

CHAPTER I

1 INTRODUCTION

1.1 General Background

In terms of scientific development, Nepal ranks low. Its science budget is just 60 million rupees (US\$800,000), or 0.08 percent of the total national budget. Yet, despite poverty, poor governance and ten years of insurgency, a few initiatives in Nepal's energy sector are showing how thinking small can bring big results.

For any country, its energy supply is a limiting factor. Energy is expensive, generates pollution, but is absolutely necessary. Many developing countries face the added conundrum of possessing natural resources that could potentially supply large amounts of energy, but lacking the funds, resources and infrastructure to exploit them.

An adequate and reliable supply of energy is a prerequisite for development. In Nepal, forests and water are the two major indigenous energy resources. Forests are being over exploited in many parts of the country, mainly for fuel wood; whereas water resources are underutilized with regard to their capacity to generate hydroelectricity. Nepal might be able to control forest degradation by adopting a differentiated approach to hydropower development.

Gigantic dams could control floods, irrigate fields and generate electricity, not only for Nepal but potentially for India too. But the costs involved are

prohibitive and no Nepali government has yet dared launch such projects, which would mean flooding valleys and potentially moving populations.

While Nepal's planned 'mega' dam projects have stalled, their 'micro' counterparts have been successful, with some financing local development. It is the 'micro' hydropower plants, built on small rivers that have been most successful. Already, 2,000 of these produce nearly one-sixth of the total electricity produced by hydroelectric plants in Nepal.

1.1.1 Investment Potentials of Hydropower Business in Nepal

The hydropower sector clearly has tremendous potential for contributing to growth and development impact and benefits. Nepal, known as a highly potential country for generating hydroelectricity, has a theoretical potential of generating 83,000 MW electricity while the real production capacity is 527.5 MW. The public sector generates 412.5 MW and the private sector produces 115 MW, which comes to be 0.63 percent of the total potential of electricity generation. Taking advantage of the new policy of welcoming private foreign investment in this sector, two joint-business companies involving important foreign investors have been generating and selling hydro power on the build-operate-transfer basis for some years now. Several IPP projects are under construction (Chapter16, Electricity Development, www.npc.gov.np/tenth plan).

Even then, it is estimated that the electricity accounts for a very small share of the total energy consumption in the country. Fuel wood accounts for roughly 75 percent of the total energy consumption. Right now only a small percentage of the country's population, less than 20 percent, is using electricity for home consumption.

On the other hand, there are excellent prospects for power exports of significant volume of electricity from Nepal to India (to the northern region). The time is right to explore the possibilities and invest in it. Moving in this direction would be in line with the increasing trade and economic cooperation between Nepal and India. There will also be significant markets for domestic consumption of electricity, with economic growth and business and industrial expansion, as expected.

The range of the size of the projects for FDI in Nepal right now in terms of generation capacity and/or the size of investment is very wide, from relatively small hydropower generation schemes to very large hydro-power projects. There is thus a wide range of investment opportunities.

A large number of well studied projects of various scales and sizes are already available for investment and the government is ready to invite private capital- domestic and foreign- to take these on to invest in them. In the past the planners have lost a lot of time talking about the hydro power potential to contribute to the country's prosperity, but with little real action and actual project implementation. However, the last decade saw important beginning of a real change, with not only proper legislation and policy framework in place, but also the implementation of a number of small hydro power projects with private sector investment.

1.1.2 Independent Power Producers (IPPs)

An Independent Power Producer is a privately owned power producer (power plant).Independent Power Producers (IPPs) from the private sector are now influential players for hydropower generation in Nepal with total

installed capacity of 140.4 MW (26.5 %). Besides, over a dozen small hydropower projects that are in different stages of progress have been cleared to interconnect with the NEA grid and sell all their generation to NEA.

Independent Power Producers' Association, Nepal (IPPAN) was established in the year 2001 with the intention of encouraging the private sector to work in the area of hydropower in Nepal. It is a non-profit, non-government autonomous organization.

One of its main purposes is to act as a link between the private sector and government organizations involved in developing hydropower in the country so that Nepalese citizens can get the maximum benefit from the development effort.

Besides this, the organization also helps exchange technology, expertise, knowledge, financial and management information among the independent power producers in the country.

IPPAN is primarily a membership organization. The General Assembly comprises both institutional and individual members. The General Assembly elects the Board of Directors, which then formulates the plans and policies of the organization.

The members of IPPAN are as follows.

A. Corporate Members

- i) Ankhu Hydropower Pvt. Ltd..
- ii) Annapurna Group Pvt. Ltd.

- iii) Annapurna Renewable Energy (P) Ltd.
- iv) Balephi Hydropower Company Ltd.
- v) Butwal Power Company Ltd.(BPC)
- vi) Cemat Power Dev. Co (P) Ltd.
- vii) Grid Nepal Pvt. Ltd.
- viii) Himal Power Ltd. (HPL)
- ix) Himalayan Hydropower (P) Ltd.
- x) Himtal Hydropower Company
- xi) IDS Energy Pvt. Ltd
- xii) Khudi Hydropower
- xii) Lamjung Electricity Development Company (P) Ltd. (LEDSCO)
- xiv) Mai Valley Hydropower Pvt. Ltd.
- xv) Manang trade Link Pvt Ltd.
- xvi) Molnia Power (P) Ltd.
- xvii) Muktishree Pvt. Ltd.
- xviii) Nepal Jal Bidyut Prabardhan tatha Bikash Ltd.
- xix) PAN Himalaya Energy Pvt. Ltd.
- xx) Pashupati Energy Dev. Co.(P) Ltd.
- xxi) Radhi Bidyut Company Ltd.
- xxii) Rairang Hydropower
- xxiii) Ru Ru Jalbidhyut Pariyojana Pvt. Ltd.
- xxiv) Sanima Hydropower Company (P) Ltd
- xxv) Shikhar Hydropower Company
- xxvi) Super Khudi Hydropower Pvt. Ltd
- xxvii) Tundi Power Co. Pvt. Ltd
- xxviii) Unique Hydel Co. Pvt. Ltd
- xxix) Upper Madi Hydro Pvt. Ltd
- xxx) Upper Maiwa Hydropower Pvt. Ltd

xxxii) Welcome Energy Development Co. Pvt. Ltd

B. Associate members

- i) Bank of Asia Nepal Ltd.
- ii) Clean Energy Development Bank Ltd.
- iii) Himal Hydro and General Construction Ltd
- iv) Himalayan General Insurance Co.Ltd.
- v) Hydro Solutions
- vi) ICTC Private Ltd
- vii) IL&FS Nepal Infrastructure Dev. Company
- viii) Jyoti Bikash Bank Ltd.
- ix) Klen Tech Pvt. Ltd
- x) Nabil Bank Ltd.
- xi) Nepal Hydro and Electric
- xii) Sanima Bikas Bank
- xiii) Shangrila Energy
- xiv) SN Power
- xv) Standard Chartered Bank Nepal Ltd.
- xvi) Sunrise Bank Ltd.

1.1.3 Power Purchase Agreement (PPA)

A Power Purchase Agreement, or PPA, is a long-term agreement to buy power from a company that produces electricity.

A Power Purchase Agreement is also "behind" almost every power plant. A PPA is a contract involving the generation and sales of electricity - which is normally developed between the owner of a power plant generating the

electricity, and the buyer of the electricity. PPA's can be quite lengthy agreements that may exceed 100 pages in length and take several months to even years to finalize (Renewable Energy Technologies, www.powerpurchaseagreements.com).

The basic information contained in a Power Purchase Agreement includes the following items:

Definitions

Purchase and Sale of Contracted Capacity and Energy (such as steam, hot water and/or chilled water in the case of cogeneration and tri generation plants)

Operation of the Power Plant

Financing of the Power Plant

Guarantees of Performance

Penalties

Payments

Force Majeure

Default and Early Termination

Miscellaneous

T&C's

Among various documents, mandatory to help resolve the ensuing confusion between power producers and purchasers, the power purchase agreement (PPA) is the heart of any independent power project (IPP). It guarantees market for power produced by the IPP and the tariff at which it would be sold to the purchaser. The PPA creates legal obligation on both the parties to perform the previously accepted tasks in a predetermined manner.

1.1.4 Nepal Electricity Authority (NEA)

Introduction

Nepal Electricity Authority (NEA) was created on August 16, 1985 (Bhadra 1, 2042) under the Nepal Electricity Authority Act.1984, through the merger of the Department of Electricity of Ministry of Water Resources, Nepal Electricity Corporation and related Development Boards.

To remedy the inherent weakness associated with these fragmented electricity organizations with overlapping and duplication of works, merger of these individual organizations became necessary to achieve efficiency and reliable service.

Objectives

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 both interconnected and isolated.

Responsibility

In addition to achieving above primary objective, NEA's major responsibilities are:

To recommend to Nepal Government, long and short-term plans and policies in the power sector.

To recommend, determine and realize tariff structure for electricity consumption with prior approval of Nepal Government.

To arrange for training and study so as to produce skilled manpower in generation, transmission, distribution and other sectors.

| | |
|---|-----------------------|
| Board of Directors | |
| 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. | |

1.1.5 Nepal Electricity Authority and Power Purchase Agreement

Nepal Electricity Authority (NEA) is a fully government owned public utility and as of date the only buyer of power produced by Independent Power Producers (IPPs) in Nepal. So all the IPPs in Nepal need to enter into Power Purchase Agreement (PPA) with NEA.

An application together with detailed feasibility study of the project needs to be submitted to NEA requesting it to buy power from the project to be constructed. The power to be sold to NEA should be calculated on the basis

of Q65 i.e. the design discharge should be available sixty five percent time of the year for projects up to 5 MW.

For projects bigger than 5 MW the design discharge is fixed by mutual agreement. A rate of Rs 3.9 (US\$ 0.06) per unit for wet months (mid April to mid December) and Rs 5.52 (US\$ 0.085) for dry months (mid December to mid April) is fixed by NEA as the power purchase rate from Independent Power Producers (IPPs) for projects up to 5 MW. There is no price escalation on this rate as of today. There may be one in future. For projects bigger than 5 MW the power rate is not fixed and may vary from one project to another.

1.2 Introduction of Selected Independent Power Producer

1.2.1 Butwal Power Company Limited (BPC)

Butwal Power Company was established in 1966 by a visionary Norwegian engineer Mr. Odd Hoftun. when total capacity of the power in the country was only 3.45MW. BPC with assistance from the United Mission to Nepal, developed Tinau project in 1967 to light up the town of Butwal and to promote industrial development in the area.

BPC is one of the pioneering hydropower developers in Nepal from private sector for developing self competency in various facets of the hydropower industry like engineering, construction, operation, maintenance and manufacturing of hydroelectric equipment. Similarly, it played an instrumental role in establishing Himal Hydro and General Construction Company and Nepal Hydro and Electric Ltd with a target to develop Nepal's indigenous capacity in hydropower construction.

BPC is one of the shareholders of 60 MW Khimti hydropower project. This Company owns and operates the 12 MW Jhimriuk Hydropower Plant and the 5.1 MW AndhiKhola Hydropower Plant. Besides supplying power to the national electricity grid, the company has electrified more than 20,000 households through these power plants under its rural electrification program. It owns 14.9% of the shares in Khimti I Hydropower Plant (60 MW), 51.3% in Nepal Hydro and Electric Pvt. Ltd, 20% in HydroLab Pvt Ltd, 24% in JIDCO. It also owns 60% of the shares in Khudi Hydropower Company which has been in commercial operation since 30th December, 2006.

Butwal Power Company was privatized in 2003. The main shareholders of BPC are Shangri-la Energy Limited, Interkraft Norway, the public and the Ministry of Water Resources of Nepal. The distributions of shares of BPC are: Shangri-la Energy Limited 68.95%; public 10%; HMG/N 9.09%; Employees 2%; Nepal Electricity Authority 1.06% and Nepal Industrial Development Corporation 0.06%. BPC is a very good example for being a company jointly owned by the Public, Private, Government and Employees.

BPC has the vision to provide quality and competitive services to its customers. Similarly the mission of the company is to supply electricity within its distribution areas in Nepal and expand its distribution to feasible areas. It will plan, build, acquire, own and operate electric power plants as well as purchase electricity to meet its electricity needs; make strategic investments to support its interests; supply affordable electricity; and render professional services in its areas of expertise.

Corporate Information:

| | |
|------------------------------------|---|
| Company Name | : Butwal Power Company Limited |
| Company Registration No. | : Pa. Li. No. 3-049/50 |
| Date of Incorporation | : 29th December 1965 (2022/09/14 BS) |
| Date of Conversion into Public Ltd | : 17th February, 1993 (2049/11/06 BS) |
| Date of Privatization | : 3rd January, 2003 (2059/09/19 BS) |
| Corporate Office | : Buddha Nagar, Kathmandu, Nepal |
| Registered Office | : Kathmandu, Nepal |
| PAN/VAT No. | : 500047963 |
| Bankers | : Himalayan Bank Limited Nepal Investment Bank Limited |
| Statutory Auditors | : Sundar & Co. Pulchowk, Lalitpur 20/8 Gha, Nepal |
| Internal Auditors | : BRS Neupane & Co. Sama Marg 308-14, Naxal, Kathmandu, Nepal |
| Listing | : The company is listed at Nepal Stock Exchange and is traded under stock code BPCL |

1.3 Statement of the Problem

Nepal has an enormous hydropower potential, the prospects of becoming a prosperous country can be realized provided this energy source could be tapped prudently and efficiently at the earliest. As a leader of the country's

power sector, NEA has the prime responsibility of taking necessary steps towards achieving this goal.

Considering NEA's limited resources for capital investments, financial resources available in the local market should be tapped for the equity contribution. The successful commissioning of the Chilime hydropower project under NEA-private partnership was indicative of the beginning of a new era of public-private sector cooperation in Nepal's electricity sector. This should act as a springboard for NEA to adopt an effective joint business investment policy to meet the growing demand of energy in the country.

It is very difficult to assess the efficiency of IPPs in view of their economic as well as socio-development goals. Different objectives of various parties involved with IPPs ought to be fulfilled in a competitive environment by the management of respective IPPs. In order to realize these objectives, IPPs have to be efficient in the utilization of their resources.

Finance is one of the most important functional areas of a business. It is concerned with generation, transmission, distribution and other functions of any business including independent power producers. The problem toward which this study is directed is to identify and analyze the financial strengths and weaknesses of IPPs of Nepal, here BPC.

Besides the study attempts to seek answers of the following questions:

Do the financial ratios best describe the performance of this IPP ?

What types of contemporary steps are essential for performance improvement of Nepalese IPPs.

What level of satisfaction is provided to the stakeholders by this IPP?

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

1.4 Objectives of the Study

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

To analyze the financial performance of BPC and draw comparative conclusions through financial analysis taking relevant variables.

To identify major strengths and weakness of BPC.

To find out the past and present challenges undergone by IPP in Nepal.

1.5 Significance of the Study

Analysis of financial position and statement is a crucial part of financial decision making process of a business enterprise. Poor financial management affects adversely on liquidity, turnover and profitability. It is required to measure the financial position of the business periodically in order to ensure smooth functioning of a business, big or small.

Nepal, as a developing country, needs more and more new energy sources to meet the ever- increasing demand for socio-economic development and industrialization of the country. In this backdrop, hydropower is the only resource available abundantly in all hilly and mountainous parts of the country. Access to electricity promotes new economic activities, empowers women by reducing domestic drudgery in firewood collection, improves health and education services and provides a cleaner and healthier home environment.

This study attempts to provide information and draw the attention of private and non-governmental agencies that are willing to invest in hydropower projects in Nepal. This study also expects to provide some appropriate measures to solve financial problems of Nepalese IPPs, if any. Researchers who are interested in the study of the financial performance of similar hydro power business may find this study of use.

1.6 Limitations of the Study

In spite of the conceptualization made, analysis performed and generalization drawn regarding the financial performance, the study may have some constraints. The study will be limited by following factors.

The study covers a period of 5 years from the first fiscal year 2004/05 to the recent fiscal year 2008/09 of BPC.

The secondary data is basic input of the study and, thus, accuracy of conclusions derived from them highly depends upon the reliability of these data.

Since the study is mainly concerned with BPC out of 12 IPPs in operation, the conclusion drawn from the study, and the suggestions offered may not be applicable to any other private or public enterprise.

This study may not be precise as it is to fulfill the partial requirement of the MBS program.

1.7 Organization of the Study

The aim of the dissertation is to explain the financial position of Nepalese IPPs, here BPC. The study has been divided into five chapters. Each chapter is devoted to some aspects of the study. The major chapters of the study are as follows:

- Chapter One - Introduction
- Chapter Two - Review of Literature
- Chapter Three -Research Methodology
- Chapter Four - Presentation and Analysis of Data
- Chapter Five - Summary, Conclusion and Recommendation

The first chapter deals with the initial proposal of the thesis incorporated with a view to explain in detail the aspect of hydropower development and a brief overview of NEA and IPPs of Nepal. It is focused on the statement of the problem; importance, objectives, limitations and organization of the study.

Chapter Two reviews available literature regarding findings and recommendations of previous research work made in respect of NEA and any IPP.

Research methodology is discussed in the third chapter; which includes research design, types and sources of data, data collection procedure, methods of analysis and analytical tools used.

In the fourth chapter, data collected through various sources have been presented. It mainly contains the analysis and presentations of collected data and information through definite course of research methodology. The

generated results after the application of the research method are analyzed and interpreted in this chapter.

Ultimately, the fifth and the last chapter of the study covers summary, conclusions of the study and recommendations and suggestions for the further improvement. Besides these, bibliography and appendices are also included.

CHAPTER II

2 REVIEW OF LITERATURE

2.1 Conceptual framework

In this chapter, the review of various books, research studies have been made to make clear about the concept of performance analysis as well as to recall the theories and previous studies made by various researchers. Nepal being one of the rich countries in hydropower sector, many important literatures are available in this field. This chapter reviews the available literature relating to hydropower sector and views expressed by various scholars and researchers on the financial performance of private and public enterprises.

2.1.1 Financial Analysis

“Financial Analysis is designed to determine the relative strengths and weaknesses of a company- whether the company is financially sound and profitable relative to other companies in its industry and whether its position is improving or deteriorating over time. Investors need such information in order to estimate future cash flows from the company and to evaluate the friskiness’ of these flows. Managers need to be aware of their companies’ financial positions in order to detect potential problems and to strengthen weaknesses” (Weston and Brigham, 1987, p.259).

“Financial analysis is the key tool for financial decision and starting point for making plan before using sophisticated forecasting and budgeting procedures. The value of this approach is the quantitative relation that can be

used to diagnose strengths and weaknesses in a company's performance. Financial performance is the main indicator of the success or failure of a company. The focus of financial analysis is on the key figures in the financial statements and the significant relationship that exists between them" (Khan and Jain, 1999: 4.1).

"Financial performance analysis involves the use of various financial statements. The financial statements contain summarized information of a company's financial affairs, organized systematically by the top management. These statements are used by investors and financial analysts to examine the company's performance in order to make investment decisions" (Pandey, 1999: 29-30).

Financial statements are prepared from the accounting records maintained by the company. They disclose financial information of a company during a financial year and, explain what has actually happened to earning and dividend over the past few years, in the form of income statement and balance sheet.

2.1.2 Financial Statement Analysis

"The Financial Statement Analysis reveals how far the dreams and ambitions of the top management have been converted into reality during each financial year. It involves a comparison of a company's performance with that of other companies in the same line of business, which is often identifying the company's industry classification. An analysis of financial statements should provide analysts with better understanding of the financial condition and performance of a company, than they can obtain from analysis of the financial data alone" (Van Horne, 2004: 350).

Essentially, the function of financial statements is to convey to the reader, in summary form, certain fundamental information regarding the financial health of the company at a particular point in time, the economic results of its operations for a given period of time, together with a review of the causes for change in components of the company's financial structure over a period of time. There are three major financial statements in common use at the present time. They are the following (Lynch and Williamson, 1983: 465-467).

(a) Balance Sheet

The Balance Sheet, or Statement of Financial Position, portrays the financial structure of the company in terms of its economic resources and the respective interests or claims on such resources. A balance sheet shows the financial position of a company by detailing the source of funds and the utilization of these funds, properly classified and arranged in a specific manner. It communicates information about the assets and liabilities and owners' equity of a company as on a specific date, usually at the end of each financial year.

(b) Income Statement

The Income Statement, or Operating Statement, summarizes in economic terms the results of the company's activities for a specified period of time. It is the "scoreboard" of a company's performance during a particular period of time such as a year, semester or a quarter. The generally accepted convention is to show one year events in the income statement. The income statement or profit and loss account presents the summary of revenues, expenses and net income (or net loss) of a company for the period covered by the account.

(C) Statement of Changes in Financial Position

The statement of changes in financial position provides in summary form the results of the transactions over a given period of involving the assets (or funds) of the firm. Basically, it measures changes in key segments of the firm's capital structure in terms of sources of funds acquired during the period and the important uses to which such funds were put. Used in conjunction with the balance sheet and income statement, its importance lies in its ability to supply an item which represents a deficiency in each of the other statements.

2.1.3 Objectives of Financial Statement Analysis

Financial statement analysis, being an information processing system designed to provide data for decision making, thus involves a study of relationship among various financial factors in a company as disclosed by a single set of statement and a study of trends of these factors as shown in series of statements. It aims to provide a clear understanding of changing profitability and financial condition of a company (Moer, 1961: 4).

However, objectives of financial statement analysis differ as per the need of different parties involved in a company. In broad sense, there could be two major possible objectives of financial statement analysis (Needles, 1989:63-64).

(a) Assessment of Past Performance and Current Position

Past performance is often good indicator of future performance. Therefore, an investor or creditor is interested in the past sales, expenses, net income, cash flow and return in investment. In addition, an analysis of current

position tells what assets the company owns and what liabilities must be paid. Besides, it provides the information about various facts in relation to the company such as:

-) Earning capacity or the profitability of the company.
-) Operational efficiency of the company as a whole of its various departments.
-) Long-term and short-term solvency of the company for the benefit of debenture holders and trade credit.
-) Real meaning and significance of financial data.

(b) Assessment of Potential and Related Risk

Investors judge the potential earning capacity of a company because that affects the value of the investment or share, and the amount of dividend that the company pays. The risk of an investment or loan also rests on whether the future profitability and liquidity of the company is promising or not. Therefore, the creditors judge the potential debt paying ability of the company, and managers are interested in various information concerning different potentials, such as:

-) Possibility of development in the near future through forecast and budget allocation.
-) Financial stability of the business.
-) Reforms needed in the present policies and procedures that help to reduce weaknesses and strengthen performance.

2.1.4 Significance of Financial Statement Analysis

“Financial statements report both on a firm’s position at a point in time and on its operations over some past period”. However, their real value lies in the

fact that they can be used to help predict the firm's future earnings and dividends. From an investor's standpoint, predicting the future is what financial statement analysis is all about, while from management's standpoint, financial statement analysis is useful both as a way to anticipate future conditions and, more important as a starting point for planning actions that will influence the future course of events" (Weston and Brigham, 1987 :240). Parties those benefited by the analysis of financial performance can be enumerated as (Srivastava, 1993:58-59).

(a) Significance to Top Management

Top management, being responsible of ensuring that the resources are used most efficiently and effectively and that the company's financial position is sound, must analyze financial statements to measure whether stated objectives have been met or not and to formulate operating strategies and policies so as to enhance overall performance of the company.

(b) Significance to Creditors

While trade creditors are interested in a company to meet their claim over a short period of time, the lenders of long-term debt are interested with a company's long-term solvency and survival. The lenders can decide whether the borrower retains the capacity of refunding the principal and paying interest in time or not through an analysis of financial statements.

(C) Significance to Shareholders

The investors, who have invested their fund in a company's shares, are most concerned about the company's earning .Normally, if the performance of the company is excellent, the shareholders wish to buy the shares whereas, they simply intend to hold the shares in case of satisfactory profit. And they rush

to sell their shares in case of poor performance of the company. So, the analysis of financial statement helps shareholders to decide whether to buy, sell, or hold the shares.

(d) Significance to Economists and Governmental Agencies

Economists analyze the financial statements with a view to study the prevailing business and economic condition. The governmental agencies analyze them for the purpose of price regulation, rate setting, taxes and similar other purposes.

(e) Significance to Labor Unions

Labor unions are interested in rights and benefits of labors to raise the moral of labors. To motivate the labors they expect increase in wages, fringe benefits and so on. An analysis of financial statements assists labor unions to assess whether the company is in the situation or not to make facilities available.

2.1.5 Techniques of Financial Statement Analysis

The techniques of analysis are employed to ascertain or measure the relationship among the financial statement items of a single set of statement and changes that have taken place in these items as reflected in successive financial statements. The fundamental of the analytical techniques is to simplify or reduce the data under review to the understandable terms.

Out of various techniques, selection of a technique or combination of the techniques depends on the purpose of analysis. Different techniques reveal different facts associated with the company, so some or all of the following major techniques can be used for financial statement analysis.

(a) Funds Flow Analysis

The statement of change in financial position prepared to determine only the sources and uses of fund between two dates of balance sheets is known as funds flow statement. It is prepared to summarize the change in assets and liabilities resulting from financial and investment transactions during the period as well as those changes occurred due to change in owners' equity. It is also aimed to depict the way in which the company used its financial resources during the period (Pandey, 1999: 64).

The method of preparing funds flow statement depends essentially on the sense in which the term fund is used. There are three concepts of fund: cash concept, total resources concept and working capital concept. According to cash concept, the word fund is synonymous with cash whereas, total resources concept represents the total assets and resources as fund. And under working capital concept, the term fund refers only to working capital.

However, the concept of fund as working capital has gained wide acceptance as compared to other concepts. Therefore, when conducting funds flow analysis, any transaction that increases the amount of working capital is taken as source of fund whereas transaction that decreases working capital is treated as application. But any transaction that affects current assets or current liabilities however not changing in working capital is not taken as source or use.

The utility of this technique stems from the fact that it enables shareholders, creditors and interested parties to evaluate the use of funds and, to determine how these uses were financed. In the light of information supplied by funds

flow statements, outsiders can decide whether or not to invest in the company. It enables financial experts to detect the imbalance in the use of funds and undertake remedial measures. It is also helpful to evaluate the financial pattern of a company (the portion of growth financed internally and financed externally).

In spite of these significances of funds flow analysis to various parties associated with a company, it is not free from drawbacks. Its shortcomings can be listed as:

-) It is not foolproof as it depends on conventional financial statements.
-) It cannot introduce any new items, which causes changes in financial status of a company.
-) It is not much relevant as the study of change in cash position is more useful rather than fund position.
-) It is historical in nature. So, it cannot estimate source and application of fund in near future.
-) It does not reflect the structural and policy changes.

(b) Cash Flow Analysis

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

It summarizes the causes of change in cash position between dates of two balance sheets. While preparing cash flow statement, only cash receipts from debtor against credit sales are recognized as the source of cash. Similarly, cash expenses, cash purchases and cash payments to suppliers for credit

purchase are regarded as the use of cash. Incomes and expenses outstanding and prepaid expenses are not considered under this analysis.

This type of analysis is useful for short-term planning of a company. The company needs sufficient cash to pay debt maturing in near future, to pay interest and other expenses and, to pay dividends to shareholders. The projection of cash flows for near future thus, ensures the availability of sufficient cash to match the need of a company during the period and accordingly, facilitate arrangement to meet the deficit or invest the surplus cash temporarily (Pandey, 1999:75).

Though it is more appropriate than funds flow analysis for the decisions related to near future, it is also not free from some drawbacks, such as:

-) It is not perfect as it depends on conventional financial statements.
-) It is historical in nature.
-) It does not reflect the structural and policy changes.

(C) Trend Analysis

This method is immensely helpful for the horizontal study of the data (comparative study of financial statements of several years). This method of analysis involves the comparison of percentage relationships that each statement item bears to the same item in the base year. The base year may be the earliest year, latest year or any intervening year under the study. This exhibits the direction to which the company is proceeding.

“Trend analysis is an analysis of a company’s financial ratios over time, made in order to determine the improvement or deterioration of its financial situation. But trend ratios are generally not computed for all of the items in

the statement, as the fundamental objective is to make comparison among items having same logical relationships to one another” (Weston and Brigham, 1987: 251).

Trend analysis reveals whether the current financial position of the company has improved over the past years or not. It shows which of the items have moved in a favorable direction and which of them in unfavorable direction. Though it is an important tool of analysis, it is bound by some limitations, such as:

-) Trend for a single balance sheet or income statement is seldom very informative.
-) It does not give accurate results if accounting principles followed by the accountants are not considered over the period of study.
-) Price level changes adversely affect the comparison.
-) Selected base year for some of the items in the statements may not be typical.

(d) Ratio Analysis

“Ratio analysis is a widely used tool of financial analysis. It is defined as the systematic use of ratio to interpret the financial statements so that the strengths and weaknesses of a firm as well as its historical performance and current financial condition can be determined. The term ratio refers to the numerical or quantitative relationship between two items/ variables” (Khan and Jain, 1999: 4.1).

Ratio analysis is carried out to develop meaningful relationships among individual items or groups of items usually shown in the periodical financial statements. An accounting ratio shows the relationship between two

interrelated accounting figures. Ratios are guides or shortcuts that are useful in evaluating the financial position and operation of a company. When the relationship between two figures in the balance sheet is established, the ratio so calculated is called “Balance Sheet Ratio”. Ratio may be expressed in the form of quotient, percentage or proportion.

Ratio analysis involves two types of comparison for the useful interpretation of financial statements. A ratio itself does not indicate the favorable or unfavorable position. Most commonly used standards to evaluate the ratio are:

-) Comparison of present ratios with past and expected future ratios.
-) Comparison of ratios of the company with those of similar companies over the period or with industry average at the same point of time.

With the help of ratios, one can judge financial performance of a company over a period of time and against the industry average. Ratios help analysts to form the judgments whether the performance of the company is good, questionable or poor. Management of the company can take strategic decisions based on the position revealed by ratios. Investors can decide about the future of their investment. Creditors can judge whether the company is anymore creditworthy or not.

All these judgments are backed by different types of ratios. For example, liquidity ratios measure the ability of a company to meet its current obligations. Leverage ratios evaluate the long-term financial position of a company. Activity ratios evaluate the efficiency with which a company manages and utilizes its assets. Finally, profitability ratios measure the operating efficiency of a company.

Though ratio analysis is a powerful tool of financial analysis, it should be used with extreme care and judgments should be carefully considered because it suffers from certain drawbacks, such as:

-) It is difficult to decide the proper basis of comparison.
-) It calls interpretation to certain aspects of the business, which needs detailed investigation before arriving at any financial conclusion
-) Unless there is a consistency in adoption of accounting methods, ratios may not prove of greater use in case of inter-company comparison.
-) The price level changes make the interpretation of ratios invalid.
-) The ratios are generally calculated from past financial statements and thus, are no indicators of future.

2.1.6 Limitations of Financial Statement Analysis

“Users of financial statements can get better insights about the financial strength and weaknesses of the company if they properly analyze the information reported in these statements. It facilitates to explore various facts related to the past performance of a company and forecast its potentials for achieving expected results. However, there are some limitations that prevent the realization of the stated proposition. These limitations are listed below” (Jain and Narang, 1989: B33-B35).

(a) Historical Nature of Financial Statements

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

(b) No Substitute for Judgment

Financial statement analysis is a tool to be used by experts to evaluate the financial performance of a company. If used by amateurs, financial statement analysis may provide faulty conclusions.

(c) Reliability of Figures

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

(d) Single Year Analysis is Not Much Valuable

From the analysis of financial statements relating to a single year, one cannot draw meaningful conclusions and, thus it does not have much use and value.

(e) Results May Have Different Interpretations

Different users may differently interpret the results derived from the analysis of financial statements. For example, a high current ratio may suit the lenders but it may be the sign of insufficiency of the management due to the under utilization of funds.

(f) Changes in Accounting Methods

Analysis of financial statements can be effective only if the figures derived from financial statements are comparable. The whole exercise of analysis becomes futile, if there is a change in accounting methods and the figures of current period are not comparable anymore.

(g) Pitfall of Inter-Company Comparison

When different companies are adopting different procedures, objectives, policies and different items under similar heading, comparison can be more difficult. Such analysis cannot provide reliable basis to assess the performance, efficiency, profitability and financial condition of a company as compared to whole industry.

(h) Price Level Changes Reduces the Validity of Analysis

The continuous rapid changes in the value of money economically reduce the validity of analysis, in the present day. Acquisition of assets of different levels of prices make comparison futile as meaningful conclusion can only be drawn from comparative analysis of such items relating to several accounting periods.

(i) Selection of Appropriate Tool

There are different tools of analysis available to an analyst. The tool be used in a particular situation depend on skill, training, intelligence and expertise of the analyst. If inappropriate tool is used, it may lead to faulty conclusions.

2.2 Review of Related Thesis

This section comprises reviews of various theses that are related to its topic and which may be helpful for this study. Though their problems may differ to some extent, methods and techniques of analyzing financial performance may resemble.

Eliza Amatya (2005), in her thesis “*An evaluation of financial performance of NEA*” examines the financial strengths and weaknesses of NEA based upon its financial ratios. The specific objectives of this study are:

-) To analyze the financial performance of NEA through financial analysis taking relevant variables.
-) To identify major weakness and strengths of NEA.
-) To find out the past and present challenges undergone by NEA.
-) To provide some suggestions and recommendation based on the findings for the improvement of financial performance.

Amatya (2005) has observed following aspects of financial performance of NEA in her Thesis:-

1. Looking over the trend of current ratio of NEA over 9 years, it can be observed that NEA’s current ratio is always less than the standard norm of 2:1 except in the year 1996. In the year 2001, it has less satisfactory liquidity position in compared to other year’s ratio.
2. The quick ratio in the year 1995 and 1996 is in satisfactory position while it shows the declining position from the 1997 to the year 2001. The Quick ratio in slightly increased in year 2002 and 2003 but yet it was not able to reach the position as compare to the year 1995. The average quick ratio of NEA is 0.66, which could not be yet considered as satisfactory ratio. Thus NEA is not in satisfactory position in meeting its current obligations. The quick ratio in the year 1995 is 1.23 and in the year 1996 is 1.27. These two years shows the satisfactory position of liquidity within the organization.
3. The study from above table shows the poor utilization of fixed assets within the organization. The average FATOR is 0.17 that meant a rupee

investment in the fixed asset of NEA is generating sales worth of Rs. 0.17 only. This indicates the poor FATOR and poor utilization of fixed assets. One of the causes of poor utilization of fixed asset may be the asset remaining idle without any use.

4. The gross operating revenue of NEA has increased each year. The investment on assets has increased in each year as compared to the revenue. Generating ability. Investment on assets has varied from Rs. 37338.8 million To Rs.74, 559.3 million from the year 1995 to the year 2003.
5. The inventory turnover ratio of the NEA is 7.72 times on average. It varied from 7.50 times in 1995 to 11.30 times in 2003. It followed fluctuating trend for the study period during 1995 to 2003 . It showed that NEA's inventory management might be efficient.
6. On the average collection period of NEA is 9% the above table shows that there is no standard average collection period fixed by NEA . In discussion with NEA staff and looking at the financed document of NEA, the standard collection period cannot be found.
7. Profit and sales of NEA shows that the profit of NEA is not satisfactory . NEA is facing losses in recent year through their sale is increasing by year. The profit of NEA seems to be satisfactory from year 1996 to year 2001 after which it is declining and facing lose in year 2003. Though NEA is facing losses, it seems to be doing well in the sales of Electricity.
8. The return on total assets of NEA for the year 1995 is 2.42 percent, Which doesn't seem to be satisfactory. Though it showed little progress by the following year 1996 and 1997 as it increased to 3.66 and 4.16 percent respectively. The overall ratio analysis indicates relatively poor performance of NEA.

9. The result shows that the increasing tendency of debt is very high than equity. This indicates that the financial position of NEA is not in good position.
10. The Trend line of debt of debt and equity indicates that the increasing trending of debt is very high than the equity. The graph shows that the position of NEA is not satisfactory to cover its long-term debts as its equity is decreasing in proportion to its increment in debt.

Finally, she concluded on the following findings:

The Analysis of the study of financial position of NEA through the application of various financial and statistical tools provides a different kind of result. According to the analysis of assets and liabilities, the liquidity position of NEA sounds to be good. The average current ratio of NEA is 1.32. The current assets of NEA are greater the current liabilities through out a gears. This shows that the current assets can easily cover the current liabilities the organization. Current ratio less than 1 shows the negative symptoms in organizational performance. In such situation the liquidity position of the organization becomes poor.

NEA has invested huge amounts in purchase of fixed assets but the revenue generating ability of NEA is very low in comparison to the investment on fixed assets. The average fixed assets turnover ratio is 0.17 times which implies that there is no effective utilization of fixed assets.

It is therefore recommended that NEA should not invest much plant and other fixed assets without making proper cost beneficial and target analysis. When investment is made, effort should be given to the optimum utilization

of those assets within the fixed target so that it does not cause and constrain on the profit to the assets.

Ram Chandra Khatiwada (2007), in his thesis "*Financial Performance Analysis of Butwal Power Company*" examines the financial strengths and weaknesses of BPC based upon its financial ratios, income and expenditure analysis and least square trend analysis. The following are the objectives of the study.

-) To highlight about objective, policy, growth etc of BPC.
-) To study the trend of financial performance and analyze the related financial indicators.
-) To analyze financial strength and weakness of BPC.
-) To provide recommendation and suggestions on the basis of study and findings.

In his Thesis Ram Chandra Khatiwada (2007) indentified that:-

1. The current ratio of BPC of first 3 fiscal years is very high with respect to the normal standard 2 and the later 3 years is hear to normal standard it doesn't seem to be below normal .
2. The quick ratio of the company seems to be inconsistent and remains increasing and decreasing trend. The quick ratio of first 3 fiscal years is very high with respect to the normal standard 1:1 and the later 3 year are slightly higher than the normal standard 1:1 . It doesn't seem to be below normal standard.
3. The information reflects that the average college period of BPC is larger and tells that debtors are converted into cash late. This can effect proper functioning of the company and creates cash shortage

in the company. This also affects profitability of the company adversely.

4. The total assets turnover ratio of BPC in the study period is not good. It shows the increment in ratio but increment is not satisfactory. To improve the total assets turnover ratio BPC should utilize its total assets efficiently.
5. The net profit ratio of BPC seems to be better. The average standard net profit ratio is 12%. This reflects the BPC is in better condition in its profitability with efficient management.
6. The return on shareholders equity of BPC is not consistent over the study period. It ranges from the height 17.49% to the lowest (2.92%). The ratio in the first three years is more similar and last two years is more. The return of last two years is much satisfactory to the shareholders.
7. The Correlation coefficient and probable error of coefficient between total sales and net profit after tax of BPC remained 0.93 and 0.04 respectively. The correlation coefficient of the total sales and the net profit after tax is > 6 times the probable error i.e. $0.93 > 6 * 0.04$. It indicates that the positive correlation between total sales and net profit after tax is at significant level.
8. According to the above trend equation the forecasted values of net profit after tax for coming 6 years would be Rs. 178,578.8, Rs. 193,548.0, Rs. 208,517.3, Rs. 223,486.5, Rs. 238,455.7 and Rs. 253,424.9 thousand respectively.

Finally, he concluded on the following findings:

With respect to ratio analysis, 5 different categories have been used with their sub division. According to those ratios the following fact has been discovered:

The current ratio indicates that the company is using excessive currents in the 3 fiscal years. It is maintaining the current ratio in the later 3 years near to its normal standard. It reveals that the company is in perfect liquidity position. The firm is in strong credibility position. The quick ratio indicates that the company is using excessive quick assets in the first 3 fiscal years. It is maintaining the quick ratio in the later 3 years near to its normal standard. It reveals that the company is in good liquidity position that helps in the formation of strong credibility.

Increasing trend of inventory turnover ratio indicates that inventory management of the company is being improved in the study period and is in the satisfactory condition. The debtor's turnover ratio reflects that debtors turnover ratio of BPC is fluctuation each year but is better in last two years study period than the first two years. The average collection period reflects that the average collection period of BPC larger and tells that debtors are converted into cash late. This can effect proper functioning of the company and creates cash shortage in the company. This also affects profitabiaty of The Company adversely.

Fixed assets turnover ratio shows that BPC utilized its fixed assets in better way in later years in comparison to previous year except in 2059/60. Increment in fixed assets turnover ratio indicates the improved work efficiency and financial condition. It shows the efficiency of a concern on utilizing its fixed assets. The total assets turnover ratio of BPC in the study

period is not good. It shows the increment in ratio but increment is not satisfactory. Higher ratio indicates better utilization of total assets of the organization. To improve the total assets turnover ratio BPC should utilize its total efficiently. But the company is improving efficiently utilization of total assets.

The capital employed ratio of BPC in the study period does not seem good. There is some increment in the ratio in later years but still not enough to access a good profit, higher profitability in the company. To achieve higher profit utilization and good management of capital is necessary.

The operating profit ratios of BPC seem to be better. Generally a 40% ratio is supposed good and only in the year 2059/60 less than 40%. It is due to the external factor. The higher ratio indicates the efficient condition of the company. The net profit ratio of BPC seems to be better. The average standard net profit ratio is 12%. This reflects the Butwal power company is in better condition in its profitability with efficient management. The operating expenses ratio of BPC seems a bit high in the year 2056/57, 2057/58 and 2058/59. In these years the company sustained by its non operating income. It shows less profitability of the company.

The return on total assets of BPC is fluctuating more in the study period from negative value to a highest as 14.9%. The ratio in the last two years is better than the other years. A high ratio shows the better profitability of the organization and vice versa. The return on shareholders of BPC is not consistent over the study period. It ranges from the highest 17.49% to the lowest (2.92%). The ratio in the first three year is similar and the last two years is more. Higher ratio shows higher return to the shareholders and vice

versa and negative ratio shows the loss of company and of shareholders. The return of last two years is much satisfactory to the shareholders.

The non operating income to total income ratio shows in 2060/61 the non operating income took a high percentage in the total income. Likewise in the year 2057/58 and 2061/62, the non operating income covers a high percentage in total income. It explains that the income of the company is diversified a lot which can help the company to sustain in hard times.

Times non operating income to operating income ratio shows that the non operating income to operating income of BPC in the study period a lot from 0.15% to 80% which shows non consistency in the ratio, but it tries to tell that non operating income of BPC is also very significant because the mean of ratio is 25% and around 25% of operating income is non operating income.

The operating expenses to total expenses ratio of BPC is 55% in an average, which implies that more than half of the expenses are done for the operation of the office which directly helps for the generation of income. Thus 45% of total expenses is attributed to generation of non-operating income.

Pushpa Ram Khadka (2007), in his thesis "*Profit Planning in Hydropower industry*" examines how far the different functional budgets were being applied as tool for profit planning in BPC. The major objectives of the study are as follows:

-) To analyze the various functional budgets those are prepared in BPC.
-) To examine the present planning adopted by this company.
-) To evaluate the variance between targets and actual of the BPC.

-) To examine the forecasting approach of BPC.
-) To study the fund management system of BPC.
-) To draw a picture of planning diversification of BPC.
-) To analyze the financial performance of BPC.
-) To provide necessary suggestions if any to the studied organization upon the findings of the study.

In his Thesis Pushpa Ram Khadka (2007) indentified that:-

1. The table showing sales target and achievement of fiscal year 2054/055 to 2062/63 in which , the comparison of sales target and achievement are shown . The target has been achieved from 86.36 percent to 115.29 percent. Actual sales achievements are 95.08 percent on an average.
2. From the analysis of sales, the following points can be drawn. :-
 - I. The target sales are highly ambitious so actual sales is less than target sales except two fiscal year.
 - II. The mean of target sales is higher than actual sales.
 - III. The actual sales are highly fluctuated .
 - IV. The s.d. of actual sales is less than target sales.
 - V. There is highly positive correlation between target and actual sales.
 - VI. The correlation coefficient is less significant or the budgeted sales coefficient is more than actual sales .
 - VII. Straight line trend shows positive sales figure for future.
3. To conclude the production budget of BPC following points can be stated: -

- I. BPC prepare short term production budget in annual figure . It does not prepare the production budget by interim periods and it also does not prepare the long term production plan .
 - II. The production budget preparation is based on sales budget.
 - III. % of production achievement is satisfactory with budgeted production.
 - IV. The production budget is more variable than actual production.
 - V. Regression equation shows that there is positive relationship between budgeted production and actual production.
 - VI. There is of positive correlation between actual sales and production.
4. CR of BPC is between 1.32 to 4.79 .
 5. BPC has 1.18 to 4.68 quick ratios. It means company can easily meet all the current claim.
 6. BPC has 29.19% , 35.38% , 15.47% ,15.15% , 18.07% , 31.38% , 22.60% ,20.21% and 41.44% ratio from 2054/055 and 2062/63 respectively.
 7. Gross profit margin on sales is varying from 72.67% to 20.49% .
 8. A Low net profit margin has the opposite implications . Net profit margin range between fiscal year 2054/55 to 2062/63 is 79.84 % to 41.62% .
 9. Return on shareholder's equity is between -3.28% to 23.84%.
 - 10.Greater eps in favorable EPS is between -5.36% to 34.37% from F/Y 2054/055 to 2062/063.
 - 11.Owner's get greater dividend in case of greater DPS ratio. DPS range between 5% to 40% over the year.

Finally, he concluded on the following findings:

With respect to the normal standard of Quick Ratio, later 3 years are slightly higher than the normal standard of 1:1. The inventory turnover ratio of the company seems to be in increasing trend except in the year 2059/60 where a sale is affected in the years. Increasing trend of the ratio indicates that inventory mgmt. of the company is being improved in the study period and is in the satisfactory condition.

Debtors' turnover ratio of BPC is fluctuating each year but is better in last two years study period than the first two years. The average collection period of BPC is larger and tells that debtors are converted into cash late. This can effect proper functioning of the company and creates cash shortage in the company. This also affects profitability of the company adversely.

Company utilized its fixed assets in better way in later years in comparison to previous years expect in 2059/60. Increase meant in fixed assets turn over ratio indicates the improved work efficiency and financial condition. The total assets turnover ratio of BPC in the study period is not good. It shows the increment in ratio but increment is not satisfactory. The capital employed ratio BPC in the study period does not seem to access a good profit .The operating profit ratio of BPC seems to be better. Generally a 40% ratio is supposed good and only in the years 2059/60 less than 40%. It is due to the external factor.

The net profit ratio of BPC seems to be better .The average standard net profit ratio is 12%. This reflects the Butwal Power Company is in better condition in its profitability with efficient management. The operating expenses ratio of BPC seems a bit high in the year 2056/57, 2057/58 and 2058/59.In these years the company sustained by its non operating income.

The return on total assets of BPC is fluctuating more in the study period from negative value to a highest as 14.9%. The ratio in the last two years is better than the other years. The return on shareholder equity of BPC is not consistent over the study period. It ranges from the highest 17.49% to the lowest 2.92%. The ratio in the first three years is similar and the last two year is more. The return of last two years is much satisfactory to the shareholders. The non operating income took high percentage in the total income the income of the company is diversified a lot which can help the company to sustain in hard times.

Sudeep Bahadur Shrestha,(1996), in his thesis “*Financing Power Development in Nepal - A case study of NEA*” points out that the power is a capital intensive sector for country like Nepal but there is no clear-cut policy for its development and its financing prior to the era of economic development. The general objectives of the study are to assess the financing of power sector with the following specific objectives.

-) To assess the financing on power development in historical prospective under different plan period.
-) To examine the capital structure of NEA and its sources of financing.
-) To identify problems of financing on power development.
-) To draw some policy implications on financing power development.
-) To make an attempt to put forward some viable solution to overcome the existing problems of financing power development.

In his Thesis Sudeep Bahadur Shrestha (1996) indentified that:-

Energy is a vital necessity which is directly linked with energy resources, but it lies among the least developed groups in terms of energy consumption. According to world development report, 1994, the consumption of commercial energy in Nepal is 20 kg of oil equivalent (KOE) and its per capita energy consumption is 14 GJ according to the WEOS report of 1994.

The general energy scenario of Nepal reveals its greater dependency on traditional sources of energy i.e 92.30% in 1993/94, of which the share of fuel wood, agricultural residue and animal dung is 69.12%, 14.8%, and 8.21% respectively. In the same year, the commercial sources constitute 5.96% of petroleum product, 0.94% of coal and 0.9% of electricity. The commercial consumption of alternative sources of energy is still very low.

The energy consumption in total by different sector in 1999/94, reflects that the shares of domestic, industrial, commercial, transport, agriculture, other and non-energy sector constitute 91.5, 4.30, 1.32, 2.47, 0.67, 0.01 and 0.08 percent respectively.

Since all the commercial sources of energy, e.g. oil, coal, gas etc. except electricity has to be imported. They is affecting a great pressure on the balance of payment situation.

The topographical condition is highly favorable for the generation of hydropower in Nepal and its power potentiality, i.e. 2.27% of the world, occupies the second place after Brazil.

Nepal Electricity Authority (NEA) is the principle producer and supplier of power in Nepal established in August 1985 (B.S.2042Bhadra 1) for the proper, management of electricity supply by making the production,

transmission and distribution of electricity capable, dependable and accessible to all.

The main source of revenue of NEA is the net sale of electricity, but for some year (1989-1993) it fails to cover the operation and maintenance expenses. On the expenditure side, the operation and maintenance and general expenses are the main, The increasing expenses on power purchase show the deficiency of NEA's power production.

2.3 Review of Related Journals and Articles

Hydropower development has always been a vital issue for lots of Nepalese writers and researchers. This section is devoted to the review of some major articles published in newspapers, journals, reports and magazines and, articles circulated in websites concerning state and problems of hydropower development in the country and, financial performance of IPP or NEA.

Uttam Maharjan (2002), in his article "*Hydropower Development- Targeting the Poor*" has said that the projects run by foreign parties are not benefiting the country in real terms. The PPAs reached with them have far-reaching and long-term implications. The electricity tariff of the country is among the highest in the world. Moreover, donors also impose high tariffs as a precondition for financing hydel projects. Foreign aid, which is invested in hydel projects, often comes along with harsh conditions. There is no transparency, accountability, effective monitoring mechanism and financial discipline in such projects. Rather, corruption and maladministration would rule the roost.

Maharjan has added that there is often delay in hydel projects and the cost also tends to shoot up vis-a-vis contract amounts. Nepalese rupee devaluation, additional works and the likes are cited as causes for high costs. Such arguments do not hold water since the contracts undertaken by competent and experienced foreign parties already take into account all such factors as may influence the projects. Viewed thus, only slight price adjustments may crop up. In contrast, small and medium-scale hydel projects are suitable for the country, since low capital and indigenous expertise suffice to operate such projects. Besides, these projects also answer the needs of local people and enlist their participation for quality services.

B.H. Nepal, in his article “Managing Nepalese Waters” has presented two logics to verify the impossibility for Nepal alone to harness water for hydropower in a large scale. First, it has been estimated that the cost for the production of Nepal's capacity of 42,000 MW would come roughly to US\$ 80.00 billion and for 25,000 MW; it would be around US\$ 50,000.00 billion. And second, Nepal's Fiscal Budget for 2004/2005 was just nearly US\$ 1.6 billion. He has also mentioned that due to poor motivation of the local investors, Nepal's cheapest projects like Upper Tamakoshi have been wasted. The Norwegian Feasibility Study reveals that nearly US\$ 300.00 million is necessary for the project including 65 KM road black topping, 33 KM of which is to be newly constructed to connect the site. The cost per unit thus comes nearly 89 Nepali Paisa. Money can be allocated from: the remittances of the Nepalese workers abroad, banks, provident fund reserves, etc., if the government has zeal (B.H. Nepal, 8 April/June 2005, South Asian Journal).

S B Pun (2006), in his article “*Ordinance for the High Rs. 1,280/ Crores Stakes*” has mentioned that BPC is fortunate that it does not have the debt

burden that other IPP carry. However, there is no doubt that other “IPP cows” are not far behind in distributing the not-so-modest dividends. The 2001 hydropower development policy does stress on the need “...to utilize labor and skills of Nepal ...” and mobilize “internal capital market for investment in power sector.” Like many of the other plans and policies of Nepal, these are sadly in the paper only. However, as indicated by the flurry of under-10 Mw hydropower plants under construction/commissioned, the Nepalese entrepreneurs have demonstrated that they can mobilize the internal capital market and that they can implement smaller projects using local labor and skills. This needs to be appreciated very much particularly because of the prevailing difficult environment that our country is undergoing.

Sumit Pokhrel (2006), in his article “*Nepal’s Hydropower Dream: Are We Prepared for Nightmares?*” has criticized that electricity is expensive, but it is not because of high production cost, instead it is because of various policy and regulatory failures. Government controlled NEA has sole authority on transmission and distribution of electricity in Nepal. In spite of selling most expensive electricity in the region to its consumers, in 2006 alone, the NEA has suffered a loss of Rs 2.47 billion with cumulative loss of Rs 7 billion by this year.

Pokhrel has further said that The Government of Nepal lacks financial capacity to fulfill ever increasing energy demand. There is a need to promote Nepalese private sector investment in hydro-power sector by creating conducive investment environment- not to forget the increasing foreign remittance which accounts for approx 12% of GDP, if only could be canalized in construction of micro, small, medium hydro-power to meet electricity demand and promotion of end-use will stimulate national

economy. Healthy domestic corporate-cooperative partnership could be sought to realize equitable water resource use benefits without surrendering the control of valuable natural resources to the foreign forces.

Ramesh C Arya (2007), in his article “*Revitalizing Small Hydropower in Nepal*” has said that generation of affordable and cheaper electricity from hydropower projects and supply to rural areas is the main challenge of Nepal. Hydropower plants, though in smaller scale, are capital intensive. Due to the poor accessibility and rugged terrain, transportation of materials and equipment is quite expensive. Dispersed villages and settlements in hilly and mountain areas make electrification process costly. Due to the high electricity tariff and low affordability of the village people, electrification in rural Nepal is very slow despite high demand .

Arya has added that NEA's average electricity tariff is Rs. 6.81, which is among the highest in the world. This is mainly because of high cost of construction and the high price of power purchased from Khimti and Bhotekoshi power projects, which has to be paid for in dollars. In contrast, the power from the 20 MW Chilime and 3 MW Piluwa Khola, both of which have been constructed by local investment, is much cheaper. NEA purchases power from Nepalese companies at Rs 3 per unit in the wet season and Rs 4.25 per unit in the dry season. He believes that dependence on imported power requirements may no longer be needed and; we will be exporting hydropower after five years as many small hydropower projects have been started by the Nepalese themselves and they have received support from international organizations.

Bikash Pandey (2003), in his article "*People power*" has pointed out three main reasons why locally designed projects are less expensive:

- The cost of capital borrowed from local banks is at its lowest point in many years.
- Developers had complete flexibility in where they source their equipment and how they pick contractors, and they can get the best prices.
- Smaller projects mean fewer technical complications and the ability to breakdown contracts into small components that could be bid out among a large number of competitive Nepali, Indian and Chinese companies.

Pandey has added that besides being cheaper, local investments also benefit the national economy through much stronger backward linkages in construction and manufacturing. Usually, it is only the equipment (25-40 percent of total cost) which has to be imported from overseas. Today, projects like Piluwa and Chilime are living proof that the paradigm shifts in Nepali hydropower planning have brought real change. These and other projects have extensive involvement of both in-country financial institutions and technical manpower. And the beauty is their cost of electricity generation is \$1,500 per kW, less than half that of larger aid-funded projects.

Prachar Pradhan, in his article "Challenges and Issues on the Domestic Hydropower Projects and Prospective on Export Oriented Hydropower Projects" has said that the challenges lie in developing cheap and reliable hydropower projects so as to keep the tariff within the reach of everyone. The basic infrastructure is not well developed; often includes infrastructures such as log approach roads, transmission lines and so on. The majority of equipment and materials also have to be imported, which requires foreign currency and transportation overload for a long distance from the port. The

fact that major share of the financing is from external loans and investments which are to be paid back in foreign currency; escalates the tariff further.

Pradhan has added that the cost of development of hydropower projects could be reduced substantially only with the effort of national technicians, local manufacturers and contractors. The government policy should be formulated to encourage national technician and contractors by reducing the role of expatriate consultants and contractors. Local financing institutions should be mobilized for financing small and medium scale hydropower projects. Foreign consultants' input should be minimized in small and medium analysis.

2.4 Review of Related Acts and Plans

2.4.1 “Electricity Development Policy-2058”

Government of Nepal envisaged achieving the following by 2007 in its “Electricity Development Policy-2058”:

-) A dominant private sector contributing 75 percent of total investment in hydropower.
-) Boosting of industrial consumption's by 125 percent.
-) Establishment of power development fund and infrastructure development bank.
-) Boosting of hydro capacity to meet a demand of 820 MW of which 70 MW to be export.
-) Privatization of NEA.

“Electricity Development Policy-2058” is imposed with the following objectives:

-) To utilize the existing water resources of the country and produce electricity at a low cost.
-) To make the electricity service dependable, reliable, and extend qualitative service within the whole kingdom at a reasonable rate.
-) To tie up the electrification with the economic activities.
-) To extend the rural electrification in order to support rural economic development.
-) To develop hydropower as an exportable commodity.

“Electricity Development Policy-2058” adopts the following policies to achieve above objectives:

-) Efforts shall be made to maximize the use of country’ hydropower potential in order to meet the domestic demand of electricity.
-) Construction and implementation of hydropower projects shall be encouraged to promote on the principles of build-operate-own transfer (BOOT).
-) For making the electricity service dependable, reliable and extension of qualitative service delivery within the kingdom at reasonable cost; the existing public sector institutions shall be restructured to promote the participation by creating competitive environment of community/ corporations, institutions, local agencies and private sector in hydropower production, transmission and distribution.
-) Small and medium hydropower projects shall be developed and promoted for domestic use in order to strengthen the situation of domestic power

supply. The priority shall be given to develop hydropower projects on a competitive basis suitable to the electricity.

-) The hydropower projects shall be identified for export purposes. The private sector shall export the electricity by developing such projects.
-) The major multipurpose storage projects shall be developed in a way to render the maximum down stream benefit to the country.
-) The electrification program in the rural areas shall be encouraged.
-) The rural electrification program shall be expanded in order to make the electricity services available to maximum people. A “Rural Fund Electrification” shall be established for this purpose.
-) The rural electrification development program shall be based on mobilization of people’ participation.
-) To deliver reliable and dependable electricity services and, make it easily available to consumers proper attention shall be given to safeguard their interests.
-) For supplying the electrical energy at a reasonable rate, the electricity tariff fixations process shall be made transparent and reasonable.
-) The unauthorized leakage of electricity shall be controlled. For this purpose necessary technical measures shall be adopted and legal arrangements shall be formulated. Besides these measures, emphasis shall be given to mobilize people participation to control the leakages.
-) Incentives shall be provided for the proper utilization of electrical energy. In this context, incentives shall be provided for the use of electrical energy for village water supply, irrigation, industry and tourism sectors when electricity demand is low (when supply is in excess of demand).

-) The appropriate incentive provisions shall be made to attract national and foreign investment for the development of hydropower and transparent process shall be followed.
-) Capital market shall be operated for investment in the electricity sector.
-) The use of local labor and skill shall be given priority in implementing the hydropower projects.
-) The industry producing the construction materials and equipments to be used in the electricity sector shall be encouraged to develop the industry.
-) Proper Arrangements shall be made to cover the risks arising in hydropower projects.
-) Arrangements shall be made to provide appropriate benefits at the local level while operating hydropower projects.
-) The adverse effects on environment shall be minimized caused due to the development and operation of hydropower projects and proper arrangements shall be made to resettle the displaced families.
-) Hydropower shall be developed to replace the biomass and thermal energy in order to contribute towards environmental conservation.
-) Regarding multi-purpose projects, the government could become a partner with private sector looking at the possibility of irrigation development.

2.4.2 Review of Ninth Five Year Plan

According to the population consensus 2058 BS, by the end of ninth five year plan about 40% of the total population is benefited by the electricity. The 40% includes 33% supplied by national grid and 7% from alternative energy (solar, bio energy etc.). At the end of the ninth five year plan 58 municipalities and about 1600 VDCs have electrification on all 75 districts.

At the end of ninth five year plan, the pick hour demand has reached to 426 MV. Power consumption per individual is 60 KW, and average price per unit is Rs. 6.81 at the end of ninth five year plan.

2.4.3 Tenth Five Year Plan (Electricity Development)

In tenth five year plan, to reduce the poverty significantly, the following objectives are set:

-) By using available water resources low cost electricity will be produced.
-) A qualitative and reliable electricity service will be expanded to facilitate financial activities.
-) Rural electrification will be boost to facilitate rural economy.
-) Electricity will be developed as an exportable product.

To fulfill the aforesaid objectives, the government and private sector will be active for the unilateral or bilateral project.

CHAPTER III

3 RESEARCH METHODOLOGY

3.1 Introduction

Research is a systematic and organized effort to investigate a specific problem that needs a solution. This process of investigation involves a series of well thought out activities of gathering, recording, analyzing and interpreting the data with a purpose of finding answers to the problem. So research is an on going and ever growing activity. It is done not only to solve a problem existing in the work setting, but also to add or continue to the general body of knowledge in a particular area of interest. Research Methodology is the way to solve systematically about the research problem (Wolf and Pant, 2005:4).

A suitable and simple research methodology is followed in order to achieve the stated objectives of the study and as well as to make it easier in visualizing the total study clearly. This chapter includes research design, sources and types of data, data gathering instruments, and procedures and tools for analysis.

3.2 Research Design

Research design is the plan, structure and strategy of the investigation conceived so as to obtain answers to research questions. Basically, the research design has two purposes. The first is to answer the research question and second is to control variance. A research design is the plan of attack: what approach to the problem will be taken? What methods will be used? and what strategies will be most effective (Wolf and Pant, 2005 : 92)?

This research design is basically the comparative evaluation of BPC. Descriptive and analytical approaches were used to evaluate the financial performance of this IPP. Descriptive approach is utilized for conceptualization, problem identification, conclusion and suggestion of the study whereas analytical approach will be followed for the presentation and analysis of data. The data have been analyzed on the basis of standard financial formulas used in the books of financial management.

3.3 Power Plants under study

The study as directed towards evaluation of financial performance of IPP has a population of 12 IPP currently in operation. However, only three of them are listed in the Nepal stock exchange (NEPSE): BPC, CHPCL and NHPC. The sample of one IPP is taken in accordance to their price potency in the NEPSE.

This analytical study of performance evaluation is based on the financial statements of BPC, from fiscal year 2000/01 to 2006/07. Thus the period covered in the study is 7 years of BPC.

3.4 Types and Sources of Data

The main sources of data for the purpose of this study are the published financial statements of BPC. The study is thus mainly based on the secondary data. It constitutes mostly the annual reports, which comprises balance sheet and profit and loss account statement. Information has also been supplemented from various publication of NEA.

Though the study basically covers the secondary data, however, in some cases primary data were also obtained through conversation with the

engineers and managerial officials of BPC. All other available published and unpublished materials concerning the study as well as some journal abstracts have also been used. In addition to that, a number of relevant websites were visited to ensure the availability of information across borders regarding the operation of IPP.

3.5 Research Variables

The research variables are mainly related with the financial statements of BPC. Profit and loss account, balance sheet, cash flow statement and time period are the main research variables of the study. These variables are measured in terms of various components of ratios.

3.6 Data Processing

The data has been processed through editing, coding and classification of the collected data. According to the nature of data, they have been inserted in meaningful tables. Presented data have been analyzed and interpreted using various financial and statistical tools.

3.7 Tools for Analysis

3.7.1 Financial Tools

Financial tools are those, which are used for the analysis and interpretation of financial data. They attempt to explore the financial state of a business and convey the strengths and weaknesses of its financial policies and strategies. Ratio analysis is used as the basic tool for this study in order to summarize the quantities of financial data and to make quantitative judgments about the companies' financial performance. The importance of ratio analysis lies in the fact that it presents facts on a comparative basis and

enables the drawing of inferences regarding the performance of a company (Khan and Jain, 1999: 4.33).

The following ratios are used for evaluating the performance of selected IPP.

I. Liquidity Ratios

Liquidity Ratios are used to judge the companies' ability to meet the short-term obligations. Short-term liquidity ratio involves the relationship between current assets and current liabilities. Two ratios are mainly used to measure the liquidity position (Weston and Brigham, 1987: 351).

Current Ratio (CR)

Current Ratio measures the liquidity position of the company. The standard current ratio should be 2:1 and it is also defined by the nature of the company. The current ratio is a measure of liquidity calculated by dividing the company's current assets by current assets.

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

Current assets include cash and those assets that can be converted into cash within a year. This study accumulates stock, current work-in-progress, debtors and receivable, cash and bank, and advance and deposit to produce the current assets. Similarly, creditors and payables, provisions, and advance and deposit have been pulled together to produce current liabilities.

Quick Ratio (QR)

The Quick Ratio is more accurate guide to measure the liquidity position of any company. Quick ratio establishes a relationship between quick or liquid

assets and current liabilities. Liquidity of an asset can be measured by its virtue of immediate conversion into cash without the loss of value. Quick assets comprise total current assets except prepaid expenses and stock of inventory. Generally a quick ratio of 1:1 (quick assets equal to current liabilities) is considered satisfactory as it means a company can easily meet all current claims.

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

Though advance and deposits are considered less liquid in accounting terms, in this study, they have been found to be convertible into cash quite simply. Therefore, only inventory has been left out of current assets to compute quick assets.

II. Activity / Efficiency/ Assets Management Ratios

Activity Ratios also called Efficiency or Assets Management Ratios indicate the speed with which assets are being converted or turned over into sales. Activity ratios involve comparison between the level of sales and investment of various assets. Funds of creditors and owners are invested in various assets to generate sales and profits. The better is the management of assets, the larger is the amount of sales. The activity ratios are employed to evaluate the efficiency with which company manages and utilizes its assets. A proper balance between sales and assets generally reflects that assets are managed well (Pandey, 1999: 123).

Fixed Asset Turnover Ratio (FATOR)

Fixed Assets Turnover Ratio measures the efficiency with which the company is utilizing its investment in its various net fixed assets. The ratio

expresses that a rupee of investment in a fixed asset generates the resulted sale. Generally, high fixed assets turnover ratio indicates efficient utilization of fixed assets while inefficiency in utilization is shown by low fixed turnover ratio.

$$\text{Fixed Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Net Fixed Assets}}$$

Net fixed assets are defined as the gross fixed assets minus depreciation. This study accumulates fixed assets, capital work-in-progress and investment in new project to produce the net fixed assets.

Total Asset Turnover Ratio (TATOR)

Total Assets Turnover Ratio shows the relationship between sales and total assets. It indicates the sales generated per rupee of investment in the total assets. Generally, higher turnover ratios show efficiency in utilization of companies' scarce resources and vice versa.

$$\text{Total Assets Turnover Ratio} = \frac{\text{Sales}}{\text{Total Assets}}$$

Total assets constitute the fixed assets as well as current assets and investment of the company. This study accumulates fixed assets, capital work-in-progress, investment in new project, and current assets to produce the net current assets.

Inventory Turnover Ratio (ITR)

The Inventory or Stock Turnover Ratio indicates the efficiency of the companies' inventory management. It shows how rapidly the inventory is turning into receivable through sales. Generally, high inventory turnover is

the indication of good inventory management. However, a relatively high inventory causes overly low level of inventory and result frequent stock-out and is costly for the company.

$$\text{Inventory Turnover Ratio} = \frac{\text{Sales}}{\text{Closing Inventory}}$$

Debtors Turnover Ratio (DTR)

The Debtors Turnover Ratio specifies the amount of transaction with debtors within a specified time period. This ratio indicates the velocity of debt collection of a company. In other words, it indicates the number of times average debtors are turned over during a year. Generally, high debtor's turnover is the indication of good receivable management.

$$\text{Debtors Turnover Ratio} = \frac{\text{Sales}}{\text{Closing Debtors}}$$

Average Collection Period (ACP)

The Average Collection Period provides the average turnover days receivable and outstanding, the average times it takes to convert them into cash. Short average collection period shows the timely payment of debt and long average collection period indicates inefficiency of the company in collection of receivables.

$$\text{Average Collection Period} = \frac{\text{Days in a Year}}{\text{Debtors Turnover Ratio}}$$

III. Leverage/ Capital Structure Ratio

The Leverage or Capital Structure Ratios may be defined as financial ratios which throw light on the long-term solvency of a firm as reflected in its ability to assure the long-term creditors with regard to: (i) periodic payment

of interest during the period of the loan and (ii) repayment of principal on maturity or in predetermined installments at the due dates. This ratio indicates the mix of fund provided by owners and lenders. As a general rule, there should be an appropriate mix of debt and owners' equity in financial mix of the companies' assets (Khan and Jain, 1999: 4.10).

BPC does not carry loan burden and therefore this study does not include calculations of the leverage ratios of BPC. This study accumulates short and long-term borrowings from banking and financial institutions, debentures/ bonds, and any other interest- bearing loan to produce total debt. High leverage ratios indicate greater financing by debt holders than those of equity holders. From the creditors' view point, high leverage ratios of the company is more risky to invest in, as its assets are already under claim of other lenders.

Debt- Equity Ratio (D/E Ratio)

Debt to Equity Ratio is calculated dividing total debts by total shareholders equity. This ratio shows the relationship between debt capital and equity capital.

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Shareholders Equity}}$$

This study accumulates equity and, reserve and surplus to produce shareholders equity.

Debt to Total Assets Ratio (DTAR).

Debt to Total Assets Ratio is calculated dividing total debts by total assets. This ratio shows the relationship between debt capital and total assets.

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

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

IV. Profitability Ratio

Profitability Ratios are a group of ratios showing the combined effects of liquidity, asset management, and debt management on operating results. They are the measures of a company's earning capacity and operation efficiency. Profitability ratios of the company can be calculated in relation to sales and in relation to investment. It is true that higher the profitability ratios better the financial position and vice versa (Weston and Brigham, 1987 : 249).

A company must earn sufficient amount of profit from its operation to survive and sustain in the future. Without profit no company can exist and the future of the company will be endangered. Therefore, profit is the ultimate outcome of any company. The following profitability ratios are used in this study.

Net Profit Ratio (NPR)

The Net Profit Ratio establishes the relationship between net profit and sales. The ratio measures the companies' ability to change each rupee sales into net profit. Sales constitute the fundamental dynamic force in a business enterprise. Without sufficient sales goods and services business may not be successful. The ratio of net profit to sales shows the profitability of corporations indicating that the only increase in sales does not mean anything unless it commands profit. From this ratio it can also be acquired the information of the total expenses incurred during a certain period of time.

$$\text{Net Profit Ratio} = \frac{\text{Net Profit After Tax}}{\text{Sales}}$$

Operating Expenses Ratio (OER)

The Operating Expenses Ratio is the yardstick of operating efficiency. It indicates the average aggregate variety in expenses, where some of the expenses may be increasing while some may be falling. This ratio throws light on managerial policies and programs. In general, higher operating ratio is inefficient due to higher operation cost in terms of sales. Lower operating ratio is favorable, as it will generate higher operating income, which will be sufficient to meet interest, dividend and other expenses of the company.

$$\text{Operating Expenses Ratio} = \frac{\text{Operating Expenses}}{\text{Sales}}$$

This study accumulates power plant expenses, distribution expenses and consultancy service expenses to produce operating expenses.

Return on Shareholders Equity (ROE)

Return on Shareholders Equity is the most commonly used ratio for measuring the return on owners' investment. It is the proportion of net income after tax to shareholders equity. Higher ROE is favorable as it indicates higher return for shareholders at each rupee of investment.

$$\text{Return on Shareholders Equity} = \frac{\text{Net Profit After Tax}}{\text{Shareholders Equity}}$$

Return on Total Asset (ROTA).

Return on Total Assets records the relationship between total assets and net profit. It is the proportion of net income after taxes plus interest expenses to total asset (total investment). The ROTA measures the profitability of all financial resources employed in the companies' assets. As the satisfactory level profit is one of the main objectives of the company, this ratio shows the extent to which this objective is being achieved. Higher ROTA shows higher earning of the company in terms of its total assets. Lower ROTA indicates unsound financial position due to low level of return.

$$\text{Return on Total Assets} = \frac{\text{Net Profit After Tax} + \text{Interest}}{\text{Total Assets}}$$

V. Invisibility Ratio

An analysis of Invisibility Ratio helps the investors to know the performance of the companies. These ratios give management an indication of what investors think of the companies' past performance and future prospects. If the companies' liquidity, profitability, leverage and utilization ratios are good, its market value ratios will be high and its stock price will probably be

as high as can be expected. The following invisibility ratios are used to test earning capacity of selected IPP.

Earning Per Share (EPS)

This ratio is calculated dividing net profit after taxes (EAT) by number of equity shares outstanding. The profitability of a company from the point of view of ordinary share holders is the earning per share (EPS). EPS calculations made over years indicate whether or not the companies' earning power on per share has changed over that period. EPS shows the amount of earning attributes to each equity share. If earning per share is high, market price of the share may be increased in the market and vice versa. High ratio shows the sound profitability position of the companies.

$$\text{Earning Per Share} = \frac{\text{Net Profit After Tax}}{\text{Number Of Shares Outstanding}}$$

Dividend Per Share (DPS)

This ratio can be obtained dividing total distributed dividend by number of equity shares outstanding. Dividend per share is the measure of profitability. This ratio shows the rupee earning actually distributed to common stock holders per share held by them. High ratio is favorable for the shareholders.

$$\text{Dividend Per Share} = \frac{\text{Total Dividend Distributed}}{\text{Number Of Shares Outstanding}}$$

Dividend Payout Ratio (DPR)

This ratio can be obtained dividing dividend per share by earning per share. It determines the position of per share dividend paid, out of per share earning. The higher ratio is better to the shareholders. It builds faithfulness of the investors towards the companies.

$$\text{Dividend Payout Ratio} = \frac{\text{Dividend Per Share}}{\text{Earning Per Share}}$$

3.7.2 Statistical Tools

Statistical tools present the relationship among certain variables based on past trend and help predict future values of one or more variable given the change in other associated variables. These tools are useful to researchers in order to draw liable financial conclusions from data available. The following statistical tools are used in this study for evaluating the performance of selected IPP.

I. Arithmetic Mean

An Average is a single value selected from a group of values to represent them in same way, which is supposed to stand for whole group of which it is a part, as typical of all the values in the group. Out of various measures of the central tendency, arithmetic mean is one of the useful tools applicable here. Arithmetic mean of a given set of observation is their sum divided by the number of observations. In general, if $X_1, X_2, X_3, \dots, X_n$ are the given observations and N being number of observations, then arithmetic mean usually denoted by \bar{X} is given by:

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{N}$$

II. Coefficient of Variation (CV)

Coefficient of Variation is the percentage variance in the mean, standard deviation being considered as the total variation in the mean. It is one of the relative measures of dispersion that is useful in comparing the amount of variation in data group with different mean. Coefficient of variation, denoted by CV is given by:

$$CV = \frac{s}{\bar{X}} \times 100\%$$

$$\text{Where, } s = \sqrt{\frac{\sum X^2}{n} - \frac{(\sum X)^2}{n^2}}$$

Comparing the variability of two distributions we compute the coefficient of variation for each distribution. A distribution with smaller CV is said to be more homogenous or uniform or less variable than other.

III. Co-efficient of Correlation (r)

It is a statistical tool for measuring the intensity of the magnitude of linear relationship between two series. Karl Pearson's Correlation between two variables/series X and Y is usually denoted by r and can be obtained by:

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

Where, N = Number of observation

$\sum X$ = Sum of observation in series X

$\sum Y$ = Sum of observation in series Y

$\sum X^2$ = Sum of squared observation in series X

$\sum Y^2$ = Sum of squared observation in series Y

$\sum XY$ = Sum of the product of observation in series X and Y

Value of r lies between -1 and +1, r=1 implies that there is a perfect correlation between the variables. The variables are said to be perfectly negatively correlated if r=-1 and, perfectly positively correlated if r=+1. If r=0, the variables are not correlated at all except other than in form of logarithm, quadratic or exponential.

IV. Probable Error of Correlation Coefficient (PE)

Probable Error of Correlation Coefficient is an old measure of testing the reliability of an observed value of correlation coefficient. It is calculated to find the extent to which correlation coefficient depends upon the condition of random sample. Probable error of correlation coefficient denoted by PE(r) is obtained by:

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

Where, $\sqrt{\frac{1 - r^2}{N}}$ = Standard Error

Reason for taking 0.6745 is that in a normal distribution, 50% of observations lie in the range ± 0.6745

PE is used to test if an observed value of sample correlation coefficient is significant of any correlation in the population. If $r > 6$ PE, correlation is significant otherwise not.

V. Least Square Linear Trend

Trend Analysis is a very useful and commonly applied tool to forecast the future event in quantitative term, on the basis of the tendencies in the dependent variable in the past period. The straight line trend implies that irrespective of the seasonal and cyclical as well as irregular fluctuation, the trend value increase by absolute amount per unit of time. The linear trend values from a series in arithmetic progression.

Mathematically $Y = Xa + bX$

Where, Y = value of the dependent value

a = Y -intercept

b = slope of the trend line

X = value of the independent value

Normal equations fitting above equation are:

$$\sum Y = \sum Xa + \sum bX$$

$$\sum XY = \sum Xa + \sum bX^2$$

Since, $\sum X = 0$, $a = \frac{\sum Y}{N}$ and $b = \frac{\sum XY}{\sum X^2}$

VI. Chi-Square Test

The Chi-square (χ^2) test is designed to work with nominal data. It provides the researcher with a mathematical way of examining a classification table to see whether the arrangement of values within that table is unusual in some way. In performing this test, the mathematical process will be looking for a significant difference between the observed and expected frequencies. The chi-square test involves a comparison of two or more responding groups (Wolf and Pant, 2005: 287).

Since Chi-square test does not make any assumption about population parameters, it is called distribution free test. This test is good for normal or ordinal scale of measurement. Chi-square test is also used for analysis of quantitative variables, such as opinions of people, religious affiliation, smoking habits and so on. Chi-square test is a test that describes the magnitude of difference between observed and expected (theoretical) frequencies under certain assumptions. In other words, it describes the magnitude of the discrepancy between theory and observation (Sthapit, A.B., et. al., 2004: 333).

It is defined as:

$$\text{Chi-square, } \chi^2 = \sum \frac{(O - E)^2}{E}$$

Where, O = Observed Frequency

E = Expected Frequency

$$\text{Expected Frequencies} = \frac{RT \times CT}{N}$$

Where, N= Number of observations

RT= Row Total

CT= Column Total

Note: 5% level of significance have been used for all tests.

CHAPTER IV

4. PRESENTATION AND ANALYSIS OF DATA

In this chapter, the data have been analyzed and interpreted using financial and statistical tools following the research methodology dealt in the third chapter. This chapter is divided into three sub heads as presentation of data from secondary sources, presentation of the data from primary sources and major findings of the study.

4.1 Presentation of Data from Secondary Sources

This section includes the data related with the study from secondary sources. Secondary sources mean the data of the BPC derived from their Annual Reports; web pages and other already published sources. The presentation and analysis of these numerical data include ratio analysis and correlation analysis.

4.1.1 Liquidity Ratio

Liquidity Ratios are used to judge the companies' ability to meet the short-term obligations. These ratios involve the relationship between current assets and current liabilities and are measured by current ratio and quick ratio.

Current Ratio (CR)

Current Ratio measures the liquidity position of the company. The standard current ratio should be 2:1 and it is also defined by the nature of the company. The current ratio of different sampled years has been presented in the table 4.1 below.

Table 4.1
Calculation of Current Ratio

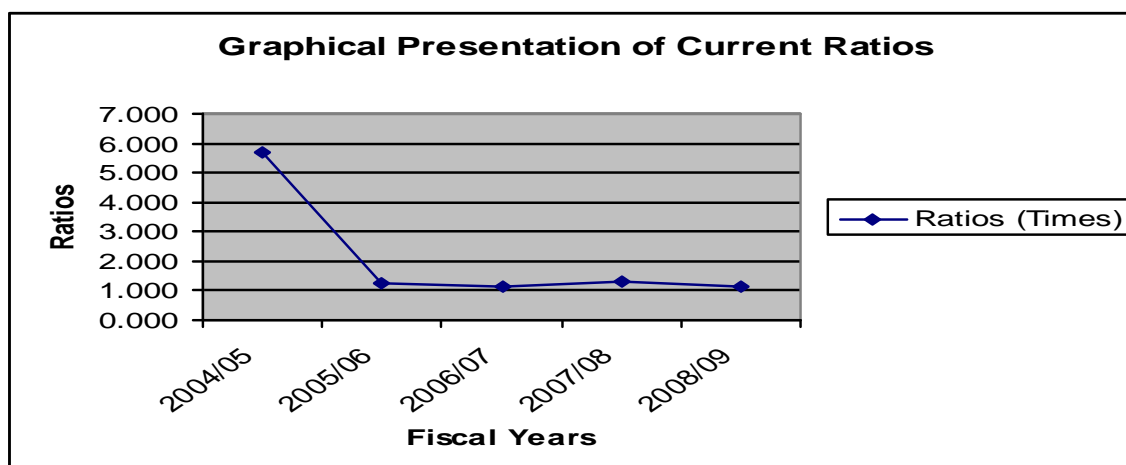
(In Thousand NRS.)

| Fiscal Year | Current Assets | Current Liabilities | Ratios (Times) |
|----------------------------------|-----------------------|----------------------------|-----------------------|
| 2004/05 | 335,582 | 58,710 | 5.716 |
| 2005/06 | 543,416 | 443,879 | 1.224 |
| 2006/07 | 670,674 | 587,408 | 1.142 |
| 2007/08 | 776,080 | 595,872 | 1.302 |
| 2008/09 | 802,170 | 717,933 | 1.117 |
| Mean (\bar{X}) | | | 2.100 |
| Standard Deviation (\dagger) | | | 2.022 |
| Coefficient of Variation (CV) % | | | 96.29 |

Source: *Annual Report of BPC*

Looking over the trend of current ratio of BPC over 5 years, it can be observed that other than initial one year, the company's current ratio has not remained satisfactory. Increased bank overdraft and creditors of BPC is the reason for decreased current ratio in last four years. Though BPC has a fluctuating trend of current ratio, its mean current ratio of 2.100 seems to be over than the conventional standard of 2:1 which suggests a sound liquidity position.

Figure 4.1



Quick Ratio (QR)

The Quick Ratio is more accurate guide to measure the liquidity position of any company. Generally a quick ratio of 1:1(quick assets equal to current liabilities) is considered satisfactory as it means a company can easily meet all current claims.

Table 4.2
Calculation of Quick Ratio

(In Thousand NRS.)

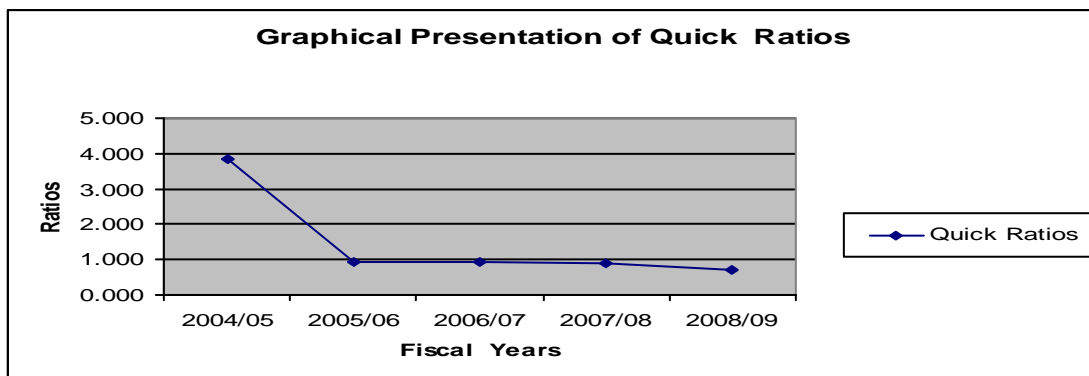
| Fiscal Year | Quick Assets | Current Liabilities | Ratios (Times) |
|--------------------------------|--------------|---------------------|----------------|
| 2004/05 | 224,638 | 58,710 | 3.826 |
| 2005/06 | 419,279 | 443,879 | 0.945 |
| 2006/07 | 539,211 | 587,408 | 0.918 |
| 2007/08 | 530,986 | 595,872 | 0.891 |
| 2008/09 | 498,796 | 717,933 | 0.695 |
| Mean (\bar{X}) | | | 1.455 |
| Standard Deviation() | | | 1.329 |
| Coefficient of Variation (CV)% | | | 91.36 |

Source: *Annual Report of BPC*

Above table reveals a fluctuating but satisfactory trend of quick ratio of BPC with a mean of 1.455, which reveals the inadequacy of resources to meet current obligations.

Advance and deposits has been observed to be volatile than other current assets of BPC which has been revealed by decreased CV in quick ratio to the CV in current ratio.

Figure 4.2



4.1.2 Activity/ Efficiency/ Assets Management Ratios

Activity ratios also called Efficiency or Assets Management Ratios indicate the speed with which assets are being converted or turned over into sales. A proper balance between sales and assets generally reflects that assets are managed well. The following activity ratios are used to judge the effectiveness of asset utilization in this study.

Fixed Assets Turnover Ratio (FATOR)

Fixed Assets Turnover Ratio measures the efficiency with which the company is utilizing its investment in its various net fixed assets. Generally, high fixed assets turnover ratio indicates efficient utilization of fixed assets while inefficiency in utilization is shown by low fixed turnover ratio.

Table 4.3

Calculation of Fixed Assets Turnover Ratio

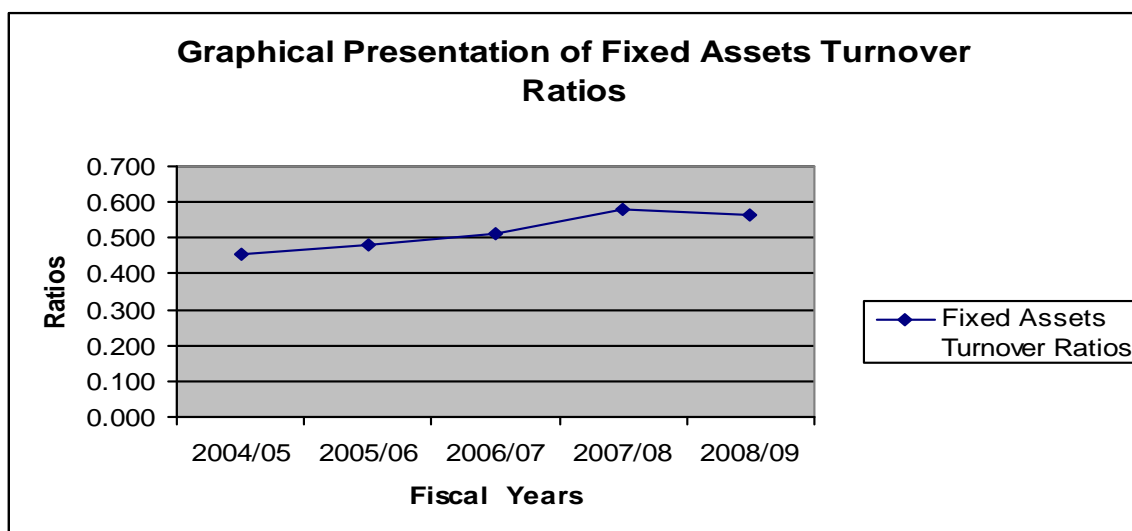
(In Thousand NRS.)

| Fiscal Year | Sales | Fixed Assets | Ratios (Times) |
|--------------------------------|---------|--------------|----------------|
| 2004/05 | 323,134 | 714,016 | 0.453 |
| 2005/06 | 358,419 | 743,605 | 0.482 |
| 2006/07 | 379,769 | 743,893 | 0.511 |
| 2007/08 | 421,687 | 725,742 | 0.581 |
| 2008/09 | 430,800 | 765,339 | 0.563 |
| Mean (\bar{X}) | | | 0.518 |
| Standard Deviation() | | | 0.054 |
| Coefficient of Variation (CV)% | | | 10.41 |

Source: *Annual Report of BPC*

We can find an increasing trend of sales and fluctuating trend of fixed assets, of BPC which also results in increasing trend of FATOR. BPC has used its fixed assets quite adequately; generating an overall mean sale of NRs. 0.518 out of each rupee invested in fixed assets.

Figure 4.3



Total Assets Turnover Ratio (TATOR)

Total Assets Turnover Ratio indicates the sales generated per rupee of investment in the total assets. Generally, higher turnover ratios show efficiency in utilization of companies' scarce resources and vice versa.

Table 4.4
Calculation of Total Assets Turnover Ratio

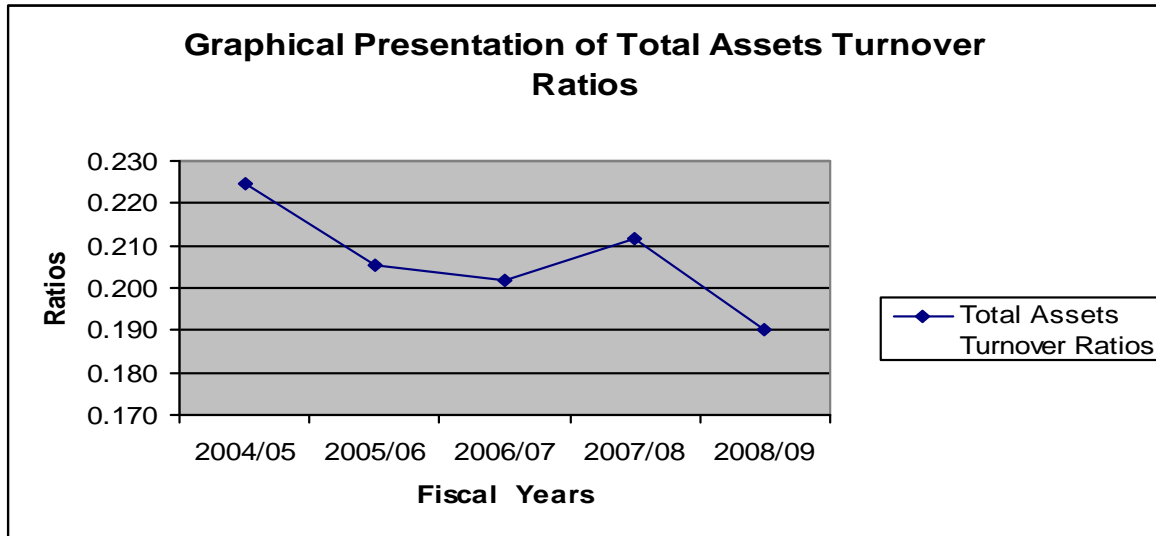
(In Thousand NRS.)

| Fiscal Year | Sales | Total Assets | Ratios (Times) |
|--------------------------------|--------------|---------------------|-----------------------|
| 2004/05 | 323,134 | 1,439,238 | 0.225 |
| 2005/06 | 358,419 | 1,744,447 | 0.205 |
| 2006/07 | 379,769 | 1,882,271 | 0.202 |
| 2007/08 | 421,687 | 1,991,692 | 0.212 |
| 2008/09 | 430,800 | 2,264,200 | 0.190 |
| Mean (\bar{X}) | | | 0.207 |
| Standard Deviation() | | | 0.013 |
| Coefficient of Variation (CV)% | | | 6.11 |

Source: *Annual Report of BPC*

Above table reveals a steady and satisfactory trend of TATOR of BPC with a mean of 0.207. Considering the results of FATOR and TATOR it can be concluded that BPC is utilizing its current assets efficiently, or in other words, it has adequately invested in current assets.

Figure 4.4



Inventory Turnover Ratio (ITR)

The Inventory or Stock Turnover Ratio indicates the efficiency of the companies' inventory management. Generally, high inventory turnover is the indication of good inventory management. However, a relatively high inventory turnover causes overly low level of inventory and result frequent stock-out and is costly for the company.

Table 4.5

Calculation of Inventory Turnover Ratio

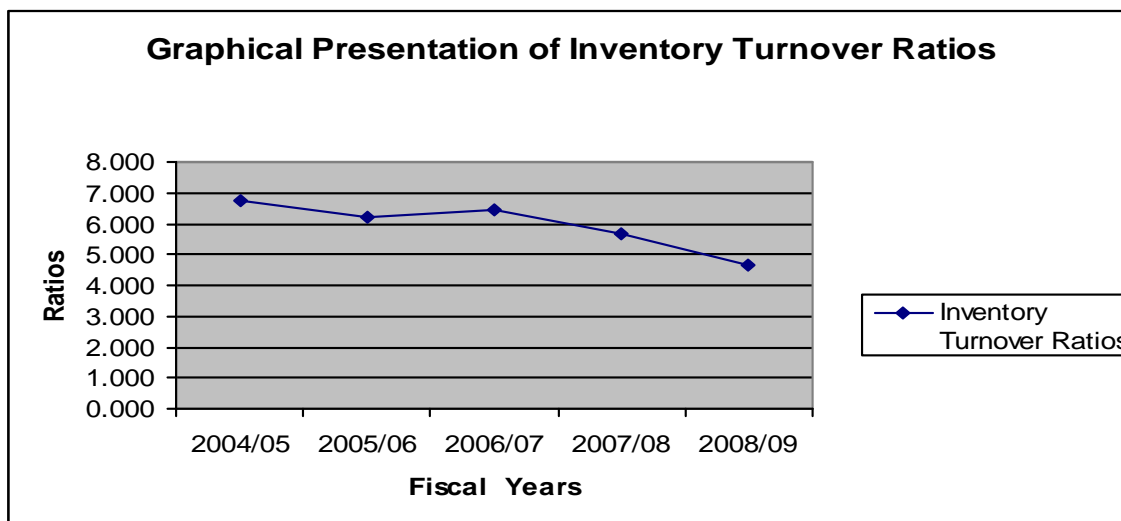
(In Thousand NRS.)

| Fiscal Year | Sales | Closing Stocks | Ratios (Times) |
|--------------------------------|---------|----------------|----------------|
| 2004/05 | 323,134 | 48,038 | 6.727 |
| 2005/06 | 358,419 | 57,623 | 6.220 |
| 2006/07 | 379,769 | 58,896 | 6.448 |
| 2007/08 | 421,687 | 74,647 | 5.649 |
| 2008/09 | 430,800 | 92,723 | 4.646 |
| Mean (\bar{X}) | | | 5.938 |
| Standard Deviation() | | | 0.824 |
| Coefficient of Variation (CV)% | | | 13.87 |

Source: *Annual Report of BPC*

The mean ITR of BPC (5.938) seems to be very trivial and unsatisfactory. But the risk of running out of inventory for BPC seems to be very much reduced by the stable trend of ITR shown by a low CV of 13.87%.

Figure 4.5



Debtors Turnover Ratio (DTR)

The Debtors Turnover Ratio specifies the amount of transaction with debtors within a specified time period. This ratio indicates the velocity of debt collection of a company. In other words, it indicates the number of times average debtors are turned over during a year. Generally, high debtor's turnover is the indication of good receivable management.

Table 4.6

Calculation of Debtors Turnover Ratio

(In Thousand NRS.)

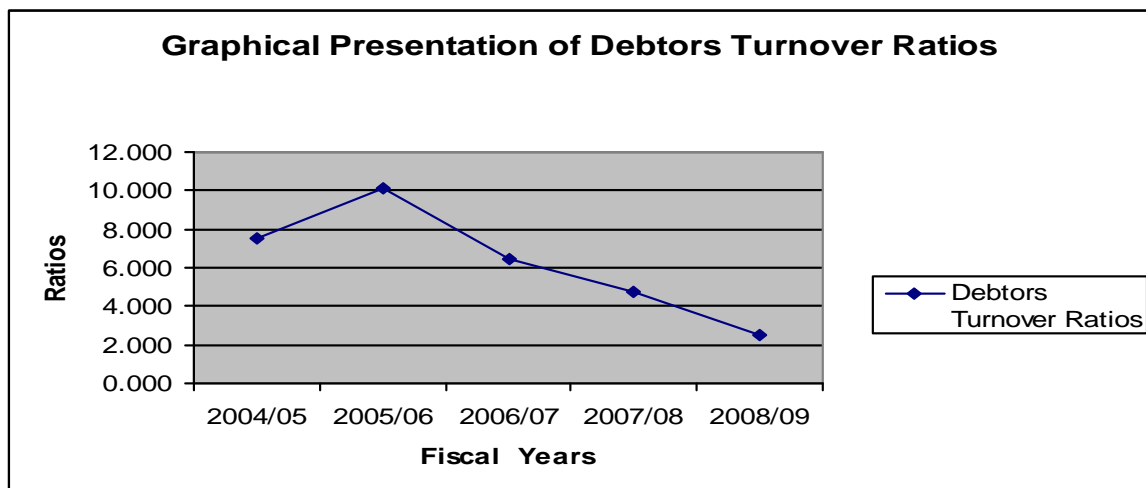
| Fiscal Year | Sales | Closing Debtors | Ratios (Times) |
|--------------------|--------------|------------------------|-----------------------|
| 2004/05 | 323,134 | 42,921 | 7.529 |
| 2005/06 | 358,419 | 35,512 | 10.093 |
| 2006/07 | 379,769 | 58,918 | 6.446 |
| 2007/08 | 421,687 | 88,407 | 4.770 |

| | | | |
|--------------------------------|---------|---------|-------|
| 2008/09 | 430,800 | 171,359 | 2.514 |
| Mean (\bar{X}) | | | 6.270 |
| Standard Deviation() | | | 2.854 |
| Coefficient of Variation (CV)% | | | 45.52 |

Source: *Annual Report of BPC*

Above table reveals a fluctuating trend of DTR of BPC. Due to considerably increased amount of debtors, the DTR of BPC has dropped to 2.514 after experiencing a high turnover three years ago. The CV with respect to DTR of BPC is 45.52%.

Figure 4.6



Average Collection Period (ACP)

The Average Collection Period provides the average turnover days receivable and outstanding, the average times it takes to convert them into cash. Short average collection period shows the timely payment of debt and long average collection period indicates inefficiency of the company in collection of receivables.

Table 4.7

Calculation of Average Collection Period

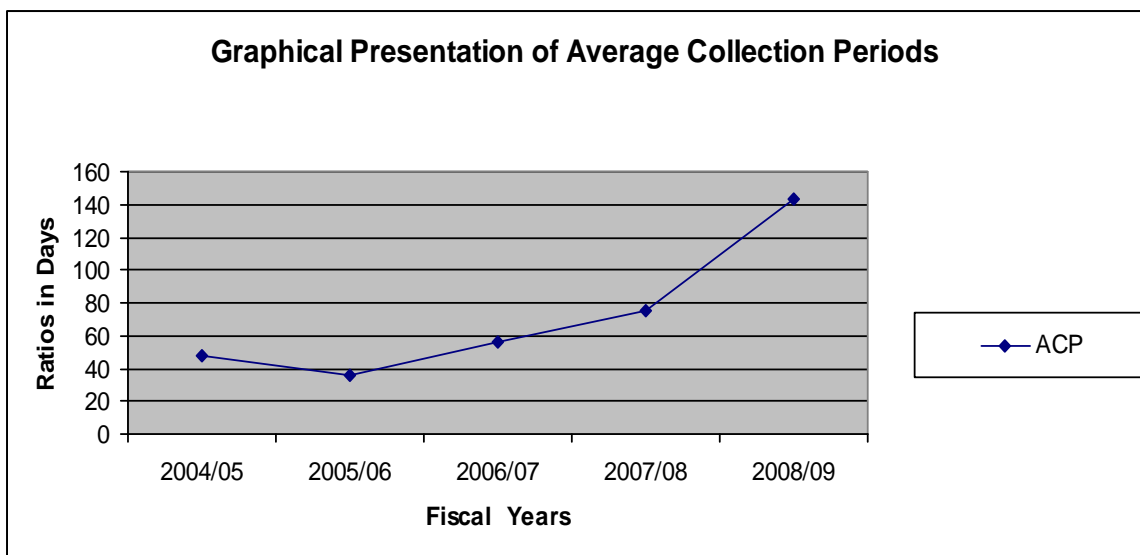
(In Thousand NRS.)

| Fiscal Year | Days in a Year | Debtors Turnover Ratio | ACP (Days) |
|--------------------------------|-----------------------|-------------------------------|-------------------|
| 2004/05 | 360 | 7.529 | 48 |
| 2005/06 | 360 | 10.093 | 36 |
| 2006/07 | 360 | 6.446 | 56 |
| 2007/08 | 360 | 4.77 | 75 |
| 2008/09 | 360 | 2.514 | 143 |
| Mean (\bar{X}) | | | 72 |
| Standard Deviation() | | | 42.562 |
| Coefficient of Variation (CV)% | | | 59.44 |

Source: *Annual Report of BPC*

Above table reveals fluctuating trend of ACP of BPC. BPC seem to deteriorate in their receivable management in last couple of years with increasing trend of ACPs. While BPC has a better overall ACP mean of 72 days, it also has more volatility in ratios presented by CV of 59.44.

Figure 4.7



4.1.3 Leverage/ Capital Structure Ratios

Leverage Ratio also called as Capital Structure Ratios are to be calculated to judge the long-term financial position of the company. This ratio indicates the mix of fund provided by owners and lenders. But BPC does not carry loan burden. Therefore, Leverage/Capital Structure Ratios of BPC are not calculated.

Debt- Equity Ratio (D/E Ratio)

Debt to Shareholders Equity is to be calculated dividing total debts by total shareholders' equity. This ratio shows the relationship between debt capital and equity capital.

Debt to Total Assets Ratio (DTAR)

Debt to Total Assets Ratio is to be calculated dividing total debts by total assets. This ratio shows the relationship between debt capital and total assets.

4.1.4 Profitability Ratio

Profitability Ratios measure the success of the company in earning a net return on sales or on investment. These ratios give the decision about how effectively the company is being managed. It is true that higher the profitability ratios better the financial position and vice versa.

Net Profit Ratio (NPR)

The Net Profit Margin establishes the relationship between net profit and sales. The ratio measures the companies' ability to change each rupee sales into net profit. The ratio of net profit to sales shows the profitability of corporations indicating that the only increase in sales does not mean

anything unless it commands profit. From this ratio it can also be acquired the information of the total expenses incurred during a certain period of time.

Table 4.8
Calculation of Net Profit Ratio

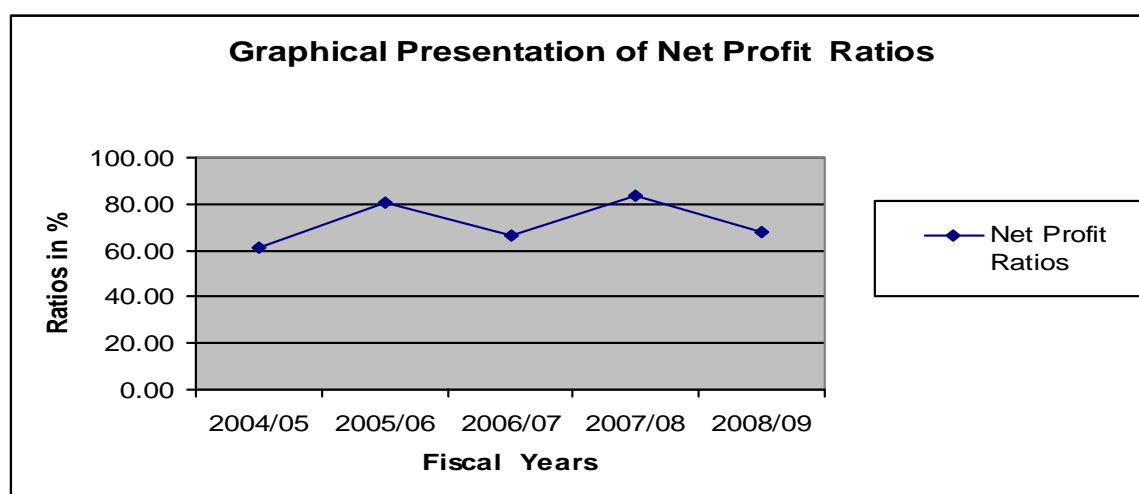
(In Thousand NRS.)

| Fiscal Year | Net Profit After Tax | Sales | Ratios (%) |
|--------------------------------|-----------------------------|--------------|-------------------|
| 2004/05 | 197,761 | 323,134 | 61.20 |
| 2005/06 | 288,419 | 358,419 | 80.47 |
| 2006/07 | 252,840 | 379,769 | 66.58 |
| 2007/08 | 353,879 | 421,687 | 83.92 |
| 2008/09 | 291,592 | 430,800 | 67.69 |
| Mean (\bar{X}) | | | 71.97 |
| Standard Deviation() | | | 9.73 |
| Coefficient of Variation (CV)% | | | 13.52 |

Source: *Annual Report of BPC*

Above table reveals an admirable trend of NPR of BPC, BPC being the favorite with an overall mean ratio of 71.97. The CV with respect to NPR of BPC is 13.52% .

Figure 4.8



Operating Expenses Ratio (OER)

Operating Expenses Ratio is the yardstick of operating efficiency. The calculation of this ratio comprises computation of all operating, cost of goods sold and general administrative expenses. In general, higher operating ratio is inefficient due to higher operation cost in terms of sales. Lower operating ratio is favorable, as it will generate higher operating income, which will be sufficient to meet interest, dividend and other expenses of the company.

Table 4.9
Calculation of Operating Expenses Ratio

(In Thousand NRS.)

| Fiscal Year | Operating Expenses | Sales | Ratios (%) |
|-----------------------|---------------------------|--------------|-------------------|
| 2004/05 | 104,799 | 323,134 | 32.43 |
| 2005/06 | 102,461 | 358,419 | 28.59 |
| 2006/07 | 116,642 | 379,769 | 30.71 |
| 2007/08 | 147,685 | 421,687 | 35.02 |
| 2008/09 | 156,148 | 430,800 | 36.25 |
| Mean (\bar{X}) | | | 32.60 |
| Standard Deviation() | | | 3.12 |

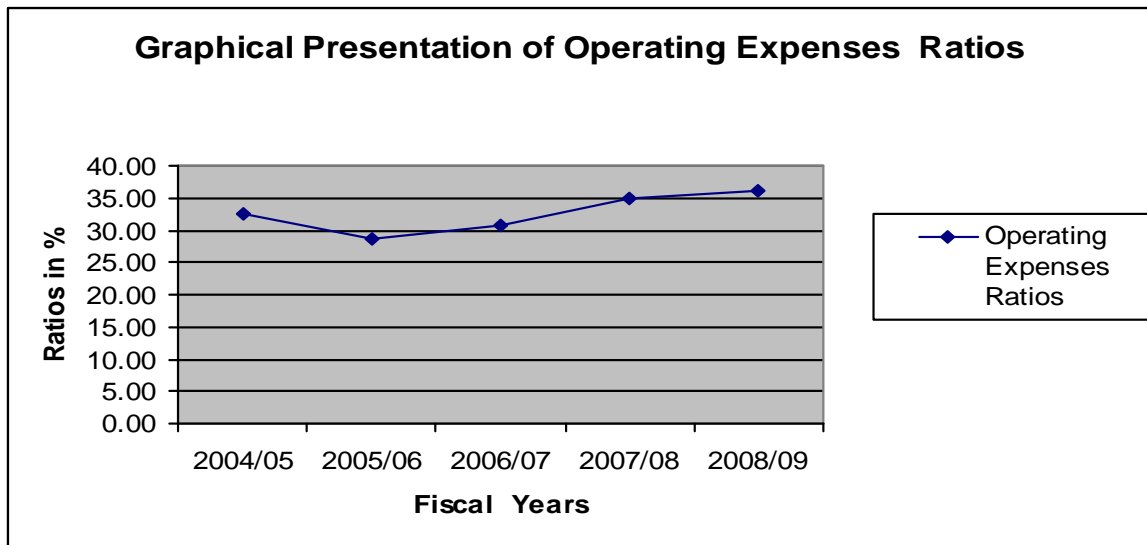
| |
|--------------------------------|
| Coefficient of Variation (CV)% |
|--------------------------------|

| |
|------|
| 9.56 |
|------|

Source: *Annual Report of BPC*

Above table reveals a fluctuating trend of OER of BPC .BPC with a mean OER of 32.60 % and CV of 9.56% has considerably high operating costs..

Figure 4.9



Return on Shareholders Equity (ROE)

Return on Shareholders Equity is the most commonly used ratio for measuring the return on owners' investment. It is the proportion of net income after tax to shareholders equity. Higher ROE is favorable as it indicates higher return for shareholders at each rupee of investment.

Table 4.10

Return on Shareholders Equity

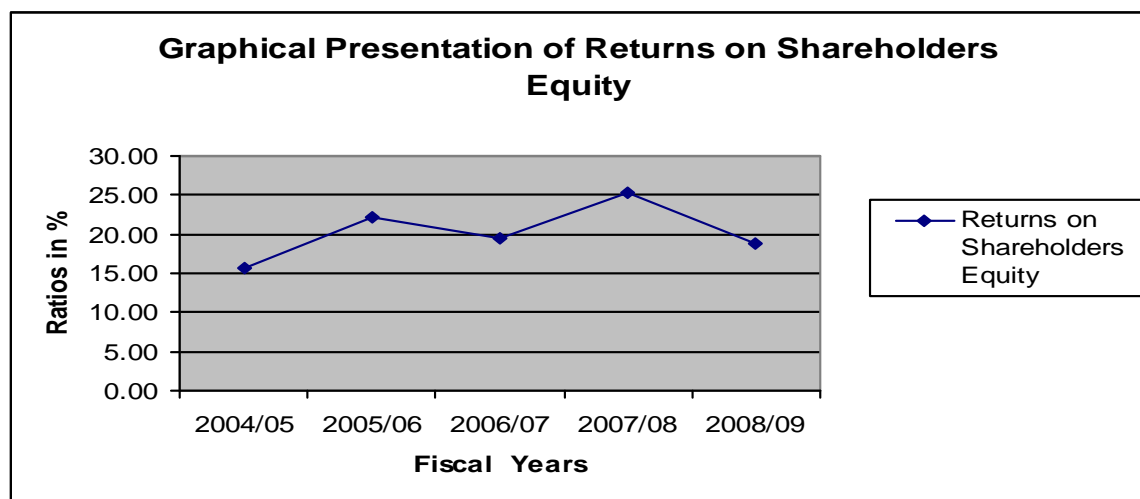
(In Thousand NRS.)

| Fiscal Year | Net Profit After Tax | Shareholder's Equity | Ratios (%) |
|--------------------------------|-----------------------------|-----------------------------|-------------------|
| 2004/05 | 197,761 | 1,254,669 | 15.76 |
| 2005/06 | 288,419 | 1,300,568 | 22.18 |
| 2006/07 | 252,840 | 1,294,863 | 19.53 |
| 2007/08 | 353,879 | 1,395,820 | 25.35 |
| 2008/09 | 291,592 | 1,546,267 | 18.86 |
| Mean (\bar{X}) | | | 20.34 |
| Standard Deviation() | | | 3.62 |
| Coefficient of Variation (CV)% | | | 17.78 |

Source: *Annual Report of BPC*

Above table reveals a fluctuating trend of ROE of BPC with a mean ratio of 20.34%.

Figure 4.10



4.1.5 Invisibility Ratio

An analysis of Invisibility Ratio helps the investors to know the performance of the companies. If the companies' liquidity, profitability, leverage and

utilization ratios are good, its market value ratios will be high and its stock price will probably be as high as can be expected.

Earning Per Share (EPS)

EPS calculations made over years indicate whether or not the companies' earning power on per share has changed over that period. EPS shows the amount of earning attributes to each equity share. If earning per share is high, market price of the share may be increased in the market and vice versa. High ratio shows the sound profitability position of the companies.

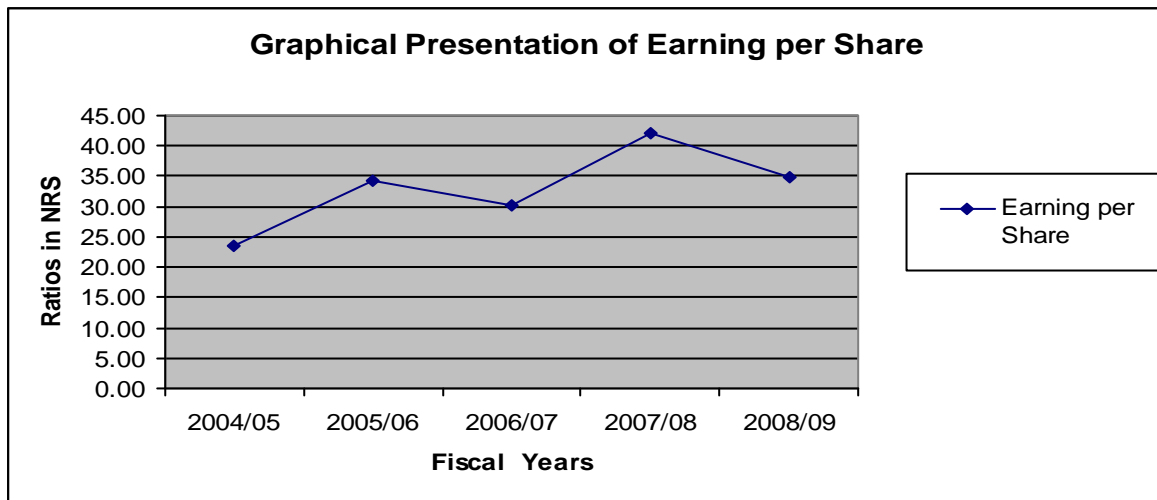
Table 4.11
Calculation of Earning Per Share

| Fiscal Year | Earnings After Tax | No. of Equity Shares | Ratios in NRS. |
|--------------------------------|---------------------------|-----------------------------|-----------------------|
| 2004/05 | 197,761,775 | 839,057,700 | 23.57 |
| 2005/06 | 288,418,689 | 839,057,700 | 34.37 |
| 2006/07 | 252,839,960 | 839,057,700 | 30.13 |
| 2007/08 | 353,879,380 | 839,057,700 | 42.18 |
| 2008/09 | 291,592,163 | 839,057,700 | 34.75 |
| Mean (\bar{X}) | | | 33.00 |
| Standard Deviation() | | | 6.82 |
| Coefficient of Variation (CV)% | | | 20.68 |

Source: *Annual Report of BPC*

We can find huge differences between the fluctuating trends of EPS of BPC. While BPC is yielding a satisfactory mean EPS of Rs. 33.00. The CV with respect to EPS of BPC is Rs. 20.68%.

Figure 4.11



Dividend Per Share (DPS)

Dividend Per Share is the measure of profitability. This ratio shows the rupee earning actually distributed to common stock holders per share held by them. High ratio is favorable for the shareholders.

Table 4.12

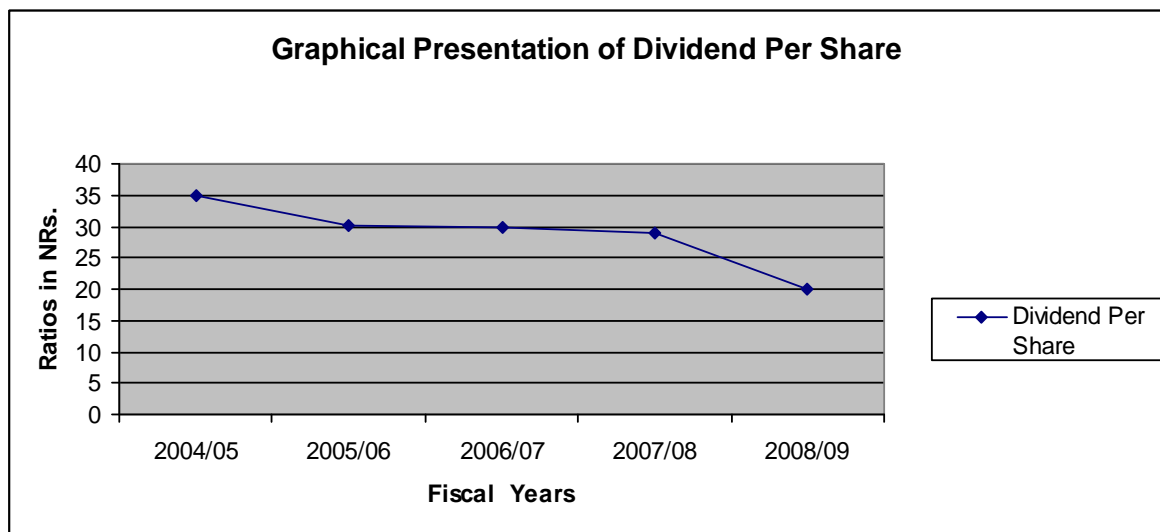
Calculation of Dividend Per Share

| Fiscal Year | Total Distributed Dividend | No. of Equity Shares | DPS (NRs.) |
|--------------------------------|-----------------------------------|-----------------------------|-------------------|
| 2004/05 | 293,670,300 | 8,390,577 | 35 |
| 2005/06 | 251,718,000 | 8,390,577 | 30 |
| 2006/07 | 251,635,305 | 8,390,577 | 30 |
| 2007/08 | 241,717,310 | 8,390,577 | 29 |
| 2008/09 | 167,811,540 | 8,390,577 | 20 |
| Mean (\bar{X}) | | | 29 |
| Standard Deviation() | | | 5.448 |
| Coefficient of Variation (CV)% | | | 18.94 |

Source: Annual Report of BPC

The amounts of dividends for FY 2008/09 are proposed dividend not distributed. Above table reveals fluctuating trend of DPS of BPC. The DPS of BPC of last four years has been decreasing. The mean DPS of BPC is 29 Lakh. The CV with respect to DPS of BPC is 18.94% .

Figure 4.12



4.1.6 Correlation Analysis

Karl Pearson's Coefficient of Correlation is most widely used in practice to measure the degree of relationship between two variables of the company. So, it is measured by using the following formula.

a) Correlation between Total Sales and Net Profit After Tax

The Coefficient of Correlation between Total Sales and Net Profit After Tax of BPC for the different sampled years has been calculated in Appendix A.

The coefficient of correlation between Sales (X) and Net Profit After Tax (Y) of BPC came to be 0.803. This suggests that the two variables have strong positive relation to each other.

Coefficient of correlation in BPC appeared greater than eight times of PE, i.e. $0.803 > 8 \times 0.107$, which implies that the relation between sales and net profit after tax was positive at significant level.

b) Correlation between Total Sales and Total Assets

The Coefficient of Correlation between Total Sales and Total Assets of BPC for the different sampled years has been calculated in Appendix A.

The coefficient of correlation between Sales (X) and Total Assets (Y) of BPC came to be 0.962 This suggests that the two variables have positive relation to each other and, increase in total assets have more favorable effect on sales of BPC .

However, coefficient of correlation in BPC appeared more than eight times of PE, i.e.

$0.962 > 8 \times 0.022$, which implies that the relation between sales and total assets is at significant level.

c) Correlation between Total Assets and Net Profit After Tax

The Coefficient of Correlation between Total Assets and Net Profit After Tax of BPC for the different sampled years has been calculated in Appendix A.

The coefficient of correlation between Total Assets (X) and Net Profit After Tax (Y) of BPC came to be 0.681. This suggests that the two variables have

positive relation to each other and, it is likely that increase in total assets is associated to increase in net profit after tax of BPC.

However, coefficient of correlation in BPC appeared more than four times of PE, i.e.

$0.681 > 4 \times 0.162$, which implies that the relation between total assets and net profit after tax is at significant level.

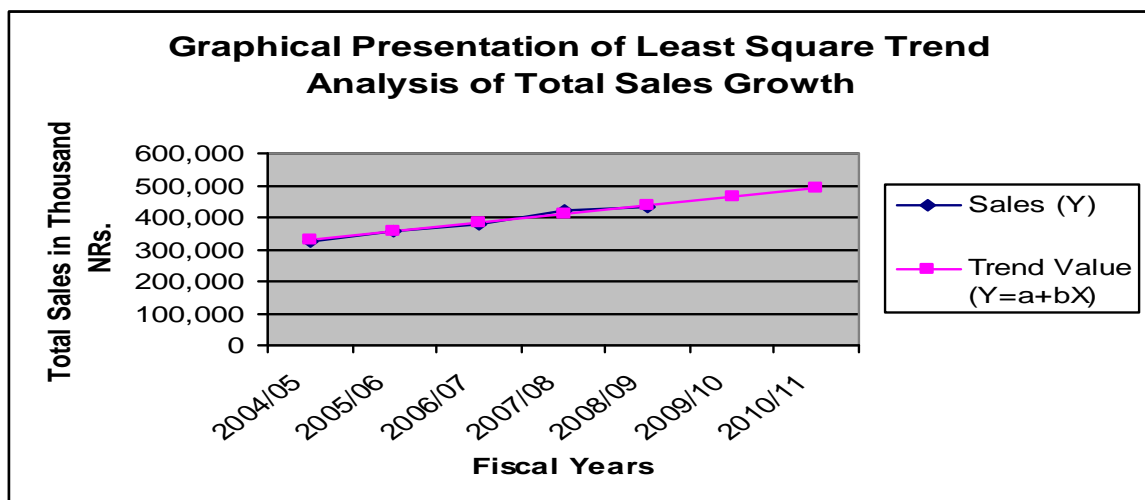
4.1.7 Least Square Linear Growth Trend Analysis

Trend Analysis is a mathematical method which is widely used to find out future tendencies based on past findings and present assumption. Further more it is applied for finding out a trend line for those series which change periodically in absolute amount.

Least Square Trend Analysis of Total Sales Growth

Least Square Trend Analysis of Total Sales Growth of BPC for the different sampled years has been calculated in Appendix B.

Figure 4.13



The Y-intercept (a) and slope of the trend line (b) of total sales of BPC remained to be NRs. 382,761.8 and NRs. 27,860 respectively. During the study period, total sales of BPC exposed an increasing trend. The trend equation of total sales is given by:

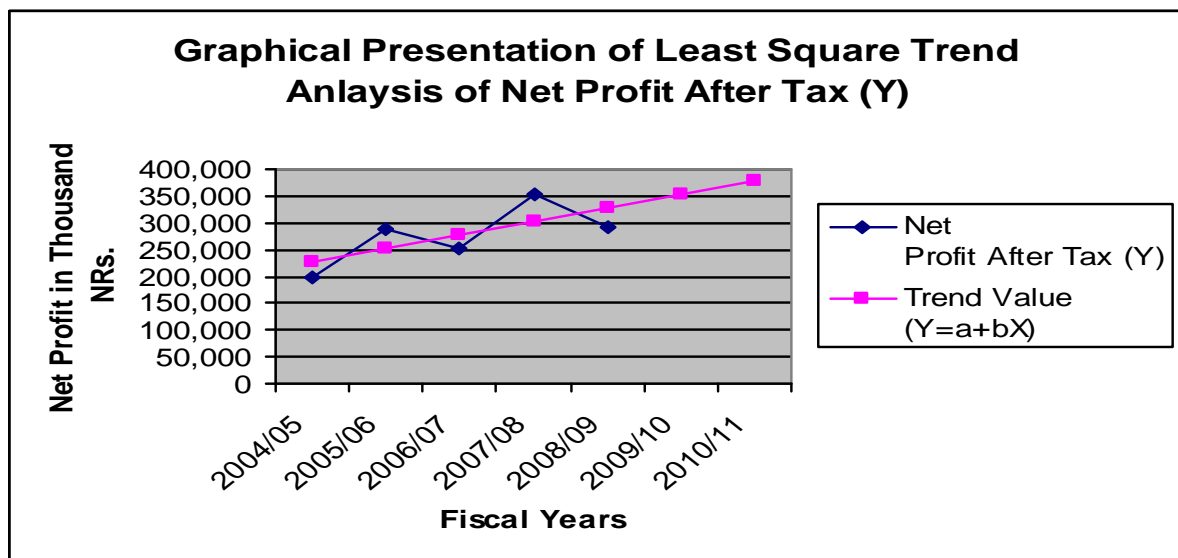
$$Y_c = 382,761.8 + 27,860X$$

According to the above trend equation, the forecasted values of total sales of BPC for coming five years would be NRs. 466,341.8, 494,201.8, 522,061.8, 549,921.8 and 577,781.8 thousand respectively.

Least Square Trend Analysis of Net Profit After Tax Growth

Least Square Trend Analysis of Net Profit After Tax Growth of BPC for the different sampled years has been calculated in Appendix B.

Figure 4.14



The Y-intercept (a) and slope of the trend line (b) of net profit after tax of BPC remained to be NRs. 276,898.2 and NRs. 25,312 respectively. During

the study period, total sales of BPC exposed an increasing trend. The trend equation of total sales is given by:

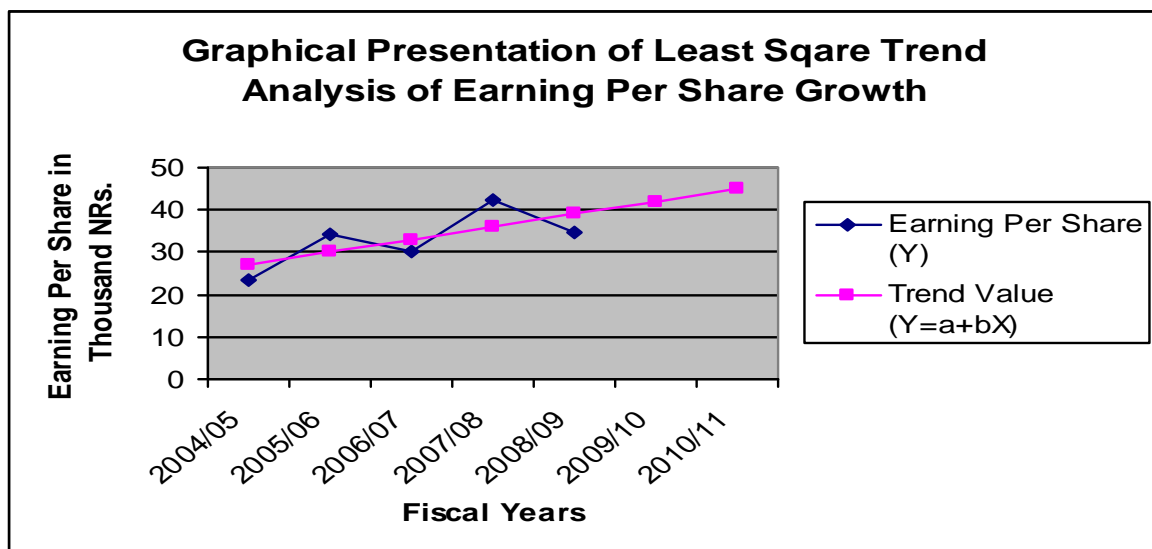
$$Y_c = 276,898.2 + 25,312 X$$

According to the above trend equation, the forecasted values of net profit after tax of BPC for coming five years would be NRs. 352,834.8, 378,147.0, 403,459.2, 428,771.4 and 454,083.6 thousand respectively.

Least Square Trend Analysis of Earning Per Share Growth

Least Square Trend Analysis of Earning Per Share Growth of BPC for the different sampled years has been calculated in Appendix B.

Figure 4.15



The Y-intercept (a) and slope of the trend line (b) of earning per share of BPC remained to be NRs. 33 and NRs. 3 respectively. During the study period, EPS of BPC exposed an increasing trend. The trend equation of EPS is given by:

$$Y_c = 33 + 3X$$

According to the above trend equation, the forecasted values of EPS of BPC for coming five years would be NRs. 42.1, 45.1, 48.1, 51.1 and 54.1 respectively.

4.2 Presentation of Data from Primary Sources

This section includes the information related with the study from primary sources. Primary data were obtained through conversation and interview made with the engineers and managerial officials of BPC. The presentation and analysis of these primary data are given below.

4.2.1 ROE as a Measure of Performance

To know the respondents' view if ROE shows the performance of the selected IPP, a question was asked, "Does ROE show the performance of your company?"

The responses provided by respondents are tabulated below:

Table 4.13

| Group | Yes | No | Total |
|----------------|-----|----|-------|
| Executives | 8 | 2 | 10 |
| Non-executives | 17 | 3 | 20 |
| Total | 25 | 5 | 30 |

Source: Survey of BPC in 2010

Above question was asked and analyzed through chi-square method. In chi-square test two hypotheses should be taken and, accordingly these two hypotheses were set.

-) Null hypothesis (H_0): ROE shows the performance of the selected IPP.
-) Alternative hypothesis (H_1): ROE does not show the performance of the selected IPP

Test Statistics: Under H_0 , the test statistic is: $t^2 \times \frac{(O - E)^2}{E}$

| Row Column | O | E | O-E | $(O-E)^2$ | $(O-E)^2/E$ |
|---------------|----|--------|--------|-----------|-------------|
| 1,1 | 8 | 8.333 | -0.333 | 0.111 | 0.013 |
| 1,2 | 2 | 1.667 | 0.333 | 0.111 | 0.067 |
| 2,1 | 17 | 16.667 | 0.333 | 0.111 | 0.007 |
| 2,2 | 3 | 3.333 | -0.003 | 0.111 | 0.033 |
| Total | | | | | 0.120 |

Here, calculated $t^2 = 0.120$

Degree of freedom = $(r-1)(c-1) = (2-1)(2-1) = 1$

$r = 5\%$

Tabulated value of $t^2_{0.05}(1) = 3.841$

Conclusion: Since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that ROE shows the performance of the selected IPP. From above test we can conclude that personnel think that ROE shows the performance of the selected IPP.

4.2.2 Performance Evaluation through Ratio Analysis

To know the respondents' view if ratio analysis is used to measure performance in the selected IPP, a question was asked, "Is ratio analysis used to measure performance in your company?"

The responses provided by respondents are tabulated below:

Table 4.14

| Group | Yes | No | Total |
|----------------|-----|----|-------|
| Executives | 10 | 0 | 10 |
| Non-executives | 15 | 5 | 20 |
| Total | 25 | 5 | 30 |

Source: Survey of BPC in 2009

Above question was asked and analyzed through chi-square method. In chi-square test two hypotheses should be taken and, accordingly these two hypotheses were set.

) Null hypothesis (H_0): ratio analysis is used to measure performance in the selected IPP.

) Alternative hypothesis (H_1): ratio analysis is not used to measure performance in the selected IPP.

Test Statistics: Under H_0 , the test statistic is: $t^2 \times \frac{(OZE)^2}{E}$

| Row Column | O | E | O-E | $(O-E)^2$ | $(O-E)^2/E$ |
|---------------|----|--------|--------|-----------|-------------|
| 1,1 | 10 | 8.333 | 1.667 | 2.779 | 0.333 |
| 1,2 | 0 | 1.667 | -1.667 | 2.779 | 1.667 |
| 2,1 | 15 | 16.667 | -1.667 | 2.779 | 0.167 |
| 2,2 | 5 | 3.333 | 1.667 | 2.779 | 0.834 |
| Total | | | | | 3.001 |

Here, calculated $t^2 = 3.001$

Degree of freedom = $(r-1)(c-1) = (2-1)(2-1) = 1$

$r = 5\%$

Tabulated value of $t^2_{0.05}(1) = 3.841$

Since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that ratio analysis is used to measure performance in the

selected IPP. From above test we can conclude that personnel think that ratio analysis is used to measure performance in the selected IPP.

4.2.3 Adequacy of Government Assistance to the IPP in Nepal

To know the respondents' view about the adequacy of government assistance to the IPP in Nepal, a question was asked, "Has government provided adequate assistance to your company?"

The responses provided by respondents are tabulated below:

Table 4.15

| Group | Yes | No | Total |
|----------------|-----|----|-------|
| Executives | 6 | 4 | 10 |
| Non-executives | 12 | 8 | 20 |
| Total | 18 | 12 | 30 |

Source: Survey of BPC in 2010

Above question was asked and analyzed through chi-square method. In chi-square test two hypotheses should be taken and, accordingly these two hypotheses were set.

) Null hypothesis (H_0): there is adequate government assistance to the IPP in Nepal.

) Alternative hypothesis (H_1): there is not adequate government assistance to the IPP in Nepal.

Test Statistics: Under H_0 , the test statistic is: $t^2 \times \frac{(OZE)^2}{E}$

| Row Column | O | E | O-E | (O-E) ² | (O-E) ² /E |
|---------------|---|---|-----|--------------------|-----------------------|
| | | | | | |

| | | | | | |
|-------|----|----|---|---|---|
| 1,1 | 6 | 6 | 0 | 0 | 0 |
| 1,2 | 4 | 4 | 0 | 0 | 0 |
| 2,1 | 12 | 12 | 0 | 0 | 0 |
| 2,2 | 8 | 8 | 0 | 0 | 0 |
| Total | | | | | 0 |

Here, calculated $t^2 = 0.120$

Degree of freedom = $(r-1)(c-1) = (2-1)(2-1) = 1$

$r = 5\%$

Tabulated value of $t^2_{0.05}(1) = 3.841$

Since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that there is adequate government assistance to the IPP in Nepal. From above test we can conclude that there is adequate government assistance to the IPP in Nepal.

4.2.4 Comparison of Present Return and Expectation of Investors

To compare the expected and actual earning status of the investors from the share investment, a question was asked, “Is the level of return you are presently getting is higher than your expectation from share investment?”

The responses provided by respondents are tabulated below:

Table 4.16

| Group | Yes | No | Total |
|----------------|-----|----|-------|
| Executives | 7 | 3 | 10 |
| Non-executives | 15 | 5 | 20 |
| Total | 22 | 8 | 30 |

Source: Survey of BPC in 2010

Above question was asked and analyzed through chi-square method. In chi-square test two hypotheses should be taken and, accordingly these two hypotheses were set.

) Null hypothesis (H_0): the level of return presently obtained from IPP is higher than the expectation of investors.

) Alternative hypothesis (H_1): the level of return presently obtained from IPP is not higher than the expectation of investors.

Test Statistics: Under H_0 , the test statistic is: $t^2 \times \frac{(O - E)^2}{E}$

| Row Column | O | E | O-E | $(O-E)^2$ | $(O-E)^2/E$ |
|---------------|----|--------|--------|-----------|-------------|
| 1,1 | 7 | 7.333 | -0.333 | 0.111 | 0.015 |
| 1,2 | 3 | 2.667 | 0.333 | 0.111 | 0.042 |
| 2,1 | 15 | 14.667 | 0.333 | 0.111 | 0.008 |
| 2,2 | 5 | 5.333 | -0.333 | 0.111 | 0.021 |
| Total | | | | | 0.086 |

Here, calculated $t^2 = 0.120$

Degree of freedom = $(r-1)(c-1) = (2-1)(2-1) = 1$

$r = 5\%$

Tabulated value of $t^2_{0.05}(1) = 3.841$

Since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that the level of return presently obtained from IPP is higher than the expectation of investors. From above test we can conclude that personnel think that the level of return presently obtained from IPP is higher.

4.2.5 Role of Whim and Rumors in Influencing Stock Prices of IPP

To know the view-point of respondents about the influence of whim and rumors in influencing stock prices, a question was asked, “Do you think that the stock prices of IPP are influenced by whim and rumors rather than profitability reasons?”

The responses received from the respondents are tabulated below:

Table 4.17

| Group | Yes | No | Total |
|----------------|-----|----|-------|
| Executives | 6 | 4 | 10 |
| Non-executives | 10 | 10 | 20 |
| Total | 16 | 14 | 30 |

Source: Survey of BPC in 2010

Above question was asked and analyzed through chi-square method. In chi-square test two hypotheses should be taken and, accordingly these two hypotheses were set.

) Null hypothesis (H_0): the stock prices of IPP are influenced by whim and rumors rather than profitability reasons

) Alternative hypothesis (H_1): the stock prices of IPP are not influenced by whim and rumors rather than profitability reasons.

Test Statistics: Under H_0 , the test statistic is: $t^2 \times \frac{(OZE)^2}{E}$

| Row Column | O | E | O-E | (O-E) ² | (O-E) ² /E |
|---------------|----|--------|--------|--------------------|-----------------------|
| 1,1 | 6 | 5.333 | 0.667 | 0.445 | 0.083 |
| 1,2 | 4 | 4.667 | -0.667 | 0.445 | 0.095 |
| 2,1 | 10 | 10.667 | -0.667 | 0.445 | 0.042 |

| | | | | | |
|-------|----|-------|-------|-------|-------|
| 2,2 | 10 | 9.333 | 0.667 | 0.445 | 0.048 |
| Total | | | | | 0.268 |

Here, calculated $t^2 = 0.120$

Degree of freedom = $(r-1)(c-1) = (2-1)(2-1) = 1$

$r = 5\%$

Tabulated value of $t^2_{0.05}(1) = 3.841$

Since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that the stock prices of IPP are influenced by whim and rumors rather than profitability reasons. From above test we can conclude that personnel think that the stock prices of IPP are influenced by whim and rumors rather than profitability reasons.

4.3 Major Findings

From the above analysis and interpretation of data, the following findings have been drawn:

4.3.1 Major Findings from Secondary Sources

The current ratios of BPC remained respectively 5.716, 1.224, 1.142, 1.302 and 1.117 throughout the study period. The mean and CV of current ratios of BPC came to be 2.100 and 96.29%.

The quick ratios of BPC remained 3.826, 0.945, 0.918, 0.891 and 0.695 respectively throughout the study period. The mean and CV of quick ratios of BPC came to be 1.455 and 91.36%.

The FATORs of BPC remained 0.453, 0.482, 0.511, 0.581 and 0.563 respectively throughout the study period. The mean and CV of FATORs of BPC came to be 0.518 and 10.41%.

The TATORs of BPC remained 0.225, 0.205, 0.202, 0.212 and 0.190 respectively throughout the study period. The mean and CV of TATORs of BPC came to be 0.207 and 6.11%.

The ITRs of BPC remained 6.727, 6.220, 6.448 , 5.649 and 4.646 respectively throughout the study period. The mean and CV of ITRs of BPC came to be 5.938 and 13.87%.

The DTRs of BPC remained 7.529, 10.093, 6.446, 4.769 and 2.514 respectively throughout the study period. The mean and CV of DTRs of BPC came to be 6.270 and 45.52%.

The ACPs of BPC remained 48, 36, 56, 75 and 143 respectively throughout the study period. The mean and CV of ACPs of BPC came to be 72 days and 59.44%.

The NPRs of BPC remained 61.20%, 80.47%, 66.58%, 83.92% and 67.69% respectively throughout the study period. The mean and CV of NPRs of BPC came to be 71.97% and 13.52%.

The OERs of BPC remained 32.43%, 28.59%, 30.71%, 35.02% and 36.25% respectively throughout the study period. The mean and CV of OERs of BPC came to be 32.60% and 9.56%.

The ROEs of BPC remained 15.76%, 22.18%, 19.53%, 25.35% and 18.86% respectively throughout the study period. The mean and CV of ROEs of BPC came to be 20.34% and 17.78%.

The EPSs of BPC remained NRs. 23.57, NRs. 34.37, NRs. 30.13, NRs. 42.17 and respectively throughout the study period. The mean and CV of EPSs of BPC came to be NRs. 33 and 20.68%.

The DPSs of BPC remained NRs. 35, NRs. 30, NRs. 30, NRs. 29 and 20 respectively throughout the study period. The mean and CV of DPSs of BPC came to be NRs. 29 and 18.94%.

The coefficient of correlation between sales and net profit after tax of BPC came 0.803. This value of correlation indicates the positive relation between sales and net profit after tax. Considering the probable errors of BPC, since the value of r is greater than 6PE, the correlation is at significant level.

The coefficient of correlation relation between sales and total assets of BPC came 0.962. This value of correlation indicates the positive relation between sales and total assets.

The coefficient of correlation relation between total assets and net profit after tax of BPC came 0.681. This value of correlation indicates the positive relation between total assets and net profit after tax.

According to the trend equation, the forecasted values of total sales of BPC for coming five years would be NRs. 466,341.8, 494,201.8, 522,061.8, 549,921.8 and 577,781.8 thousand respectively.

According to the trend equation, the forecasted values of net profit after tax of BPC for coming five years would be NRs. 352,834.8, 378,147.0, 403,459.2, 428,771.4 and 454,083.6 thousand respectively.

According to the trend equation, the forecasted values of EPS of BPC for coming five years would be NRs. 42.1, 45.1, 48.1, 51.1 and 54.1 respectively.

4.3.2 Major Findings from Primary Sources

Out of 30, 25 respondents agreed that ROE did show the performance of their company. And since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that ROE shows the performance of the selected IPP.

Out of 30, again 25 respondents agreed that ratio analysis was used to measure the performance of their company. And since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that ratio analysis is used to measure performance in the selected IPP.

Out of 30, 18 respondents agreed that there is adequate government assistance to the IPP in Nepal. And since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that there is adequate government assistance to the IPP in Nepal.

Out of 30, 22 respondents agreed that the level of return presently obtained from IPP were higher than the expectation of investors. And since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that the level of return presently obtained from IPP is higher than the expectation of investors.

Out of 30, 16 respondents agreed that the stock prices of IPP were influenced by whim and rumors rather than profitability reasons than the expectation of investors. And since calculated value of t^2 is less than tabulated value of t^2 , H_0 is accepted which means that the stock prices of IPP are influenced by whim and rumors rather than profitability reasons.

CHAPTER V

5 SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter shows the final report of the study. This chapter is divided into three sections. First section deals with the summary of the study in which the results of calculations that is found in previous chapter is presented in short manner. The second section is related with the conclusion of the study in which overall decisions made under the study are presented. The third section of this chapter is remedies or recommendations of the study.

5.1 Summary

Power projects on Nepal's gushing, mountain rivers could meet the energy needs of this Himalayan country and its giant southern neighbor, India. But the foaming waters are yet to be even partly harnessed, because of a shortage of funds and opposition to big multi-million dollar hydroelectric projects from a strong, environmental lobby.

In August 1995, the Arun III project, which dam planners claimed would cover the country's power needs well into the next century, had to be shelved when the World Bank pulled out from the \$ 1 billion scheme for environmental reasons. A surge in energy demand was already creating long power shortages in the capital city, Kathmandu. The government, left with little choice but to explore alternative power projects to meet the demand, gave the go-ahead to a number of projects that were smaller in scale but easier to finance and build.

Butwal Power Company was established in 1966 when total capacity of the power in the country was only 3.45MW. BPC with assistance from the United Mission to Nepal, developed Tinau project in 1967 to light up the town of Butwal and to promote industrial development in the area. BPC not only involved in design and construction work but also owns and operates the 12 MW Jhimruk Hydropower Plant and the 5.1 AndhiKhola Hydro Power Plant. The company supplies power to the national electricity grid besides lighting up nearly 23,000 local households. BPC is currently the largest private power supplier in Nepal.

There has been a gradual change in local and global energy markets providing ample space for both the public and the private sectors. It is now being increasingly evident that the participation of private enterprises in the power sector can lead to better mobilization of resources to meet the ever-increasing domestic and regional power demand. The establishment of a few small and medium sized hydropower plants within the last decade has laid the foundation for private sector participation in Nepal.

The continuing interest shown by both the domestic and foreign private investors is encouraging for Nepal's power sector although the current interest of the private sector is limited to small plants of capacities less than 10 MW only, probably because of the much higher investment needs of larger projects. The increasing demand of electricity can however be met only through a combination of both small and medium-sized projects. It is therefore pertinent for NEA to take up several medium sized schemes for implementation in the public sector with donor assistance.

Although the demand for power is rising every year, generation projects have not been implemented in tandem. The delays experienced in Middle Marsyangdi, the only public sector project presently under construction, is an example of the uncertainties faced even after a project enters the construction phase. Public sector generation projects take considerable preparation time before execution. The process of mobilization of resources for generation and other projects is also very time consuming and uncertain. Decisions for taking up such projects should therefore be made well in advance so that power plants come into operation in a timely fashion as per the system requirements. The identification and implementation of projects involving relatively low investments is the key to providing affordable electricity to the people of Nepal.

Being the largest government enterprise and pioneer of electricity business in Nepal, it is desirable for NEA to initiate and expedite joint venture power generation schemes to conquer the continuous loss situation. Considering NEA's limited resources for capital investments, financial resources available in the local market should be tapped for the equity contribution. The successful commissioning of the Chilime hydropower project under NEA-private partnership was indicative of the beginning of a new era of public-private sector cooperation in Nepal's electricity sector. This should act as a springboard for NEA to adopt an effective joint venture investment policy to meet the growing demand of energy in the country.

As this study is related to the financial evaluation of BPC, a number of financial and statistical tools have been used to meet the prescribed objectives. Ratio analysis being the primary financial tool includes all five categories namely, liquidity ratio, activity ratio, leverage ratio, profitability

ratio and invisibility ratio. To further analyze the financial data, a number of statistical tools have been used such as arithmetic mean, standard deviation, coefficient of variation, coefficient of correlation, probable error of correlation coefficient and least square trend line.

The liquidity ratios of the companies seem to be consistent in last couple of years for BPC. While BPC has failed to do so in last couple of years. The mean and CV of current ratios of BPC came to be 2.100 and 96.29%. Similarly, the mean and CV of quick ratios of BPC came to be 1.455 and 91.36%

Except that of ITRs all other activity ratios of BPC present volatile trends for the period of study. The mean and CV of FATORs of BPC came to be 0.518 and 10.41%. Similarly, the mean and CV of TATORs of BPC came to be 0.207 and 6.11%. Likewise, the mean and CV of ITRs of BPC came to be 5.938 and 13.87%. Similarly, the mean and CV of DTRs of BPC came to be 6.270 and 45.52%. Likewise, the mean and CV of ACPs of BPC came to be 72 days and 59.44%.

BPC present fluctuating trends of profitability ratios. The mean and CV of NPRs of BPC came to be 71.97% and 13.52%. Similarly, the mean and CV of OERs of BPC came to be 32.60% and 9.56%. Likewise, the mean and CV of ROE ratios of BPC came to be 20.34 and 17.78%. The invisibility ratios of company present fluctuating trends. The mean and CV of EPS ratios of BPC came to be NRs. 33.00 and 20.68%. Similarly, the mean and CV of DPS ratios of BPC came to be NRs. 29.00 and 18.94%.

The coefficient of correlation between sales and net profit after tax of BPC show positive and significant relation. The coefficient of correlation between

these two variables of BPC came 0.803. Similarly, the probable errors of BPC came 0.107.

The coefficient of correlation between sales and total assets of BPC show Positive and significant relation. The coefficient of correlation between these two variables of BPC came 0.962. Similarly, the probable errors of BPC came 0.022.

The coefficient of correlation between total assets and net profit after tax of BPC show positive and significant relation. The coefficient of correlation between these two variables of BPC came 0.681. Similarly, the probable errors of BPC came 0.162.

According to the trend equation, the forecasted values of total sales of BPC for coming five years would be NRs. 466,341.8, 494,201.8, 522,061.8, 549,921.8 and 577,781.8 thousand respectively.

According to the trend equation, the forecasted values of net profit after tax of BPC for coming five years would be NRs. 352,834.8, 378,147.0, 403,459.2, 428,771.4 and 454,083.6 thousand respectively.

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Out of 30, 25 respondents agreed that ROE did show the performance of their company. And since calculated value of t^2 is less than tabulated value

of t^2 , H_0 is accepted which means that ROE shows the performance of the selected IPP.

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5.2 Conclusions

As per the analysis and interpretation of data the following conclusions have been derived:

-) The current and quick ratios of the companies seem to be inconsistent. While BPC has failed to maintain conventional standard of liquidity position (2:1) in last couple of years.
-) The fixed assets turnover ratios of BPC are inconsistent but satisfactory in terms of inclination. It seems that BPC has been able to utilize its current assets more appropriately. BPC has a very humble rate of inventory turnover.
-) BPC is all equity financed and thus the risk of insolvency is minimized for the company.
-) BPC has considerably high operating expenses ratios and inconsistent trend in its net profit ratios.
-) BPC is being more liberal in distributing the earnings in form of dividends.
-) The coefficient of correlation between sales and net profit after tax of BPC show positive and significant relation.
-) The coefficient of correlation between sales and total assets of BPC show positive. It also reveals that it is likely that increase in total assets is associated to increase in sales of BPC.
-) The coefficient of correlation between total assets and net profit after tax of BPC show positive. It also reveals that the net profit after tax of BPC is more reactive to fluctuations in total assets.
-) From the primary data analysis it can be concluded that ROE does show the performance of the IPP, ratio analysis is used to analyze the performance, government assistance to IPP in Nepal is adequate,

present return of IPP is higher than the expectation of investors and, the stock prices are influenced by whims and rumors rather than profitability reasons.

Table 5.1
SWOT Analysis

| IPP | BPC |
|----------------------|--|
| Strengths | <ul style="list-style-type: none">) Availability of funds) Efficient use of resources) Diversified sources of income |
| Weaknesses | <ul style="list-style-type: none">) High operating expenses) Lack of strategies to realize financial plans |
| Opportunities | <ul style="list-style-type: none">) Plenty of market availability) No competition |
| Threats | <ul style="list-style-type: none">) High research costs) Tightening power purchase agreements by NEA |

5.3 Recommendations

Based on the conclusions, some recommendations are presented below:

-) The liquidity position of BPC is feeble, and they should hold more liquid assets or otherwise cut off current liabilities to maintain a proper liquidity position.
-) BPC needs to find better ways to control and improve its inventory and receivable management.
-) Including funds of fixed interest in the capital structure can maximize the value of company. BPC should enjoy the capital of less cost by borrowing funds as BPC is in strong credibility position.

-) The profitability position of BPC is satisfactory. However, there is a need for effective production management to control operating costs of BPC.
-) BPC should adopt a more liberal dividend payout policy, as the earning per share is healthy to support such policy. The uniform distribution of dividends will also help to reduce fluctuations in stock prices.
-) The projected sales values can be met by setting production and sales plans, and formulating proper policies and strategies. The IPP should implement new techniques of management such as participative management, management by objective and total quality management.
-) The IPP should maintain research budgets to study new hydroelectric projects across the country. There should be proper cost control on maintenance activities.
-) The IPP should introduce SWOT analysis to improve their capability of dealing with external forces and managing internal issues of strengths and weaknesses.
-) The IPP should maintain a separate human resource department to make sure that there is an effective system of handling grievance of employees and conduction of management development and training programs.
-) The IPP should follow the practices of setting financial goals for future activities and should develop major programs to accomplish them.

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