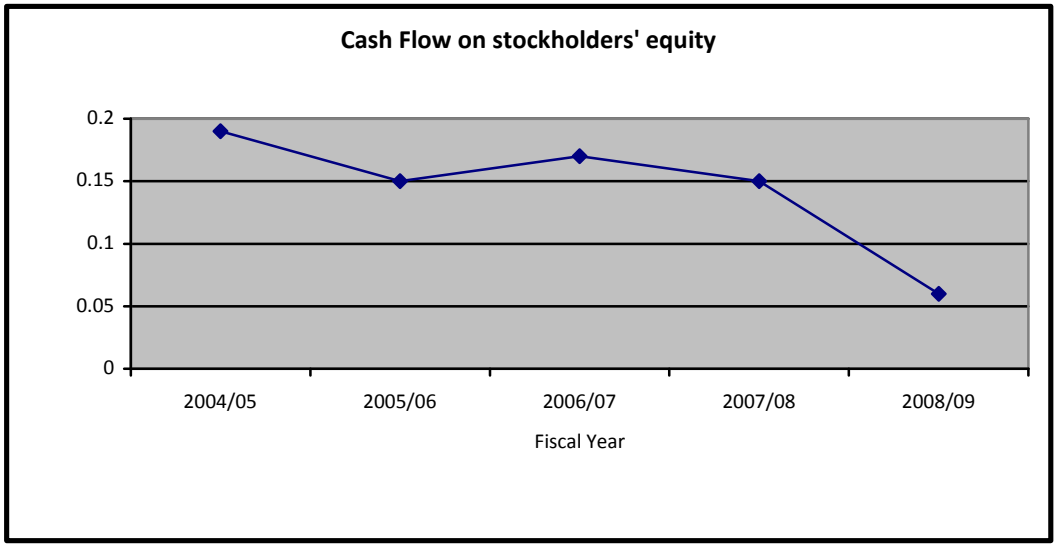
(NRs. in million)

Fiscal year	Cash flow operation	Stockholder's equity	Ratio
2004/05	2944.07	15867.66	0.19
2005/0	2570.20	17567.78	0.15
2006/07	3547.38	21579.46	0.16
2007/08	3926.30	23177.20	0.17
2008/09	-6811	22159.73	-0.03
	average		0.128

The above table it is observed that cash flow return on stockholder's equity is 0.19, 0.15, 0.16, 0.17 and -0.03 from the FY 2005/06 to the FY 2008/09 respectively. The average of cash flow return on stockholders' equity ratio is 0.128 which means cash flow on stockholders' equity is only 12.8% NEA is not consistent in utilizing the available sources of fund so that it couldn't repay units stockholders since there is only governments capital contribution and it is totally owned by the government . Government took cash instead of dividend above table signifies NEA is inefficient to generate required cash.

It can be presented with following trend line:

Figure: 4.15



The trend line of cash flow return on stockholders' equity shows the fluctuation in the ratio, that means NEA is consistent in maintaining cash total cash outflow from operating investing and financing activities overall . Higher the ratio higher will be the cash inflow and vice- versa

Cash turnover ratio $= \frac{\text{cash inflows}}{\text{cash outflows}}$

It can be shown with the following trend line as:

Table: 4.15

Cash inflow to outflow ratio

(NRs. in million)

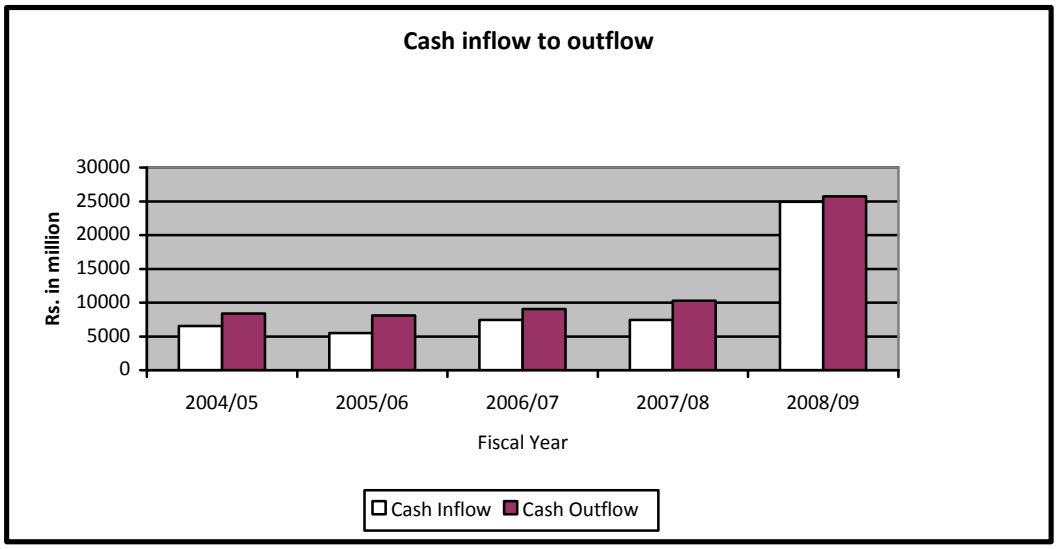
Fiscal year	Total cash inflow	Total cash outflow	Ratio
2004/05	8685.22	8393.23	1.034
2005/0	8480.88	8544.28	0.99
2006/07	9151.76	9031.15	1.013
2007/08	10677.43	10297.21	1.036
2008/09	29113.16	29753.93	0.978
		Average	1.01

The above it is observed that the ratio of cash inflows to outflow is 0.78, 0.67, 0.82, 0.72 and 0.97 from the FY 2004/05 to the FY 2008/09 respectively, the ratio above one signifies cash inflow is greater than cash outflow. The average ratio of cash inflow and cash outflow more than inflow. The average ratio of cash inflow is outflow is 1.01 which means cash inflows and cash outflows are not equal cash outflow is more than cash out flow in average of 5 years.

Here cash inflow and outflow is taken from cash flow statement .cash flow statement perfectly shows the sources of cash and where it is being used NEA have obtained cash inflow basically from operating activates and financing activities and cash is out flowed to investing activities . the reason behind obtaining cash from operating activities is operating profit and working capital when working capital decreases I.e. current assets decreases and current liabilities increases except cash there is inflow of cash .similarly under financing activates issue of shares and borrowing makes cash inflows .More cash is seen out flowed from investing activities .it is because to operate and expand services an corporation have to purchase more plant and machinery as wells it have to invest in other hydro project too. Thus three is cash outflow due to investment purpose.

The following diagram shows the proportion between cash inflow and outflow:

Figure: 4.16



The above table and diagram shows there is not equal proportion of cash inflow and outflow, that means, cash obtained from operating and financing activities are utilized in investing activities in investing activity and payment of borrowing excess cash from cash and balance but could not added in cash and bank balance

4.9.4 Cash Flows liquidity ratio

This ratio if used to test the company's short term debt paying ability. short term debt refers to account payable , Sundry creditors bills payable etc

Here, Cash flow liquidity ratio = $\frac{\text{Cash flows from operation + opening cash/bank balance}}{\text{Current liabilities}}$

Table: 4.16

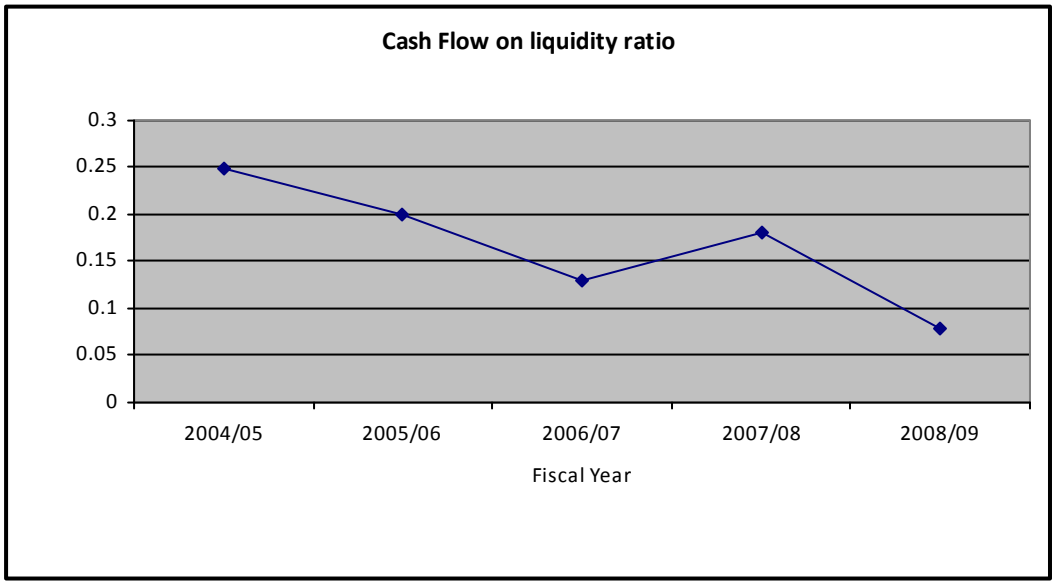
Cash Flows liquidity ratio

(NRs. in million)

Fiscal year	CFOA	Cash/bank balance	Current Liabilities	ratio
2004/05	2944.07	1322.60	16758.69	0.25
2005/06	2570.2	1258.60	19144.39	0.20
2006/07	3547.38	1379.21	22119	0.22
2007/08	3926.3	1827.80	25482.01	0.23
2008/09	-668.11	697.11	27599.40	0.001
		average		0.18

The above shows to pay short term debt which identified very poor capacity. the average of the ratio is 0.19 since the ratio is observed positive which indicated that the company have ability to pay short term debt to some extent but it is not satisfactory due to low liquidity ratio Moreover the ratio is fluctuating which indicates NEA is not consistent in increasing its cash flow liquidity ratio .it can be shown with following trend line.

Figure: 4.17



The above trend line shows the inability of NEA to pay its short term debt because the ratio fell below one. The ratio above one signifies the ability of NEA to pay its short term debt. So the company should extend its operation effectively to generate more cash inflow and should maintain optimum cash and bank balance at the end of each year.

4.9.5 Cash Turnover Ratio

Cash turnover ratio is cash flow on revenue ratio .cash flow revenue ratio measures the company's ability to turn sales revenue into cash from operating activities where as cash turnover ratio measures the company's ability to turn sales revenue into cash and bank balance.

Here, cash flow turnover ratio = $\frac{\text{Cash and bank Balance}}{\text{sales}}$

Table: 4.17

Cash turnover ratio

(Rs in million)

Fiscal year	Cash/ bank balance	Sales	ratio
2004/05	1322.6	12605.2	0.11
2005/0	1258.6	13331.9	0.09
2006/07	1379.21	14449.73	0.09
2007/08	1827.8	15041.49	0.12
2008/09	697.11	15220.87	0.04
		average	0.091

The cash balance of the company should be optimum to meet its current obligations. The cash turnover ratio explains how quickly cash is recovered from sales. Higher ratio indicates the company's sound liquidity position and vice-versa. However, high ratio though considered as good, it also signifies excess cash balance held idle which decreases the opportunity to generate more cash.

The above table shows that NEA have fluctuating cash turnover ratio higher ratio is obtained in the fiscal year 2007/08 i.e. 0.12 which indicates in that year more sales revenue turned into cash and lowest ratio is obtained in fiscal year 2008/09 which indicates NEA made more expenses and spent more cash on investment which unlimited result to lower cash and bank balance.

Table 4.18

Correlation between Cash balance and Sales

NRs in million

Sales (X)	Cash balance (Y)	X = (X - 14449.73)	y = Y - 1379.21	X^2	Y^2	xy
12605.20	1322.60	-1844.29	-56.61	3401405.6	3204.69	104405.2
13331.90	1258.60	-117.59	-120.61	1249007.4	14546.77	14218.71
14449.73	1379.21	0	0	0	0	0
15041.49	1827.8	591.76	448.59	350179.89	202132.98	265457.61
15220.87	697.11	771.14	-682.1	594656.89	465260.41	-525994.59
	|	ϕX = -598.99|	ϕY = -410.73	ϕX^2 = 5595249.79|	ϕY^2 = 684244.85|	ϕxy = -14913.07

$$\text{Correlation Coefficient (r)} = \frac{n\phi xy - \phi x \phi y}{\sqrt{n\,\phi x^2 - (\phi x)^2 .\; n\phi y^2 - (\phi y)^2}}$$

$$= \frac{5 \times -14913.07 - (-598.99) \times (-410.73)}{\sqrt{(5 \times 5595249.79 - (-598.99)^2\ (5 \times 684244.85 - (-410.7)^2))}}$$

$$= \frac{-320588.51}{1187226.45}$$

$$= -0.27$$

Since the value of r = -0.27, there is low degree of negative correlation between sales revenue & cash/bank balance it means higher the sales revenue small decrease in cash or bank balance. There is very low degree of negative relationship between sales and cash balance.

Regression and Trend Analyses above correlation have been used as statistical tools to analysis the data here are some more statistical tools that are used in the study.

Regression Analysis

Regression is a statistical tools used to define relationship between two (or more) variables and to make estimation of one variable on the basis of the other variables 9s) the closer the relationship between the two variables the more accurate the estimated value is the unknown variable to be estimated is called dependent variable and the know variable is called independent variable correlations analysis indicates to what degree the variable are related and regression analysis indicates how the variables are related trend line.

A series formed from a sequence of statistical data arranged in accordance with their time of occurrence is called to be a time series Mathematical , a time series is defined by the function relationship y=(t) where is the value of lines is taken as an example of time series . the information in statement of cash flows also assists in predicating the ability to generate future cash flows here an effort is made to out the future cash from flows of NEA for the F/Y 2004/05 to 2008/09 for this cash from operating investing and financing activate are calculated by fitting the straight trend line considering operating, investing and financing activities as dependent variable and sales revenue as independent variable

4.10.1 Estimation of sales revenue using trend analysis

Fitting the trend line taking fiscal year (x) as intendment variable and sales revenue (Y) dependent variable, future sales revenue can be predicted as follows:

Table 4.19

Trend Analysis of Sales Revenue

NRs in million

Fiscal Year (X)	Sales revenue (Y)	X - 2007	XY	X^2
2005	12605.20	-2.0	-25210.40	4.00
2006	13331.90	-1.00	-1331.90	1.00
2007	1449.73	0.00	0.00	0.00
2008	15041.49	1.00	15041.49	1.00
2009	15220.87	2.00	30441.74	4.00
	ϕy|X|Π Ο|ΝΣΗΚΩ|	ϕx = 0	ϕXY = 6940.93	ϕX^2 = 10

In the above table, the fiscal year 2005 refers to the FY 2004/05. Similarly the FY 2006 refers the FY 2005/06, 2007 refers to 2006/07, 2008 refers to 2007/08 & 2009 refers to 2008/09.

The trend line of dependent variable sales revenue (y) and independent variable fiscal year (x) is expressed by.

y = a + bx …… equation (i)

We know that

$$b = \frac{n\phi XY - \phi X\phi Y}{n\phi x^2 - (\phi X)^2}$$

$$a = \frac{\phi y}{n} - \frac{b\phi x}{n}$$

$$b = \frac{5 \times 6940.93 - 0 \times 70649.19}{5\times 10 - (0)^2}$$

= 694.09

Again

$$a = \frac{\phi y}{n} - \frac{b\phi x}{n}$$

$$= \frac{70649.19}{5} = 14129.83$$

Now substituting the value of a & b in equation (i)

r = 14129.83 + 694.09 X

The above trend line shows the sales revenue for the next year.

Thus estimation of sales revenue for coming three years are;

For the fiscal year 2010 (2009/10) x=x -2007= 2010 – 2007=3

And y= 14129.83 + 694.04 *4

= 16212.1

For fiscal year 2011 (2010/11)

x = x - 2011 - 2007 = 4

And y = 1429.83=694.09*4

= 16906.19

For fiscal year 2012 (2011/12) x= x-2012-2007=5 and 1429.83+694.09*5

=17600.28

The above computation of future sales revenue can be show following table and trend line.

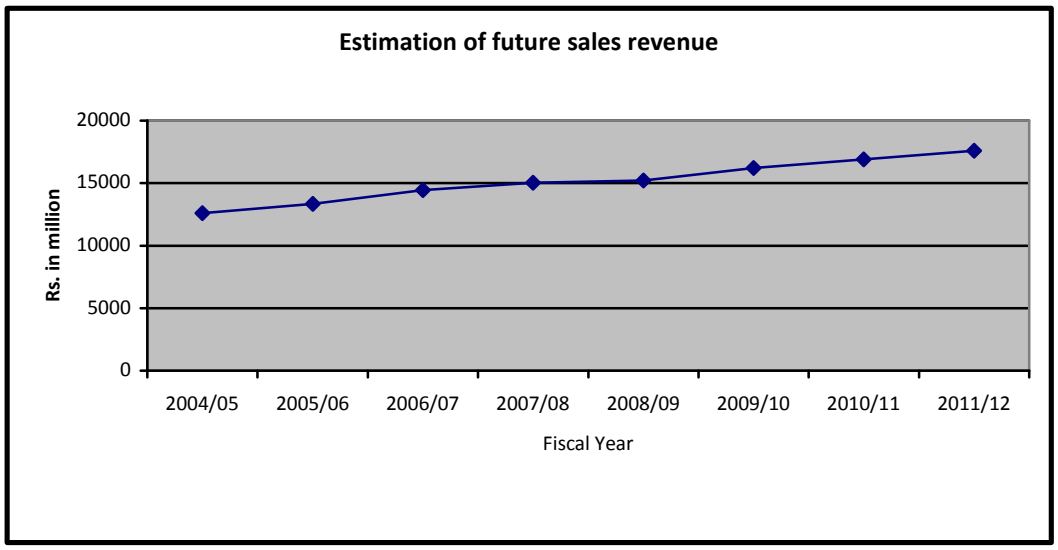
Table 4.20

Estimated sales revenue

(NRs. in million)

Fiscal year	Estimated sales revenue
209/010	16212.10
2010/011	16906.19
2011/012	17600.28

Figure: 4.18



The above trend line observes that revenue is in increasing trend in the future as well. But the most important fact should be acknowledge about is the above trend line is possible only when there is no any risk factors exists Risk factors refers load shedding

strike etc. If there exists such a risk factors then the above calculated future sales revenue will be difficult to achieve .in the present scenario. NEA is sufferings from 16hr of load shedding daily. in this context, it will be very difficult to get above mentioned revenue thus it can said that , if the risk factors do not exists then above trend of sales revenue can be achieved

4.10.2 Estimation of CFOA using Regression analysis

Here CFOA is directly dependent revenue is considered as independent variable and CEOA as dependent variable

Table 4.21

Regression Analysis of CFOA

(NRs. in million)

Sales (X)	CFOA (Y)	X = X - 14449.73	Y = y-3547.38	X^2	Y^2	XY
12605.20	2944.07	-1844.53	- 603.31	3402290.92	363982.96	1112823.39
13331.90	2570.2	-1117.83	- 977.38	1249543.90	955271.66	1092544.69
14449.73	3547.38	0.00	0.00	0.00	0.00	0.00
15041.49	3926.3	591.76	379.92	350179.89	143580.36	22422.699
15220.87	-668.11	771.14	- 4215.49	594656.89	17770355.94	3250732.96
	ϕY =	ϕX = -1599.46	ϕXY = - 5416.96	ϕX^2= 559667	ϕY^2 = 19233190.92	ϕXY

Here, No. of year = 5

For $\overline{X} = d1 + \frac{\phi x}{n}$

$= 14449.73 + \frac{-1599.22}{5}$

$= 14129.88$

For $\overline{Y} = d_2 + \frac{\phi y}{n}$

$= 3547.38 + \frac{(-5416.96)}{5}$

$= 2463.96$

$byx = \frac{n\phi xy - \phi x \phi Y}{n\phi x^2 - (\phi x)^2}$

$$= \frac{5 \times 821135.19 - (-1599.46 \times -5416.96.01)}{5 \times 5596679.71 - (-1599.46)^2}$$

$= - 0.50$

$a = d_1 + \frac{\phi y}{n} - d_2 + \frac{b\phi x}{n}$

$= (d_1 + \overline{y}) - (d_2 + b\overline{x})$

Or,

$\overline{y} - (-0.5 \times \overline{x})$

$= 2463.98 + (0.5 \times 14129.88)$

$= 9728.92$

Now regression equation on y on x is

$y - \overline{y} = byx (x - \overline{x})$

$y - 2463.98 = -0.5 (X - 14129.88)$

$y = 2463.98-0.5x + 7064.94$

$y = 9528.92 - 0.5x$

From this equation it can be forested the CFOA based on the sales as follows.

(1) For FY 2009/10

X = sales = 16212

y = $-0.5 \times 16212 + 9528.92$

= 1422.92

(2) For FY 2010/11

X = sales = 16906.19

y = $-0.5 \times 16906.19 + 9728.92$

= 1275.82

(3) For FY 2011/12

X = sales = 17600.28

y = $-0.5 \times 17600 + 9528$

= 728.92

The above mentioned figure of CFOA can be shown with the following table and trend line.

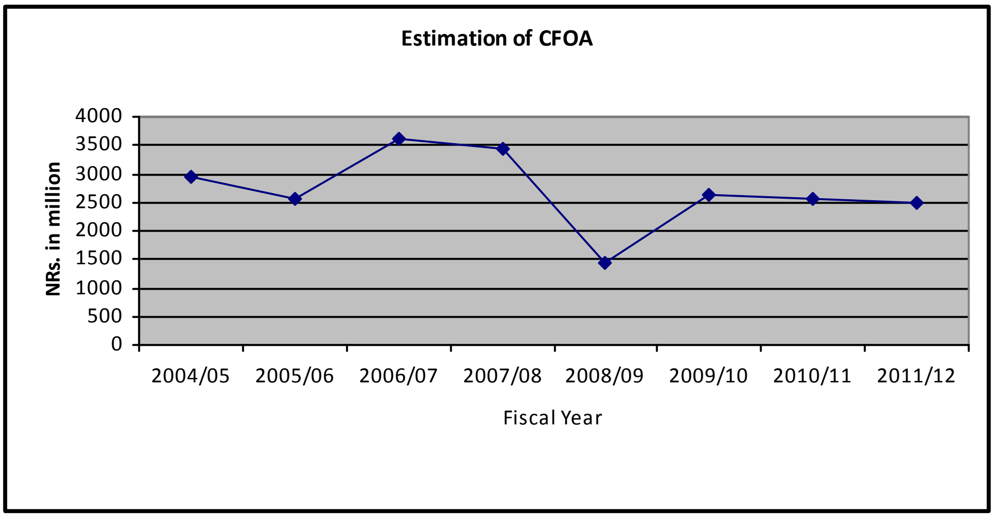
Table: 4.22

Table of Estimated CFOA

(NRs. in million)

Fiscal year	Estimated CFOA
2009/10	1422.92
2010/11	1275.82
2011/12	728.92

Figure: 4.19



The above trend line showed that if all the risk factors do not exists then the future CFOA would be Rs 1422.92 million in the FY 2009/10 Rs. 1275.82 million in the FY 2010/011 Rs. 728.92 in FY 2011/12. It means CFOA is in decreasing trend in figure if sales increases, CF will be decreased.

4.10.3 Estimation of CFIA using regression analysis

Table: 4.23

Regression Analysis of CFIA

(Rs. in million)

Sales (X)	CFIA (Y)	X = X - 14449.73	(Y-(-7254.22)	X^2	Y^2	XY
12605.20	-6256.26	-1844.53	997.96	3401405.6	995924.16	-1840527.64
13331.90	-5550.80	-1117.83	1703.42	1249007.4	2901639.69	-1903725.15
14449.73	-7254.22	0	0	0	0	0
15041.49	-7541.18	591.76	286.96	350179.8	82346.04	-169811.44
15220.87	-8638.74	771.14	-1384.52	594650.9	1916895.63	-1067658.75
	ϕY = 35241.2|	ϕX = -1598.96|	ϕXY = -4372.86	ϕX^2= 5595249.7|	ϕY^2 = 5896805.56|	ϕXY|X| ZNΣPKΠΛΕΣP|

Here, No. of year (n) = 5

For $\overline{X} = d1 + \frac{\phi x}{n}$

$= -14449.73 + \frac{-1598.98}{5}$

$= -14769.52$

For $\overline{Y} = d_2 + \frac{\phi y}{n}$

$= -7254.22 + \frac{-4372.86}{5}$

$= -8128.79$

$byx = \frac{n\phi xy - \phi x \phi Y}{n\phi x^2 - (\phi x)^2}$

$= \frac{(5 \times 4981722.98) - (-1598.96 \times -4372.86)}{5 \times 5595249.7 - (-1598.96)^2}$

$= \frac{31900643.13}{25419575}$

$= -1.25$

Now regression equation on y on x is

$y - \overline{y} = byx\ (x - \overline{x})$

$y - (-8128.79) = -1.25\ (X - (14769.52)$

$y - 1.25x - 18461.9 + 8125.79$

$y = -1.25x - 10336.11$

From this equation it can be forested the CFIA based on the sales as follows.

(1) For FY 2009/10

X = sales = 16212 (from calculation of estimation of sales revenue)

y = $-1.25 \times 16212 + (-10336.11)$

= - 30601.11

(2) For FY 2010/11

X = sales = 16906.19

y = $-1.25 \times 16906.19 + (-10336.11)$

= - 31468.85

(3) For FY 2011/12

X = sales = 17600.28

y = - 1.25 × 17600.28 + (-10336.11)

= -32336.46

The above mentioned figure of CFIA can be shown with the following table and trend line.

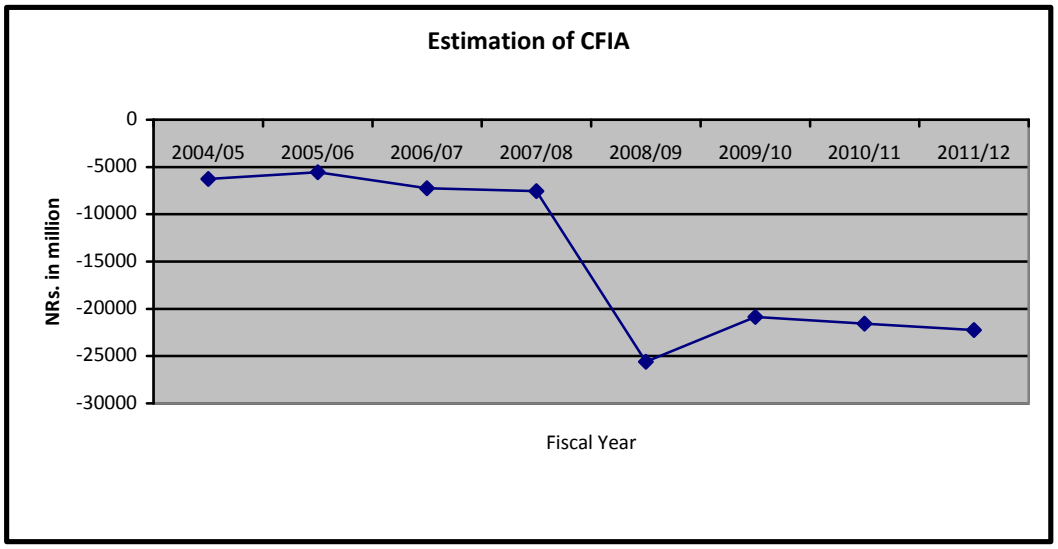
Table: 4.24

Estimation of cash flow from investing activities

(Rs. in million)

Fiscal year	Estimated CFOA
2009/10	- 30601.11
2010/11	- 31468.85
2011/12	- 32336.46

Figure: 4.20



The above estimation and the trend lines observed that cash flow from FY 2010/11 it activities in the FY 2009/10 would be -30601.11 million and in the FY 2011/11 it would be Rs. -31468.85 million and in FY 2011/12 it increase to 32336.46 indicates that if sales is increased cash outflow of investing activity also increases.

4.10.4 Estimation of CFFA using regression analysis

Table: 4.25

Regression Analysis of CFFA

(NRs. in million)

Sales (X)	CFFA (Y)	X = X - 14449.73	(Y-(-3827.45)	X^2	Y^2	XY
12605.20	3598.37	-1844.53	-229.08	3401405.6	12947546.99	422489.95
13331.90	2916.62	-1117.83	-910.83	1249007.4	8506672.22	1017934.50
14449.73	3827.45	0	0	0	0	0
15041.49	3995.1	591.76	167.65	350179.89	28106.52	99208.56
15220.87	8666.08	771.14	4838.63	594656.89	386792855.7	3731261.14
		ϕX = -1598.96	ϕY = -3866.37	ϕX^2= 5595249.79	ϕY^2 = 5893586668.3	ϕXY |X| ΞΛΠ ΡΣΝΗΚΞ

Here, No. of year (n) = 5

for $\overline{X} = d_1 + \frac{\phi x}{n}$

$= 14449.73 + \frac{-1598.98}{5}$

$= 14129.93$

for $\overline{Y} = d_2 + \frac{\phi y}{n}$

$= -3827.45 + \frac{13866.37}{5}$

$= 4600.72$

byx $= \frac{n\phi xy - \phi x \phi Y}{n\phi x^2 - (\phi x)^2}$

$= \frac{(5 \times 5270894) - (-1598.96) \times 3866.37}{5 \times 5595249.79 - (-1598.96)^2}$

$= \frac{32536640.98}{30532922.03}$

$= 1.06$

Here, byx = 1.06 indicates that if 1% increase in sales cash flow from financial activity is also increases by 1.06%.

Now regression equation y on x is

$y - \overline{y} = byx\ (x - \overline{x})$

y - 4600.72 = 1.06 (x - 14129.93)

y = - 10377 + 1.06 x

From this equation it can be forested the CFFA based on the sales as follows.

(1) For FY 2009/10

X = sales = 16212.1 (from calculation of estimation of sales revenue)

y = 1.06 × 16212.10 + (-10377)

= 6807.82

(2) For FY 2010/11 (from calculation of estimation of sales revenue)

X = sales = 16906.19

y = 1.06 × 16906.19 + (-10377)

= Rs. 7543.56

(3) For FY 2011/12

X = sales = 17600.28 (from calculation of estimation of sales revenue)

y = 1.06×17600.28 + (- 10377)

= Rs. 8279.30

It is shown with the following table and trend line.

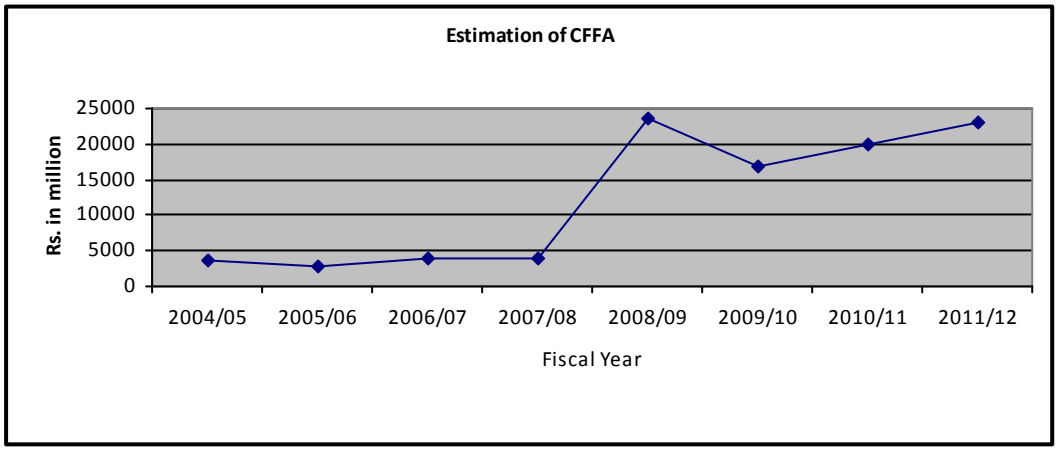
Table: 4.26

Estimation of cash flow from investing activities

(Rs. in million)

Fiscal year	Estimated CFOA
2009/10	3807.82
2010/11	7543.56
2011/12	8279.30

Figure: 4.21



The above fever noted that cash flow from financial activities the FY 2009/10 is Rs. 6807.82 million in FY 2010/11 it would be Rs. 7543.56 & in FY 2011/12. It would be 279.30. It signifies more cash is going to be generated cash from financial activity will also increased above values are determination without considering any Risk factors If Risk factors is exists in the future above calculated value might be changed.

4.11. Research hypothesis

Testing of hypothesis is one of the most important aspects in the theory of decision-making. It consists of decision rules required for drawing probabilistic inferences about the population parameters. Hypotheses are an assumption that is made about the population parameter and then its validity is tested. The act of verification involves testing the validity of such assumption which when undertaken based on sample evidence is called statistical hypothesis or testing of hypotheses or test of significance. In this section, it is best tried to create some hypothesis regarding cash flows and earning, so assist is tested. It is known fact that Karl's Pearson correlation co-efficient is not always reliable even if it shows perfectly significant because it doesn't consider surrounding risk. Due to some limitation occurs in correlation coefficient, it is best tried to guess research hypothesis and so being tested.

The following research hypotheses have been formulated in relation to the research questions.

4.11.1 Research Hypothesis 1:

Past earnings have significant predictive power in analyzing cash flows of Nepal Electricity Authority.

Table: 4.27

Table of Research Hypothesis

Amount in Millions

Year	Revenue (x)	x = X - 14449.73	x^2
2004/05	12605.20	- 1844.53	3402290.92
2005/06	13331.90	- 1117.83	1249543.90
2006/07	14449.73	0	0
2007/08	15041.49	591.76	350179.89
2008/09	KΞΛΛI HPTI	771.14	594656.89
		ϕx = - 1599.46|	ϕx^2 = 5596679.7|

Here, n = 5,

(⇑) = Rs. 16212.3 million (from estimated figure for the FY 2009/10).

($\overline{x}$) = 14129.88 million, (mean of previous years sample data).

∃ = 1017

Where, n = sample size

⇑ = mean of population (budgeted)

$\overline{X}$ = sample mean

∃ = standard deviation of population

H_0: ⇑ = 16212.1, that is population mean has significant value. In other words, there is no significant different between populations mean (derived from past earning) and sample mean. I.e. past earnings have significant predictive power in analyzing cash flows of Nepal Electricity Authority.

H_1 : ⇑ ≠ 16212.1 that is population mean is not equal to 16212.1. In other words, there is significant different between populations mean (derived from past earning) and sample mean. I.e. past earnings doesn't have significant predictive power in analyzing cash flows of Nepal Electricity Authority.

Test statistic: Under H0, the test statistic is

$$t = \frac{\overline{x} - u}{\exists / \sqrt{n}} = \frac{14129.88 - 16212.1}{1017\sqrt{5}}$$

$$= \frac{-2082.22}{454.81}$$

$$= -4.578$$

Hence, t = 0.47

Degree of freedom (d.f.) = n - 1, 5 -1 = 4

Critical value = the tabulated value of t for 4 d.f. for two tailed test at 5% level of significant is 2.776. Thus, the tabulated value $t_{0.05\,(4)}$ = 2.776

Decision: Since the calculated value of t i.e. t = 4.578 is greater than tabulated value of i.e. t0.05 (4) = 2.776. It is not significant and ⇑0 is accepted. It means population mean has significant value. In other words, there is significant different between populations mean (derived from past earning) and sample mean. I.e. past earning have not significant predictive power in analyzing cash flows of Nepal Electricity Authority.

4.11.2 Research Hypothesis 2:

Past cash flows have significant predictive power in analyzing cash flows of Nepal Electricity Authority.

Table: 4.28

Table of testing of research hypothesis - 2

(NRs. in million)

Year	Revenue (x)	x = X - 14449.73	x^2
2004/05	2944.07	- 603.31	363982.96
2005/06	2570.2	- 977.38	955271.66
2006/07	3547.38	0	0
2007/08	3926.3	378.92	143588.36
2008/09	-668.11	- 4215.49	17770355.94
		$\phi x = -5416.96\|$	$\phi x^2 = 19233190.92\|$

Here, n = 5

u = Rs. 6807.82 million (from figures estimated by regression equation for the FY 2009/10.

$\overline{X}$ = Rs. 4630.77 million (mean of x)

∃|X|KOMNEL||

Where,

n = sample size,

u = mean of population (budgeted)

$\overline{X}$ = sample mean

∃ = standard deviation of population

H_0: ⇑ = 6807.82 that is population mean has significant value. In other words, there is no significant different between populations mean (derived from cash flows) and sample mean. I.e. past cash flows have significant predictive power in analyzing cash flows of Nepal Electricity Authority.

H_1: ⇑ | 6807.82 that is population mean is not equal to 2804.34. In other words, there is significant different between populations mean (derived from past cash flows) and sample mean. I.e. Past cash flows don't have significant predictive power in analyzing cash flows of Nepal Electricity Authority.

Test statistic: Under H_0, the test statistic is:

$$t = \frac{\overline{x} - u}{\exists / \sqrt{n}} = \frac{4630.77 - 6807.82}{1634.90\sqrt{5}} = -2.97$$

Hence, t = -2.97

Degree of Freedom (d.f.) = n - 1 = 5-1 = 4

The tabulated value of t for d.f. 4 for two tailed test at 5% level of significant is 2.776. Thus, the tabulated value $t_{0.05\,(4)} = 2.776$

Decision: Since the calculated value of t i.e. /t/ = 2.97 is greater than the tabulated value of t i.e. t 0.05(4) = 2.776, it not significant and H_0 is not accepted. It means population mean has not significant value. In other words, there is no significant different between populations mean (derived from cash flows) and sample mean. I.e. past cash flows have not significant predictive power.

4.12 Major Findings

The major findings drawn after detail analysis of cash flow of NEA are presented below:

- Analysis of cash flows from operating activities showed NEA has sufficient cash inflows to operate its daily activities except FY 2008/09.
- Analysis of cash flows from investing activities shows NEA have excessive investment in under constructed hydropower plant and nonperforming fixed assets.
- Analysis of cash flows from financing activities shows that NEA and been dependent on long term loan and performed low repayment of debt.
- Analysis of net cash flows showed that NEA hasn't maintained optimum cash balance.
- Analysis of profit and loss showed NEA has been continuously is loss for the study period.
- NEA is suffering from loss except in 2006/07 as shown by income statement however; cash flow statement indicates there is cash inflow from operating activities. It is because; income statement includes non operating expenses where as such flow statement excludes all such items.
- Studied of cash flow adequacy ratio of NEA showed it have average 2.036 ratio which means ability of produce cash flows from operating activities are 2.024 times higher than cash requirement for payment of debt and acquisition of assets.
- Average ratio of repayment of borrowing ratio is 8.98 which mean NEA has 8.98 times ability to repay its borrowing out its long term debt.
- Average ratio of reinvestment ratio is -7.98 which means NEA has not capability of purchase its fixed assets out of its cash flows from operations.

- Average of cash flow on revenue ratio is 0.17 which means cash outflow for operation is 83% of revenue.
- There is negative and close relationship between sales and cash flows from operating activities which means if sales increase, cash flow from operating activity is decreases but no perhaps there is no evidence.
- Average ratio of cash flow to net income ratio is 0.862 which mean cash inflow is partially possible despite of the net loss.
- The correlation between net profit and cash flows from operation is lowery positive and insignificant which means if profit increase, then cash flow from operation is also increase but perhaps there is no evidence.
- Average ratio of cash flow return on assets ratio is 0.052 which means cash inflow utilization of its assets is only 5.2%.
- Average ratio of cash flows return on stockholders' equity ratio is 0.128 which means cash inflows on stockholders equity is only 12.8%.
- Average ratio of cash inflow and cash outflow is 1.01 which means cash inflows and cash outflows are almost in equal.
- Average ratio of cash flow liquidity ratio is 0.18 which means NEA's ability to pay short term debt is only 18% of total current liability.
- Average ratio of cash turnover ratio is 0.091 which means cash generated out of sales is only 9.1%.
- Past earnings of NEA have significant predictive power in analyzing cash flows.
- Past cash flows of NEA have significant predictive power in analyzing cash flows.

CHAPTER -5
SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

NEA is one of the largest public monopoly organization of Nepal .It have Been supplying electricity for decade NEA have been trying improve itself as a capable institution by investing into new hydro plant across the country for effective performance NEA needs to generated sufficient amount of cash which is considered as the lifeblood of business enterprise .Without cash no activates can take place . so the business . must have an adequate amount of cash to operate .It is also important to know the cash position of the firm and of cash to operate .it is also important to know the cash position of the firm cash flow studies provide useful information to evaluate a firm's ability to use sufficient cash in both short term and long term basis .It is the analysis of events and transactions that affects the cash position of company ,cash flow studies are done through statement of cash flows .the cash flow statement is the accounting report that provides information about cash receipts cash payments and net change in cash flows .The cash balances during the period .the main objective of the cash flow statement is to convey ignorance about the cash receipts and cash payments of an enterprise of an enterprise during the accounting period it is important and useful to every firm. Short and long term creditor's investors and management.

The balance sheet income statement and retained earnings statement do not always show the whole financial condition of a company. the balance sheets show the variety of assets owned by as company and the manner in which they are financed at the end of period but the source of activity related to those items during the period are not period are not provided .Also profit in the income statement does not reflect separately on income statement and balance sheets respectively. This cause misleading and confusing results to users. That is why, it important to prepare cash flow statement to ascertain true and fair` figure of cash inflow and outflows and important to analyses it to find out the actual cash position of the organization.

For the purpose of conducting this study , data covering from the Fy2004/05 to 2008/09 are used cash flow statement for every fiscal year are prepared to find out cash inflow and outflow from operating , investing and financing activities from cash flow statement , it is observed that net cash from operating and financing activities are positive and due to more investment in plant and equipment , net cash from investing activities are negative , Furthermore various cash flow ratios And statistical tools are used to evaluate cash. The cash and bank balance of NEA is not satisfactory during the study period. the corporation is not able to generate sufficient cash inflows from its operating activities .They amount of net cash provided by operation is not adequate to supports the planned business operating activities ,the company have

depend on long term borrowing and unsecured borrowing the company have paid huge amount of interest due to more long term debt so the company needed to change its strategies and replace its high it could call the money by issuing shares to the public which will reduce debt and more investing in fixed assets with a lower rate of return , it is unable to pay both the short term and long – term debt . During study period, It is observed that NEA have been facing many problems such as more amount of account receivable, less utilization of capacity , power loss etc which are the major causes of low profit . if it can be properly controlled , then there would be more profit .

5.2 Conclusions on the basis of finding

After analyzing cash flow of NEA, the following conclusions are made:

Though income statement of NEA showed loss figure, cash flow statement showed NEA have been achieving profit. it is because income statement shoed NEA have been achieving operating profit. It is because income statement included non operating expenses while cash flow statement excluded such expenses NEA is not fully able to convert its revenue into cash it is not consistent in generating cash from revenue because it is found that non operating expenses n have been increasing every year corresponding to decreasing operating income .Electricity leakage , theft and stage is one of the remarkable problems of NEA which reduced earning capacity of the authority .NEA is not able to generate adequate amount of cash from operating activities to pay its total debt but to some extent it is able to improve its minimum cash position . it is so because NEA have a poor management and strategic policy ,Due to weak control over purchasing of fixed assets have been increasing but cash flows from operating activities are not increasing proportionately which indicates return from its total assets is not satisfactory .NEA have maintained positive cash flow from operating activities but it is fluctuating . Likewise ,the accumulated amounts of account receivable which is increasing year by year denotes the inefficiency of the authority to collect its revenue in time ,NEA have invested its huge amount fixed assets but the return from it is very low. Cash flow adequacy ratio indicates that the corporation is able to generate enough cash to acquire assets. Proportion of borrowing of loan by NEA is very high than repayment of borrowing of loan .NEA is very much dependent on foreign loans to pay its local debt and interest. Therefore its long term loan has been increasing every year. So there are enough cash inflows from cash flow from financing activities. Onto the other hand ,NEA have ability to pay short term debt to some extent but it is not satisfactory due to low liquidity ratio Ultimately it can be concluded that NEA didn't maintain long run planning and policy regarding and investment . That is why, long term debt of is increasing and in other hands it failed to invest where there would be high return. NEA is holing cash inconsistently and utilizing it improperly. there is very flotation in handing the cash which might not be in the favor of the corporation of the services and excessive cash contribute nothing to the profit since idle cash earns nothing increasing trend of cost in every is another remarkable point for NEA. It haven't adopted the cost control measures .NEA failed

to analysis its strengths weakness, opportunities and threat deeply though it has been facing competition from independent power producers and it have it have not yet made assessment of its present prospect and future potentiality seriously . Though NEA have monopoly market, it is not able to achieve on its goal due to unstable government and political interference of Nepal government

5.3 Recommendations

After the detail analysis of cash flow of NEA, the following recommendation can be made.

- The balance sheet and income statement are not able to show cash inflows and outflows of the corporation. that is why it is important to prepare cash flow statement to ascertain true and fair of cash inflows and outflows
- Cash sufficiency isn't satisfactory. NEA has a low capability to repay its borrowing Asset acquisition is over hauled .Because of excessive cash outflows , NEA should give first priority in collect ting its receivable collation policy should not be affected by political pressure
- To control cash inflow from revenue, Leakage of electricity should be controlled.
- Purchase of assets is the main aspect of outflow. NEA should stress on overhauled acquisition of assets and emphasized on efficient utilization of its assets .NEA should do a complete package of feasibility studies of project and invaluable with alternative before making capital investment.
- NEA relied on loan instead of its internal source of finance. Interest on loan has been overdue. NEA's capability of repayment of its borrowing is significantly low. NEA should on its internal source of finance than collecting from outsiders.
- NEA is in loss Excess of non operating expenses are reason behind this. Controllable expenses should be controlled strictly. NEA should control its a expenses on the basis of allocated budgeted out the year.
- Most of capital investment of NEA came from long term loan .Timely completion of under constructed project is highly recommended to repay its loan
- Cash flows returns are inefficient cash generated out of net profit is almost negative. To control cash return on net profit , it is utmost required to control administrative and distribute expenses
- Cash flows returns on assets and stockholders equity are very low. It might affect investor’s decision.
- Cash liquidity is poor. To control it payable to creditors must control
- Past earning and cash flows have predictive power to predict future cash flows. Therefore the concerned authority must have knowledge of past earning and cash flows to operate future cash flows.

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Appendix-1

Nepal electricity Authority Balance sheet of July 2004/05 to July 15, 2008/09					
Particular	**2004/05**	**2005/06**	**2006/07`**	**2007/08**	**2008/09**
Capital and liabilities					
Share Fanatical	18,215.15	20,161.80	23,113.10	26,382.18	28,414.99
Accumulated profit	(3475,20)	4808.00)	6095.80	(5801.61)	(7133.77)
Other Loan	477.51	513.86	550.48	998.89	1018.89
Secured long term Loan	41,103,14	44,537.51	46,487.91	47,616.15	52,762.18
Grand Total	56,321.30	60,405.17	64,055.69	69,195.61	75,062.29
Asset					
Property , plant And Equipment	512,415.14	52,166.56	51,743.38	51,781.76	52,294.10
Capital Work – in progress	10,619.55	16,060.40	21,991.50	29,145.19	35,930.74
Investment	713.01	777.00	819.90	882.05	1602.05
Sub total	62,747.70	69,003.96	74,554.78	81,89.00	89,826.89
current Assets					
Inventories	1.048.01	1,372.70	1,354.80	1,498.45	1.518.45
Sundry Debtors and Other Receivable	3,735.71	3,697.70	4,088.00	5,151.41	6,776.70
Cash and Bank Balance	1,036,42	1,322.60	1,258.60	1,447.58	820.84
Prepaid, Advanced Loan and provision	2,063.27	2,098.60	2,293.90	2,225.53	2,275.47
Total current Assets	7,883.41	8,491.60	8,995.30	10,322.97	11,391.46
Less: current Liabilities and provision					

Sunday Creditors and payables	13,856.61	16,768.69	19.144.39	22,119.00	25,6117.71
Provision	681.48	697,70	709.80	93.13	813.13
Total current Assets	14,538.09	17,466.39	19,854.19	22,812.13	26,430.84
Net Current Assets	(6,654.68)	8,974.79)	(10,858.89)	12,489.16)	(15,039.38)
Deferred Expenditures to be written off)	250.01	126.70	32.40	130.94	60.00
Inter Unit Balance(net)	(21.73)	249./30	327.40	(255.17)	214.78
Total Def . Exp and Inter	228.28	376.00	359.80	(124.23)	274.78
Grand total	56,321.30	60,405.17	64,o55.69	69,195.61	75.062.29

Appendix -2

Nepal Electricity Authority					
Income statement for the FY ending July 2004/05 to July 15, 2008/9					
Particular	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**2008/09**
Sales	11874.70	12605.20	13331.90	14449.73	15405.03
Less: Cost of sales	6765.40	7462.40	8332.70	9034.56	9929.85
Generation lic power purchase)	6565.90	7246.40	8100.60	8793.68	9626.57
Transmission	199.50	215.90	232.10	240.88	304.28
Gross profit	5109.30	5142,80	4999.20	5415.17	5475.18
Add: other income	671.40	617.50	639.90	106.61	655.245
Less: Administrative expenses	489.10	622.40	419.50	479.59	576.14
Less Distributaries expenses	1376.10	1484.20	1703.70	1834.39	1947.42
Add/less (other Income)/ masc. exp	344.90	219.90	(297.20)	(47.44)	50.00
Profit from operation	3570.60	3433.80	3813.10	4165.24	3556.86
Less: Interest	2991.50	3079.80	3050.90	2385.41	2368.41
Depreciation	1686.00	1733.50	1916.90	1856.47	1920.00
(profit) Loss On Foreign Exchange	59.10	(230.00	42.70	(493.39)	480.61
Deferent revenue expenditure written off	320.10	123.30	105.40	42.56	70.00
Provision for losses on property plant & equipment		40.00	65.00	42.56	70.00
Sub total	5056.70	4746.60	5080.90	3851.05	4869.02
Profit (loss) from operation in the current year	1486.10	1312.80	126.80	314.19	1312.16
Less : Provision for tax					
Balance of the profit as per last account	(1694.90	3475.20	4808.00	6095.80	5801.61
Net profit(Loss) after tax	(1760.30)	(1312.80)	(1267.80)	314.19	(1312.16)
Total profit available for appropriation	(3455.20)	4788.00)	6075.80	(5781.61)	(7113.77
Insurances fund	20.00	20.00	20.00	20.00	20.00
Profit (loss) transferred to balance sheet	(3475.20)	4808.00)	(6095.80)	5801.61	7133.77)