

Acknowledgement

The spirit of summer internship program lies in not merely doing the project but to get a firsthand experience of the industry and to prepare ourselves for tomorrow's managerial needs. I wish to express my appreciation and thanks to all those with whom I have had the opportunity to work and whose thoughts and insights have helped me in furthering my knowledge and understanding of the subject.

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INTRODUCTION

Financial Management represents analytical approach to Corporate Finance decision making with special focus on the basis finance theory and its implication in the financial decision making process and policies. A systematic approach for attaining effective management performance is Financial Planning and Budgeting which indicates company's growth, performance, investment and requirement of fund during a given period of time which involves preparation of projected Balance sheet, Fund Flow Statement and Profit and Loss account using the past year's financial data which helps the company to regulate its Funds Flow and achieve the targeted yield of return. The scope of finance is any Government owned or Public Sector undertaking also include Fund Management, Budgeting, Capital Structure, Risk & Return, Working Capital Management, Cost Control, Asset Management etc. Normally PSU's have huge volume of investments and incidentally NTPC has got well established policies and practices to take financial decisions for the benefit of the company.

OBJECTIVE OF THE STUDY

- ❖ To gain the overall idea about the organization.
- ❖ To gain a firsthand knowledge about the structure and the functioning of the Finance department and investment policy.
- ❖ To have an effective exposure of the actual working situation.
- ❖ To study the rules and practices implemented at NTPC.
- ❖ To see the applicability and usability of theory which have been taught to us during the first year of the course?
- ❖ To find out the financial performance of the organization.
- ❖ To find out the importance of finance in business.
- ❖ To find out the future requirements of finance in business.
- ❖ To study the investment decisions of the organization.
- ❖ To know what all studies are made before setting up a power plant in a region.

METHODOLOGY

The information was collected from various sources which are listed below:-

- ❖ From the official documents.
- ❖ From records and manuals of different departments of the organization.
- ❖ From a close observation of the functioning of various departments of the organization.
- ❖ Last but not the least, knowledge, both negative and positive precipitated through informal discussions with the employees of different departments.

RESEARCH METHODOLOGY

Plan of Study:

A proper and systematic approach is essential in any project work. Proper planning should be done for conducting the data collection, completion and presentation of the project. Each and every step must be so planned that it leads to the next step automatically. This systematic approach is a blend of planning and organization and major emphasis is given to interdependence of various steps. The plan of this study is as follows: Research Purpose
The purpose of the research was to know the criteria on which investment of the company is raised every year and a favorable rate of return is arrived at, increasing the net result of the company as per their budget.

Research Objective:

The main objective of the research is:

- ❖ To know the investment decisions.
- ❖ To analyze the investment depending on internal rate of return.

Scope and Limitations:

- ❖ Research Boundaries
- ❖ This study is based on the consolidated data of the organization; as such the IRR cannot be calculated region wise.

Classification of Data

The data used for this study is Primary data and Secondary data.

Primary data:

This includes the information collected mainly from the office. This has served as primary source of data for this study.

Secondary data:

This includes the information gathered from various websites.

Sample size:

The sample size selected is of four years.

Sampling Technique:

The sampling procedure employed for this project is judgmental sampling, a convenience sampling technique in which elements are based on the judgment of researcher.

Statistical Analysis:

Information collected was classified and tabulated for further analysis.

Calculations were done for the interpretation of the data e.g. Discount factor, Averages, etc.

The report is covered with various data and tables on which the project has been carried out.

Software tools used for the data analysis:

The software tool used for data analysis is MS WORD & MS EXCEL.

LIMITATION OF THE STUDY

- ❖ The limitations faced during the summer course are:-
- ❖ First – it was not possible to study various aspect of the organization in detail.
- ❖ Employees were apprehensive of secrecy of data and therefore hesitated in disclosing all the data regarding some of the points concerning to this study.
- ❖ As this is a general study, hypothesis could not be drawn.
- ❖ Some executives could not afford time because of their busy schedule.



VISION

“A WORLD CLASS INTEGRATED POWER MAJOR,
POWERING INDIA’S GROWTH,
WITH INCREASING GLOBAL PRESENCE”

CORE VALUES

(B-COMIT)

BUSINESS ETHICS

CUSTOMER FOCUS

ORGANISATIONAL & PROFESSIONAL PRIDE

MUTUAL RESPECT & TRUST

INNOVATION & SPEED

TOTAL QUALITY FOR EXCELLENCE

CORPORATE MISSION

“ DEVELOP AND PROVIDE RELIABLE POWER, RELATED
PRODUCTS AND SERVICES AT COMPETITIVE PRICES,
INTEGRATING MULTIPLE ENERGY SOURCES WITH
INNOVATIVE AND ECO-FRIENDLY TECHNOLOGIES AND
CONTRIBUTE TO SOCIETY ”

INDUSTRY PROFILE

Introduction

The power sector has registered significant progress since the process of planned development of the economy began in 1950. Hydro-power and coal based thermal power have been the main sources of generating electricity. Nuclear power development is at slower pace, which was introduced, in late sixties. The concept of operating power system on a regional basis crossing the political boundaries of states was introduced in the early sixties. In spite of the overall development that has taken place, the power supply industry has been under constant pressure to bridge the gap between supply and demand.

Growth of Indian power sector

Power development is the key to the economic development. The power sector has been receiving adequate priority ever since the process of planned development began in 1950. The electricity generation increased from about 5.1 billion units to 420 billion units-82 fold increases. About 85% of the villages have been electrified except far-flung areas in North Eastern states, where it is difficult to extend the grid supply.

Structure of power supply industry

In December 1950 about 63% of the installed capacity in Utilities was in the private sector and about 37% was in the public sector. The industrial Policy Resolution of 1956 envisaged the generation, transmission and distribution of power almost exclusively in the public sector. As a result of this Resolution and facilitated by the Electricity (Supply) Act, 1948 the electricity industry developed rapidly in the State Sector. In the Constitution of India “Electricity” is a subject that falls within the concurrent jurisdiction of the Centre and the States. The Electricity (Supply) Act, 1948 envisaged creation of State Electricity Boards (SEBs) for planning and implementing the power development programmes in their respective states. The Act also provided for creation of central generation companies for setting up and operating generating facilities in the Central Sector. The Central Electricity Authority constituted under the Act is responsible for power planning at the national level.

In addition the Electricity (Supply) Act also allowed from the beginning, the private licensees to distribute or generate electricity in the specified areas designated by the concerned State Government/SEB. The National thermal Power Corporation (NTPC) and National Hydro-electric Power Corporation (NHPC) were set up for the generation and bulk transmission of power to supplement the efforts at the State level and took upon itself the responsibility of setting up large power projects these purposes in 1975. North- Eastern Electric Power Corporation (NEEPCO) was set up in 1976 to implement the regional power projects in the North-East.

Subsequently two more power generation corporation was set up in 1988 viz. Tehri Hydro Development Corporation (NHPC). To construct, operate and maintain the inter-state and inter regional transmission systems the National Power transmission Corporation (NPTC) was set up in 1989. The corporation was renamed as POWER GRID in 1992.

The policy of liberalization the Government of India announced in 1991 and consequent amendments in Electricity (Supply) Act have opened new vistas to involve private investment and the major policy changes have been announced by the Government in this regard.

Regional Power System

In order to optimally utilize the dispersed sources for power generation it was decided right at the beginning of the 1960's that the country would be divided into 5 regions and the planning process would aim at achieving regional self sufficiency.

Viability of SEBs

The financial health of the SEBs will be improved through rationalization of tariff, restructuring and reforms to make economically viable and their projects bankable to generate energy on economic rate, to provide quality services to the consumers and to ensure a fair return to the investors. This can be best achieved by unbundling single entity (SEBs) and corporatizing the same for the above activities. In this context, some of the States have taken initiative by unbundling their respective SEBs into separate companies for Generation & Transmission & Distribution.

Regulatory Bodies

The Government of India has promulgated Electricity Regulatory Commission Act, 1998 for setting up of Independent regulatory bodies both at the Central level and at the State level viz. the Central Electricity Regulatory Commission (CERC) and the State Levels respectively. These regulatory bodies would primarily look into all aspects of tariff fixation and matters incidental thereto.

Technology Upgradation

Refurbishment of existing Thermal Power Station

Continuous deterioration in performance of thermal power stations had been observed during early 80's. Therefore, Renovation and Modernizations Scheme (R&M Schemes) were drawn and executed for improving the performance of existing thermal power stations. Pollution control measures in these power stations being a capital-intensive activity, it accounted for major portion-around 40% of Rs.12billion kept for R&M schemes under phase-I. During phase-I, 163 units of 34 thermal power stations were covered. As a result of R&M schemes these achieved 10,000 million units of additional generation per annum against the target of 7000 million units. Encouraged by the results achieved, R&M phase-II programme is presently under progress. Total estimated cost of these works is Rs.24 billion. Most of the Electricity Boards or other generating agencies are facing financial constraints to carry out R&M activities. Therefore, this area has to be taken on priority to arrange financial assistance.

COMPANY OVERVIEW

India's largest power company, NTPC was set up in 1975 to accelerate power development in India. NTPC is emerging as a diversified power major with presence in the entire value chain of the power generation business. Apart from power generation, which is the mainstay of the company, NTPC has already ventured into consultancy, power trading, ash utilization and coal mining. NTPC ranked 317th in the '2009, Forbes Global 2000' ranking of the World's biggest companies.



The total installed capacity of the company is 30, 144 MW (including JVs) with 15 coal based and 7 gas based stations, located across the country. In addition under JVs, 3 stations are coal based & another station uses naphtha/LNG as fuel. By 2017, the power generation portfolio is expected to have a diversified fuel mix with coal based capacity of around 53000 MW, 10000 MW through gas, 9000 MW through Hydro generation, about 2000 MW from nuclear sources and around 1000 MW from Renewable Energy Sources (RES). NTPC has adopted a multi-pronged growth strategy which includes capacity addition through green field projects, expansion of existing stations, joint ventures, subsidiaries and takeover of stations. NTPC has been operating its plants at high efficiency levels. Although the company has 18.79% of the total national capacity it contributes 28.60% of total power generation due to its focus on high efficiency.

Establishing a Global Presence

To become a truly global company serving global markets, it is essential for NTPC to establish its brand equity in overseas markets. NTPC would continue to focus on offering Engineering & Project Management Services, Operations & Maintenance services, and Renovation & Modernization services in the international market.

Establishing a successful services brand would be a precursor to taking higher investment decisions in different markets. Going forward, NTPC would continue to evaluate various options for strengthening its presence in global markets including setting up power generation capacity, acquisition of gas blocks etc.

By the year 2017, NTPC would have successfully diversified its generation mix, diversified across the power value chain and entered overseas markets. As a result NTPC would have altered its profile significantly. Elements of the revised profile that NTPC would seek to achieve are:

Amongst top five market capitalization in the Indian market

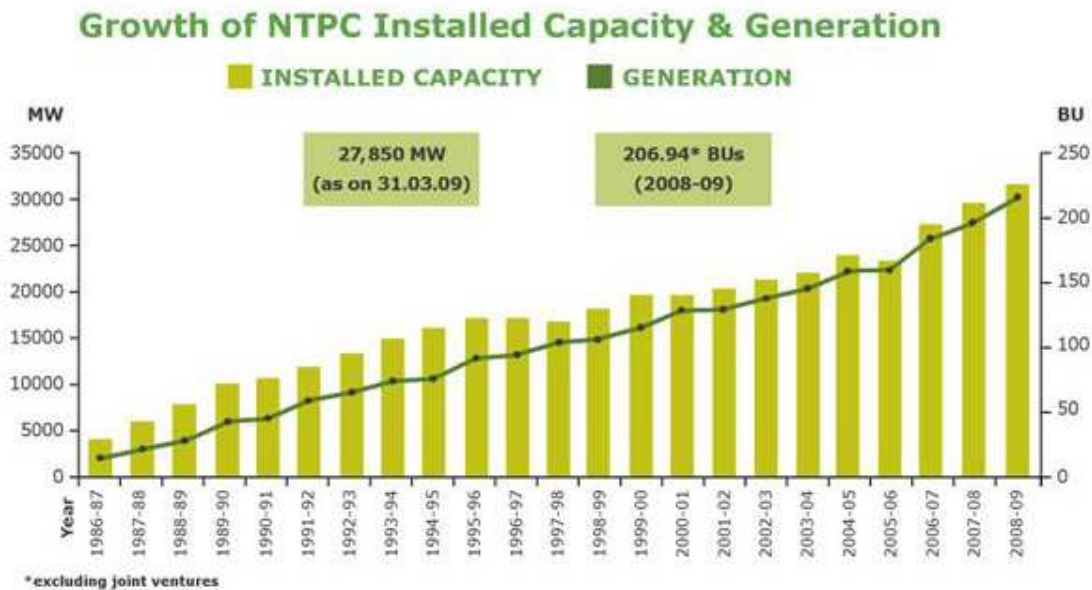
- ❖ An Indian MNC with presence in many countries
- ❖ Diversified utility with multiple businesses
- ❖ Setting benchmarks in project construction and plant availability & efficiency
- ❖ Preferred employer
- ❖ Have a strong research and technology base
- ❖ Loyal customer base in both bulk and retail supply
- ❖ A leading corporate citizen with a keen focus on executing its social responsibility

Services offered by NTPC

An entire gamut of services is offered in the areas mentioned above. These are:

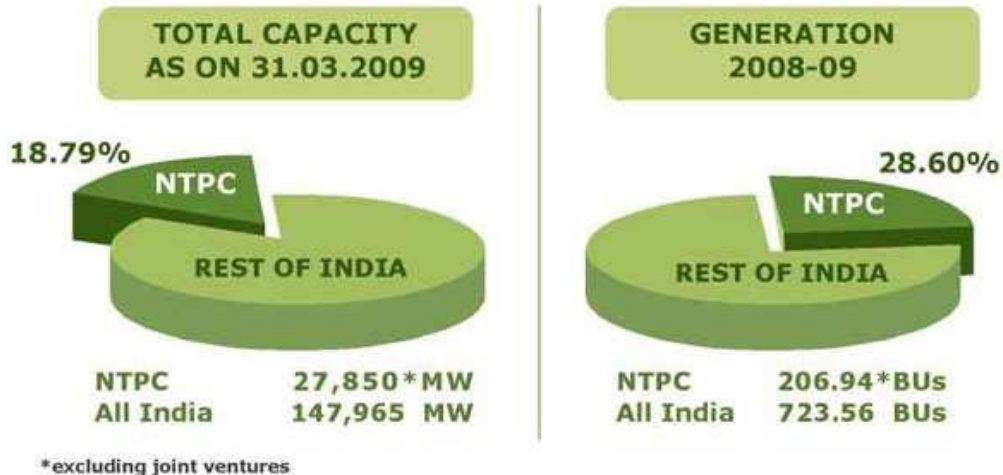
- ❖ Owner's Engineer Services
- ❖ Lender's Engineer Services
- ❖ Environment Engineering and Management
- ❖ Procurement Services

- ❖ Project Management
- ❖ Quality Assurance and Inspection Services
- ❖ Materials Management
- ❖ Construction Management, Erection and Commissioning
- ❖ Financial Systems and Modeling
- ❖ Operation and Maintenance
- ❖ Restoration, Efficiency Improvement and Renovation and Modernization
- ❖ HRD and Training
- ❖ Research and Development
- ❖ Information Technology
- ❖ Management Consultancy



In October 2004, NTPC launched its Initial Public Offering (IPO) consisting of 5.25% as fresh issue and 5.25% as offer for sale by Government of India. NTPC thus became a listed company in November 2004 with the government holding 89.5% of the equity share capital. The rest is held by Institutional Investors and the Public. The issue was a resounding success. NTPC is among the largest five companies in India in terms of market capitalization.

NTPC contributes more than one-fourth of India's total power generation with less than one-fifth capacity



At NTPC people before Plant Load Factor is the mantra that guides all HR related policies. NTPC has been awarded No.1, Best Workplace in India among large organizations for the year 2008, by the Great Places to Work Institute, India Chapter in collaboration with The Economic Times. The concept of Corporate Social Responsibility is deeply ingrained in NTPC's culture. through its expansive CSR initiatives. NTPC strives to develop mutual trust with the communities that surround its power stations. Right from social to developmental work of the community and welfare based dependence to creating greater self reliance; The constant endeavor is to institutionalize social responsibility on various levels.

Board of Directors

Shri R.S. Sharma	Chairman and Managing Director
Shri Chandan Roy,	Director of operation
Shri A.K Singhal	Director of Finance
Shri K.B Dubey	Director of Projects
Shri I.J Kapoor	Director of Commercial

Shri R.C. Shrivastav Director of Human Resources

Non-official part - time Director

Shri P.K. Sengupta

Shri M.N. Buch

Shri Shanti Narain

Shri K. Dharmarajan

Dr. M. Govinda Rao

Shri Adesh Jain

Shri Kanwal Nath

Shri Arun Kumar Sanwalka

Diversified Growth

NTPC's quest for diversification started about a decade back with its foray into Hydro Power. It has, since then, been moving towards becoming a highly diversified company through backward, forward and lateral integration. The company is well on its way to becoming 'an Integrated Power Major', having entered Hydro Power, Coal Mining, Power Trading, Equipment Manufacturing and Power Distribution. NTPC has made long strides in developing its Ash Utilization business.

In its pursuit of diversification, NTPC has also developed strategic alliances and joint ventures with leading national and international companies.

Hydro Power: In order to give impetus to hydro power growth in the country and to have a balanced portfolio of power generation, NTPC entered hydro power business with the 800 MW Koldam hydro projects in Himachal Pradesh. Two more projects have also been taken up in Uttarakhand. A wholly owned subsidiary, NTPC Hydro Ltd., is setting up hydro projects of capacities up to 250 MW.

Coal Mining: In a major backward integration move to create fuel security, NTPC has ventured into coal mining business with an aim to meet about 20% of its coal requirement from its captive mines by 2017. The Government of India has so far allotted 7 coal blocks to

NTPC, including 2 blocks to be developed through joint venture route. Coal Production is likely to start in 2009-10.

Power Trading: 'NTPC Vidyut Vyapar Nigam Ltd.' (NVVN), a wholly owned subsidiary was created for trading power leading to optimal utilization of NTPC's assets. It is the second largest power trading company in the country. In order to facilitate power trading in the country, 'National Power Exchange Ltd.', a JV between NTPC, NHPC, PFC and TCS has been formed for operating a Power Exchange.

Ash Business: NTPC has focused on the utilization of ash generated by its power stations to convert the challenge of ash disposal into an opportunity. Ash is being used as a raw material input for cement companies and brick manufacturers. NVVN is engaged in the business of Fly Ash export and sale to domestic customers.

Joint ventures with cement companies are being planned to set up cement grinding units in the vicinity of NTPC stations.

Power Distribution: 'NTPC Electric Supply Company Ltd.' (NESCL), a wholly owned subsidiary of NTPC, was set up for distribution of power. NESCL is actively engaged in 'Rajiv Gandhi Gramin Vidyutikaran Yojana' programme for rural electrification and also working as 'Advisor cum Consultant' for Ministry of Power for implementation of Accelerated Power Development and Reforms Programme (APDRP) launched by Government of India.

Equipment Manufacturing: Enormous growth in power sector necessitates augmentation of power equipment manufacturing capacity. NTPC has formed JVs with BHEL and Bharat Forge Ltd. for power plant equipment manufacturing. NTPC has also acquired stake in Transformers and Electricals Kerala Ltd. (TELK) for manufacturing and repair of transformers.



Future Capacity Additions

NTPC has formulated a long term Corporate Plan up to 2017. In line with the Corporate Plan, the capacity addition under implementation stage is presented below:

PROJECT	STATE	Fuel	MW
1. Kahalgaon-II (3X50 0)	Bihar	Coal	500
2. Sipat I (3 x 66 0)	Chhattisgarh	Coal	1980
3. Barh I (3 x 6 60)	Bihar	Coal	1980
4. Korba II I (1 x 500)	Chhattisgarh	Coal	500
5. Farakka II I (1 x 50 0)	West Bengal	Coal	500
6. NCTPP II (2 x 4 90)	Uttar Pradesh	Coal	980
7. Simhadri II (2 x 5 00)	Andhra Pradesh	Coal	1000
8. Indira Gandhi STPP- JV with IPGCL & HPGCL (3x500)	Haryana	Coal	1500
9. Vallur I - JV with TNEB (2 x 5 00)	Tamilnadu	Coal	1000
10. Nabinagar TP P- JV with Railways (4 x 2 50)	Bihar	Coal	1000
11. Bongaigaon (3 x 250)	Assam	Coal	750
12. Koldam HEPP (4 x 2 00)	Himachal Pradesh	Coal	800
13. Loharinag Pala HEPP (4x 1 50)	Uttarakhand	Coal	600
14. Tapovan Vishnugad HEPP (4 x 130)	Uttarakhand	Coal	520
15. Mauda (2 x 500)	Maharashtra	Coal	1000
16. Barh II I (2 X 6 60)	Bihar	Coal	1320
17. Vindhyachal-IV (2X5 00)	Madhya Pradesh	Coal	1000
18. Rihand III(2X500)	Uttar Pradesh	Coal	1000
Total			17,930

Subsidiaries

NTPC Electric Supply Company Ltd. (NESCL)

The company was formed on August 21, 2002. It is a wholly owned subsidiary company of NTPC with the objective of making a foray into the business of distribution and supply of electrical energy, as a sequel to reforms initiated in the power sector.

NTPC Vidyut Vyapar Nigam Ltd. (NVVN)

The company was formed on November 1, 2002, as a wholly owned subsidiary company of NTPC. The company's objective is to undertake sale and purchase of electric power, to effectively utilize installed capacity and thus enable reduction in the cost of power.

NTPC Hydro Ltd. (NHL)

The company was formed on December 12, 2002, as a wholly owned subsidiary company of NTPC with an objective to develop small and medium hydroelectric power projects of up to 250 MW.

Pipavav Power Development Co. Ltd. (PPDCL)

A memorandum of understanding was signed between NTPC, Gujarat Power Corporation Limited (GPCL) and Gujarat Electricity Board (GEB) in 2004 for development of a 1000 MW thermal power project at Pipavav in Gujarat by forming a new joint venture company between NTPC and GPCL with 50:50 equity participation. Pursuant to the decision of Gujarat Government, NTPC Ltd. has dissociated itself from this company. PPDCL is under winding up.

Kanti Bijlee Utpadan Nigam Limited, (formerly known as Vaishali Power Generating Company Limited)

To take over Muzaffarpur Thermal Power Station (2*110MW), a subsidiary company named 'Vaishali Power Generating Company Limited (VPGCL)' was incorporated on September 6, 2006 with NTPC contributing 51% of equity and balance equity was contributed by Bihar State Electricity Board. This company was formed to renovate the existing unit and run

the plant. The second unit has been successfully re-synchronized on October 17, 2007 after 4 years of being idle. Renovation and modernization of the first unit is under progress. The company was rechristened as 'Kanti Bijlee Utpadan Nigam Limited' on April 10, 2008.

Bharatiya Rail Bijlee Company Limited (BRBCL)

A subsidiary of NTPC under the name of 'Bharatiya Rail Bijlee Company Limited' was incorporated on November 22, 2007 with 74:26 equity contribution from NTPC and Ministry of Railways, Govt. of India respectively for setting up of four units of 250 MW each of coal based power plant at Nabinagar, Bihar. Investment approval of the project was accorded in January, 2008. Institute of Subsidiaries

NTPC Electric Supply Company Ltd. (NESCL)

The company was formed on August 21, 2002. It is a wholly owned subsidiary company of NTPC with the objective of making a foray into the business of distribution and supply of electrical energy, as a sequel to reforms initiated in the power sector.

JOINT VENTURES

S.No.	NAME OF JV CO.	Date of incorporation	Equity holding as on 31.3.2008	Area(s) of operation
1	PTC India Limited	16.04.99	NTPC 5.28% NHPC 5.28% PFC 5.28% Power Grid Corp 5.28%	Trading of power, import/export of power and purchase of power from identified private power projects and selling it to identified SEBs/others.
2	Utility Powertech Limited (UPL)	23.11.95	NTPC 50% Reliance Infrastructure Ltd. 50%	To take up assignments of construction, erection and supervision in power sector and other sectors in India and abroad
3	NTPC-SAIL Power Company Pvt. Ltd.	08.02.99	NTPC 50% SAIL 50%	To own and operate a capacity of 564 MW as captive power plants for SAIL's steel manufacturing facilities located at Durgapur, Rourkela and Bhilai. Another unit of 250 MW is expected to be commissioned shortly.
4	NTPC-Alstom Power Services Private Limited	20.09.99	NTPC 50% Alstom Power Generation AG 50%	To take up Renovation & Modernization assignments of power plants both in India and abroad.
5	NTPC Tamil Nadu Energy Company Ltd.	23.05.03	NTPC 50% Tamil Nadu Electricity Board 50%	To set up a coal-based power station of 1000MW capacity, at Vallur, using Ennore port infrastructure facilities. The construction work at site is under progress.

6	Ratnagiri Gas and power Pvt. Limited	08.07.05	NTPC 28.33%	To take over and operate gas based Dabhol Power Project along with LNG terminal. NTPC's shareholding is to be revised to 32.88%.
7	Aravali Power Company Private Ltd.	21.12.06	NTPC 50% Indraprastha Power Generation Co. Ltd. 25% Haryana Power Generation Corp. Ltd. 25%	To set up coal based power Project of 1500 MW (3x500 MW), in Jhajjar District of Haryana. NTPC would also operate and maintain the station on Management Contract basis for at least 25 years.
8	NTPC-SCCL Global Venture Pvt. Ltd.	31.07.07	NTPC 50% Singareni Collieries Company Ltd. 50%	To jointly undertake the development and operation & maintenance of coal Blocks and integrated coal based power projects in India and abroad.
9	Meja Urja Nigam Private Limited	02.04.08	NTPC 50% Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited 50%	To set-up a power plants of 1320 MW (2X660 MW) at Meja Tehsil or any other suitable site in Allahabad district in the state of Uttar Pradesh.

10	NTPC BHEL Power Projects Pvt Ltd.	28.04.08	NTPC 50% Bharat Heavy Electrical Ltd 50%	To carry out Engineering Procurement and Construction (EPC) activities in the power sector and to engage in manufacturing and supply of equipment for power plants and other infrastructure projects in india and abroad.
11	BF-NTPC Energy Systems Limited	19.06.08	NTPC 49% Bharat Forge Limited 51%	To establish a facility to take up manufacturing of castings, forgings, fittings and high pressure piping required for power projects and other industries, Balance of Plant (BOP) equipment for the power sector
12	Nabinagar Power Generating Company Private Limited	09.09.08	NTPC 50% NTPC Bihar State Electricity Board 50%	To set-up a coal based power project having capacity of 1980 MW (3X660 MW) and operation & maintenance thereof at Nabinagar in district Aurangabad of State of Bihar.
13	National Power Exchange Limited	11.12.08	NTPC 16.67% NHPC 16.67% PFC 16.66% TCS 50%	To operate a Power Exchange at National level.

Power Generation

Presently, NTPC generates power from Coal and Gas. With an installed capacity of 30,144 MW, NTPC is the largest power generating major in the country . It has also diversified into hydro power, coal mining, power equipment manufacturing, oil & gas exploration, power trading & distribution. With an increasing presence in the power value chain, NTPC is well on its way to becoming an “Integrated Power Major.”

Installed Capacity

Be it the generating capacity or plant performance or operational efficiency, NTPC’s Installed Capacity and performance depicts the company’s outstanding performance across a number of parametres.

	NO. OF PLANTS	CAPACITY (MW)
NTPC Owned		
Coal	15	23,895
Gas/Liquid Fuel	7	3,955
Total	22	27,850
Owned By JVs		
Coal & Gas	4	2,294
Total	26	30,144

Regional Spread of Generating Facilities

<u>REGION</u>	<u>COAL</u>	<u>GAS</u>	<u>TOTAL</u>
Northern	7,035	2,312	9,347
Western	6,360	1,293	7,653
Southern	3,600	350	3,950
Eastern	6,900	-	6,900
JVs	8,14	1,480	2,294
Total	24,709	5,435	30,144



COAL BASED POWER STATIONS

With 15 coal based power stations, NTPC is the largest thermal power generating company in the country. The company has a coal based installed capacity of 23,895 MW.

S.NO.	COAL BASED (NTPC OWNED)	STATE	CAPACITY(MW)
1	Singrauli	Uttar Pradesh	2,000
2	Korba	Chhattisgarh	2,100
3	Ramagundam	Andhra Pradesh	2,600
4	Farakka	West Bengal	1,600
5	Vindhyachal	Madhya Pradesh	3,260
6	Rihand	Uttar Pradesh	2,000
7	.Kahalgaon	Bihar	1,840
8	Dadri	Uttar Pradesh	840
9	Talcher Kaniha	Orissa	3,000
10	.Unchahar	Uttar Pradesh	1,050
11	.Talcher Thermal	Orissa	460
12	Simhadri	Andhra Pradesh	1,000
13	Tanda	Uttar Pradesh	440
14	.Badarpur	Delhi	705
15	Sipat-II	Chhattisgarh	1,000
TOTAL			23,895

COAL BASED JOINT VENTURES

S.No.	Coal based JV	State	Commissioned capacity (mw)
1	Durgapur	West Bengal	120
2	Rourkela	Orissa	120
3	Bhilai	Chhattisgarh	574
	total		814

GAS/LIQUID FUEL BASED POWER STATIONS

S.No.	Gas based (owned by ntpc)	State	Commissioned capacity(mw)
1	Anta	Rajasthan	413
2	Auraiya	Uttar Pradesh	652
3	kawas	Gujarat	645
4	Dadri	Uttar Pradesh	817
5	Jhanor-Gandhar	Gujarat	648
6	Rajiv Gandhi CCPP Kayamkulam	Kerala	350
7	Faridabad	Haryana	430
	total		3,955

GAS BASED JOINT VENTURES

S.No.	JV's	State	Commissioned capacity (mw)
1	RGPPL	Maharashtra	1480
	total		1480

HYDRO BASED POWER PROJECTS UNDER IMPLEMENTATION

NTPC has increased thrust on hydro development for a balanced portfolio for long term sustainability. The first step in this direction was taken by initiating investment in Koldam Hydro Electric Power Project located on Satluj river in Bilaspur district of Himachal Pradesh. Two other hydro projects under construction are Tapovan Vishnu gad and Loharinag Pala. On all these projects construction activities are in full swing.

S.No.	Hydro based	State	Approved capacity (mw)
1	Koldam (HEPP)	Himachal Pradesh	800
2	Loharinag Pala (HEPP)	Uttarakhand	600
3	Tapovan Vishnu gad (HEPP)	Uttarakhand	520
	total		

Operations

In terms of operations, NTPC has always been considerably above the national average. The availability factor for coal based power stations has increased from 89.32% in 1998-99 to 92.47% in 2008-09, which compares favorably with international standards. The PLF has increased from 76.6% in 1998-99 to 91.14% during the year 2008-09.



The table below shows that while the installed capacity has increased by 56.58% in the last ten years, generation has increased by 88.98%.

DESCRIPTION	UNIT	1998-99	2008-09	% OF INCREASE
Installed Capacity	MW	17,786	27,850	56.58
Generation	MUs	1,09,505	2,06,939	88.98

Turnaround Capability

NTPC has played an extremely important role in turning around sub-optimally performing stations. The phenomenal improvement in the performance of Badarpur, Unchahar, Talcher and Tanda by NTPC make them our big success stories.

Badarpur (705 MW)

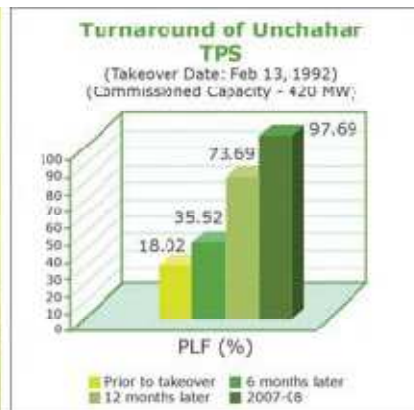
The expertise in R&M and performance turnaround was developed and built up by NTPC with the operational turnaround of Badarpur TPS through scientifically engineered R&M initiatives. The PLF of the power station improved from 31.94% at the time of the takeover to 86.46% for the year 2007-08.



Unchahar (420 MW)

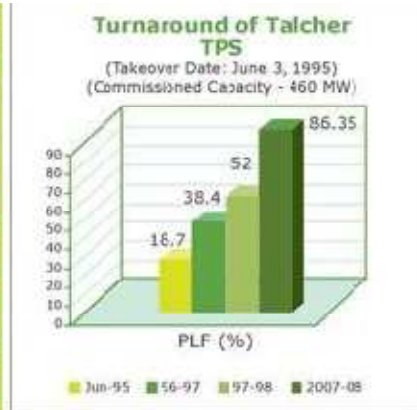
The Feroze Gandhi Unchahar Power Station was taken over by NTPC whereby the cash strapped UPSEB was rescued by the turnaround expertise of NTPC.

The remarkable speed and extent of the turnaround achieved can be seen in the table.



Talcher (460 MW)

An even more challenging turnaround story was being scripted at the OSEB's old power plant at Talcher. Taken over in June 1995, the table indicates the dramatic gains in the performance of the power plant as a result of NTPC's expertise.



Tanda (440 MW)

Tanda Thermal Power Station was taken over by NTPC on the 15 January 2000. The PLF of the power station improved from 21.59% at the time of the takeover to 91.66% for the year 2007-08.



While NTPC bettered PPA commitments, from the viewpoint of capital requirements, turning around such old units is a low cost, high and quick return option. This unprecedented success helped the concerned SEBs and the entire nation in terms of economy and power availability.

ACCOUNTING POLICIES

1. BASIS OF PREPARATION

The financial statements are prepared on accrual basis of accounting under historical cost convention in accordance with generally accepted accounting principles in India and the relevant provisions of the Companies Act, 1956 including accounting standards notified there under.

2. USE OF ESTIMATES

The preparation of financial statements requires estimates and assumptions that affect the reported amount of assets, liabilities, revenue and expenses during the reporting period. Although such estimates and assumptions are made on a reasonable and prudent basis taking into account all available information, actual results could differ from these estimates & assumptions and such differences are recognized in the period in which the results are crystallized.

3. GRANTS-IN-AID

3.1 Grants-in-aid received from the Central Government or other authorities towards capital expenditure as well as consumer's contribution to capital works are treated initially as capital reserve and subsequently adjusted as income in the same proportion as the depreciation written off on the assets acquired out of the grants.

3.2 Where the ownership of the assets acquired out of the grants vests with the government, the grants are adjusted in the carrying cost of such assets.

3.3 Grants from Government and other agencies towards revenue expenditure are recognized over the period in which the related costs are incurred and are deducted from the related expenses.

4. FIXED ASSETS

4.1 Fixed Assets are carried at historical cost.

4.2 Expenditure on renovation and modernisation of fixed assets resulting in increased life and/or efficiency of an existing asset is added to the cost of related assets.

4.3 Intangible assets are recorded at their cost of acquisition.

4.4 Capital expenditure on assets not owned by the Company is reflected as a distinct item in Capital Work-in-Progress till the period of completion and thereafter in the Fixed Assets.

4.5 Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relating to land in possession are treated as cost of land.

4.6 In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

4.7 Assets and systems common to more than one generating unit are capitalised on the basis of engineering estimates/assessments.

5. CAPITAL WORK-IN-PROGRESS

5.1 In respect of supply-cum-erection contracts, the value of supplies received at site and accepted is treated as Capital Work-in-Progress.

5.2 Incidental Expenditure during Construction (net) including corporate office expenses for the year, is apportioned to Capital Work-in-Progress.

5.3 Deposit work/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

5.4 Claims for price variation/exchange rate variation in case of contracts are accounted for on acceptance.

6. OIL AND GAS EXPLORATION COSTS

6.1 The Company follows 'Successful Efforts Method' for accounting of oil & gas exploration activities.

6.2 Cost of surveys and prospecting activities conducted in search of oil and gas are expensed off in the year in which these are incurred.

6.3 All acquisition costs are initially capitalized as 'Exploratory Wells-in-Progress' under Capital Work-in-Progress.

7. DEVELOPMENT OF COAL MINES

Expenditure on exploration of new coal deposits is capitalized as 'Development of coal mines' under Capital Work-in-Progress till the mines project is brought to revenue account.

8. FOREIGN CURRENCY TRANSACTIONS

8.1 Foreign currency transactions are initially recorded at the rates of exchange ruling at the date of transaction.

8.2 At the balance sheet date, foreign currency monetary items are reported using the closing rate. Non-monetary items denominated in foreign currency are reported at the exchange rate ruling at the date of transaction.

8.3 Exchange differences arising from translation of foreign currency loans relating to fixed assets/capital work-in-progress to the extent regarded as an adjustment to interest cost are treated as borrowing cost.

8.4 Other exchange differences are recognized as income or expense in the period in which they arise.

9. BORROWING COSTS

Borrowing costs attributable to the fixed assets during construction/renovation and modernisation are capitalised. Such borrowing costs are apportioned on the average balance of capital work-in-progress for the year. Other borrowing costs are recognised as an expense in the period in which they are incurred.

10. INVESTMENTS

10.1 Current Investments are valued at lower of cost and fair value determined on an individual investment basis.

10.2 Long term investments are carried at cost. Provision is made for diminution, other than temporary, in the value of such investments.

10.3 Premium paid on long term investments is amortised over the period remaining to maturity.

11. INVENTORIES

11.1 Inventories are valued at the lower of cost, determined on weighted average basis, and net realizable value.

11.2 Diminution in value of obsolete and unserviceable stores and spares is ascertained on review and provided for.

RATIO ANALYSIS

INTRODUCTION

Financial ratio analysis is a fascinating topic to study because it can teach us so much about accounts and businesses. When we use ratio analysis we can work out how profitable a business is, we can tell if it has enough money to pay its bills and we can even tell whether its shareholders should be happy! Ratio analysis can also help us to check whether a business is doing better this year than it was last year; and it can tell us if our business is doing better or worse than other businesses doing and selling the same things.

Ratio analysis

Ratio analysis is one of the techniques of financial analysis to evaluate the financial condition and performance of a business concern. Simply, ratio means the comparison of one figure to other relevant figure or figures.

According to Myers , "Ratio analysis of financial statements is a study of relationship among various financial factors in a business as disclosed by a single set of statements and a study of trend of these factors as shown in a series of statements."

Advantages and Uses of Ratio Analysis

There are various groups of people who are interested in analysis of financial position of a company. They use the ratio analysis to work out a particular financial characteristic of the company in which they are interested. Ratio analysis helps the various groups in the following manner:

- ❖ **To workout the profitability:** Accounting ratio help to measure the profitability of the business by calculating the various profitability ratios. It helps the management to know about the earning capacity of the business concern. In this way profitability ratios show the actual performance of the business.
- ❖ **To workout the solvency:** With the help of solvency ratios, solvency of the company can be measured. These ratios show the relationship between the liabilities and assets. In case external liabilities are more than that of the assets of the company, it shows the unsound position of the business. In this case the business has to make it possible to repay its loans.

- ❖ **Helpful in analysis of financial statement:** Ratio analysis help the outsiders just like creditors, shareholders, debenture-holders, bankers to know about the profitability and ability of the company to pay them interest and dividend etc.
- ❖ **Helpful in comparative analysis of the performance:** With the help of ratio analysis a company may have comparative study of its performance to the previous years. In this way company comes to know about its weak point and be able to improve them.
- ❖ **To simplify the accounting information:** Accounting ratios are very useful as they briefly summarize the result of detailed and complicated computations.
- ❖ **To workout the operating efficiency:** Ratio analysis helps to workout the operating efficiency of the company with the help of various turnover ratios. All turnover ratios are worked out to evaluate the performance of the business in utilising the resources.
- ❖ **To workout short-term financial position:** Ratio analysis helps to work out the short-term financial position of the company with the help of liquidity ratios. In case short-term financial position is not healthy efforts are made to improve it.
- ❖ **Helpful for forecasting purposes:** Accounting ratios indicate the trend of the business. The trend is useful for estimating future. With the help of previous years' ratios, estimates for future can be made. In this way these ratios provide the basis for preparing budgets and also determine future line of action.

Limitations of Ratio Analysis

In spite of many advantages, there are certain limitations of the ratio analysis techniques and they should be kept in mind while using them in interpreting financial statements. The following are the main limitations of accounting ratios:

- ❖ **Limited Comparability:** Different firms apply different accounting policies. Therefore the ratio of one firm cannot always be compared with the ratio of other firm. Some firms may value the closing stock on LIFO basis while some other firms may value on FIFO basis. Similarly there may be difference in providing depreciation of fixed assets or certain of provision for doubtful debts etc.

- ❖ **False Results:** Accounting ratios are based on data drawn from accounting records. In case that data is correct, then only the ratios will be correct. For example, valuation of stock is based on very high price, the profits of the concern will be inflated and it will indicate a wrong financial position. The data therefore must be absolutely correct.
- ❖ **Effect of Price Level Changes:** Price level changes often make the comparison of figures difficult over a period of time. Changes in price affect the cost of production, sales and also the value of assets. Therefore, it is necessary to make proper adjustment for price-level changes before any comparison.
- ❖ **Qualitative factors are ignored:** Ratio analysis is a technique of quantitative analysis and thus, ignores qualitative factors, which may be important in decision making. For example, average collection period may be equal to standard credit period, but some debtors may be in the list of doubtful debts, which is not disclosed by ratio analysis.
- ❖ **Effect of window-dressing :** In order to cover up their bad financial position some companies resort to window dressing. They may record the accounting data according to the convenience to show the financial position of the company in a better way.
- ❖ **Costly Technique :** Ratio analysis is a costly technique and can be used by big business houses. Small business units are not able to afford it.
- ❖ **Misleading Results :** In the absence of absolute data, the result may be misleading. For example, the gross profit of two firms is 25%. Whereas the profit earned by one is just Rs. 5,000 and sales are Rs. 20,000 and profit earned by the other one is Rs. 10,00,000 and sales are Rs. 40,00,000. Even the profitability of the two firms is same but the magnitude of their business is quite different.
- ❖ **Absence of standard university accepted terminology:** There are no standard ratios, which are universally accepted for comparison purposes. As such, the significance of ratio analysis technique is reduced.

Users of Accounting Information

Now we know the kinds of questions we need to ask and we know the ratios available to us, we need to know who might ask all of these questions! This is an important issue because the person asking the question will normally need to know something particular. Of course, anyone can read and ask questions about the accounts of a business; but in the same way that we can put the ratios into groups, we should put readers and users of accounts into convenient groups, too: let's look at that now. The list of categories of readers and users of accounts includes the following people and groups of people:

- Investors
- Lenders
- Managers of the organisation
- Employees
- Suppliers and other trade creditors
- Customers
- Governments and their agencies
- Public
- Financial analysts
- Environmental groups
- Researchers: both academic and professional

What do the Users of Accounts Need to Know?

The users of accounts that we have listed will want to know the sorts of things we can see in the table below: this is not necessarily everything they will ever need to know, but it is a starting point for us to think about the different needs and questions of different users.

Investors	to help them determine whether they should buy shares in the business, hold on to the shares they already own or sell the shares they already own. They also want to assess the ability of the business to pay dividends.
Lenders	to determine whether their loans and interest will be paid when due Managers might need segmental and total information to see how they fit into the overall picture
Employees	information about the stability and profitability of their employers to assess the ability of the business to provide remuneration, retirement benefits and employment opportunities
Suppliers & other trade creditors	businesses supplying goods and materials to other businesses will read their accounts to see that they don't have problems: after all, any supplier wants to know if his customers are going to pay their bills!
Customers	the continuance of a business, especially when they have a long term involvement with, or are dependent on, the business
Governments and their agencies	the allocation of resources and, therefore, the activities of business. To regulate the activities of business, determine taxation policies and as the basis for national income and similar statistics
Local community	Financial statements may assist the public by providing information about the trends and recent developments in the prosperity of the business and the range of its activities as they affect their area
Financial analysts	they need to know, for example, the accounting concepts employed for inventories, depreciation, bad debts and so on.

Environmental groups	many organisations now publish reports specifically aimed at informing us about how they are working to keep their environment clean.
Researchers	researchers' demands cover a very wide range of lines of enquiry ranging from detailed statistical analysis of the income statement and balance sheet data extending over many years to the qualitative analysis of the wording of the statement

Which ratios will each of these groups be interested in?

Interest Group	Ratios to watch
Investors	Return on Capital Employed
Man agers	Profitability ratios
Lenders	Gearing ratios
Employees	Return on Capital Employed
Suppliers and other trade creditors	Liquidity
Customers	Profitability
Governments an d their agencies	Profitability
Loc al Community	This could be a long and interesting list
Financial analysts	Possibly all ratios

CLASSIFICATION OF RATIOS

Ratios may be classified in a number of ways to suit any particular purpose. Different kinds of ratios are selected for different types of situations. Mostly, the purpose for which the ratios are used and the kind of data available determine the nature of analysis. The various accounting ratios can be classified as follows:

Profitability ratios :

- Gross profit ratio
- Net profit ratio
- Operating ratio
- Expense ratio
- Return on shareholders' investment or net worth
- Return on equity capital
- Return on capital employed (ROCE) ratio
- Dividend yield ratio
- Dividend payout ratio
- Earnings Per Share Ratio
- Price earnings ratio

Liquidity ratios :

- Current ratio
- Liquid /Acid test / Quick ratio

Activity ratios :

- Inventory/Stock turnover ratio
- Debtors/Receivables turnover ratio
- Average collection period
- Creditors/Payable turnover ratio
- Working capital turnover ratio
- Fixed assets turnover ratio
- Over and under trading

Leverage ratios or long term solvency ratios :

- Debt equity ratio
- Proprietary or Equity ratio
- Ratio of fixed assets to shareholders funds
- Ratio of current assets to shareholders funds
- Interest coverage or debt service ratio
- Capital gearing ratio
- Over and under capitalization

Gross profit ratio (GP ratio):- Gross profit ratio is the ratio of gross profit to net sales expressed as a percentage. It expresses the relationship between gross profit and sales.

$$\text{Gross Profit Ratio} = \text{GROSS PROFIT} / \text{NET SALES} \times 100$$

Significance:

Gross profit ratio may be indicated to what extent the selling prices of goods per unit may be reduced without incurring losses on operations. It reflects efficiency with which a firm produces its products. As the gross profit is found by deducting cost of goods sold from net sales, higher the gross profit better it is. There is no standard GP ratio for evaluation. It may vary from business to business. However, the gross profit earned should be sufficient to recover all operating expenses and to build up reserves after paying all fixed interest charges and dividends.

Causes / reasons of increase or decrease in gross profit ratio:

It should be observed that an **increase** in the GP ratio may be due to the following factors.

1. Increase in the selling price of goods sold without any corresponding increase in the cost of goods sold.
2. Decrease in cost of goods sold without corresponding decrease in selling price.
3. Omission of purchase invoices from account
4. Under valuation of opening stock or overvaluation of closing stock.

On the other hand, the **decrease** in the gross profit ratio may be due to the following factors.

1. Decrease in the selling price of goods, without corresponding decrease in the cost of goods sold.
2. Increase in the cost of goods sold without any increase in selling price.
3. Unfavorable purchasing or markup policies.
4. Inability of management to improve sales volume, or omission of sales.
5. Overvaluation of opening stock or under valuation of closing stock

Hence, an analysis of gross profit margin should be carried out in the light of the information relating to purchasing, mark-ups and markdowns, credit and collections as well as merchandising policies.

Net profit ratio: - Net profit ratio is the ratio of net profit (after taxes) to net sales. It is expressed as percentage.

Components of net profit ratio:

The two basic components of the net profit ratio are the net profit and sales. The net profits are obtained after deducting income-tax and, generally, non-operating expenses and incomes are excluded from the net profits for calculating this ratio. Thus, incomes such as interest on investments outside the business, profit on sales of fixed assets and losses on sales of fixed assets, etc are excluded.

Formula:

$$\text{Net Profit Ratio} = \text{NET PROFIT} / \text{NET SALES} \times 100$$

Significance:

NP ratio is used to measure the overall profitability and hence it is very useful to proprietors. The ratio is very useful as if the net profit is not sufficient, the firm shall not be able to achieve a satisfactory return on its investment. This ratio also indicates the firm's capacity to face adverse economic conditions such as price competition, low demand, etc. Obviously, higher the ratio the better is the profitability. But while interpreting the ratio it should be kept in minds that the performance of profits also be seen in relation to investments or capital of the firm and not only in relation to sales.

Operating ratio : - Operating ratio is the ratio of cost of goods sold plus operating expenses to net sales. It is generally expressed in percentage. It measures the cost of operations per dollar of sales. This is closely related to the ratio of operating profit to net sales.

Components:

The two basic components for the calculation of operating ratio are operating cost (cost of goods sold plus operating expenses) and net sales. Operating expenses normally include (a) administrative and office expenses and (b) selling and distribution expenses. Financial charges such as interest, provision for taxation etc. are generally excluded from operating expenses.

Formula of operating ratio:

Operating Ratio =

Cost of goods sold + Operating expenses X 100

Net Sales

Operating ratio shows the operational efficiency of the business. Lower operating ratio shows higher operating profit and vice versa. An operating ratio ranging between 75% and 80% is generally considered as standard for manufacturing concerns.

Expense ratios : - Expense ratios indicate the relationship of various expenses to net sales. The operating ratio reveals the average total variations in expenses. But some of the expenses may be increasing while some may be falling. Hence, expense ratios are calculated by dividing each item of expenses or group of expense with the net sales to analyze the cause of variation of the operating ratio.

The ratio can be calculated for individual items of expense or a group of items of a particular type of expense like cost of sales ratio, administrative expense ratio, selling expense ratio, materials consumed ratio, etc. The lower the operating ratio, the larger is the profitability and higher the operating ratio, lower is the profitability. While interpreting expense ratio, it must be remembered that for a fixed expense like rent, the ratio will fall if the sales increase and for a variable expense, the ratio in proportion to sales shall remain nearly the same.

Formula of Expense Ratio:

Following formula is used for the calculation of expense ratio:

$$\text{Particular Expense} = \text{Particular expense} / \text{Net sales} \times 100$$

Return on share holder's investment:- It is the ratio of net profit to share holder's investment. It is the relationship between net profit (after interest and tax) and share holder's/proprietor's fund. This ratio establishes the profitability from the share holders' point of view. The ratio is generally calculated in percentage.

Components:

The two basic components of this ratio are net profits and shareholder's funds. Shareholder's funds include equity share capital, (preference share capital) and all reserves and surplus belonging to shareholders. Net profit means net income after payment of interest and income tax because those will be the only profits available for share holders.

Formula of return on shareholder's investment or net worth Ratio:

$$\text{Return on share holder's investment} = \frac{\text{Net profit (after interest and tax)}}{\text{Share holder's fund}} \times 100$$

Significance:

This ratio is one of the most important ratios used for measuring the overall efficiency of a firm. As the primary objective of business is to maximize its earnings, this ratio indicates the extent to which this primary objective of businesses being achieved. This ratio is of great importance to the present and prospective shareholders as well as the management of the company.

Return on Equity Capital (ROEC) Ratio

In real sense, ordinary shareholders are the real owners of the company. They assume the highest risk in the company. (Preference share holders have a preference over ordinary shareholders in the payment of dividend as well as capital. Preference share holders get a fixed rate of dividend irrespective of the quantum of profits of the company). The rate of dividends varies with the availability of profits in case of ordinary shares only. Thus ordinary shareholders are more interested in the profitability of a company and the performance of a company should be judged on the basis of return on equity capital of the company. Return on equity capital which is the relationship between profits of a company and its equity, can be calculated as follows:

Formula of return on equity capital or common stock:

Formula of return on equity capital ratio is:

Return on Equity Capital =

Net profit after tax - Preference dividend x 100

Equity share capital

Components:

Equity share capital should be the total called-up value of equity shares. As the profit used for the calculations are the final profits available to equity shareholders as dividend, therefore the preference dividend and taxes are deducted in order to arrive at such profits.

Significance:

This ratio is more meaningful to the equity shareholders who are interested to know profits earned by the company and those profits which can be made available to pay dividends to them. Interpretation of the ratio is similar to the interpretation of return on shareholder's investments and higher the ratio better is.

Return on Capital Employed Ratio (ROCE Ratio):

The prime objective of making investments in any business is to obtain satisfactory return on capital invested. Hence, the return on capital employed is used as a measure of success of a business in realizing this objective. Return on capital employed establishes the relationship between the profit and the capital employed. It indicates the percentage of return on capital employed in the business and it can be used to show the overall profitability and efficiency of the business.

Definition of Capital Employed:

Capital employed and operating profits are the main items. Capital employed may be defined in a number of ways. However, two widely accepted definitions are "gross capital employed" and "net capital employed". Gross capital employed usually means the total assets, fixed as well as current, used in business, while net capital employed refers to total assets minus liabilities. On the other hand, it refers to total of capital, capital reserves, revenue reserves (including profit and loss account balance), debentures and long term loans.

Calculation of Capital Employed:

Method- -1. If it is calculated from the assets side, It can be worked out by adding the following:

1. The fixed assets should be included at their net values, either at original cost or at replacement cost after deducting depreciation. In days of inflation, it is better to include fixed assets at replacement cost which is the current market value of the assets.
2. Investments inside the business
3. All current assets such as cash in hand, cash at bank, sundry debtors, bills receivable, stock, etc.
4. To find out net capital employed, current liabilities are deducted from the total of the assets as calculated above.

Gross capital employed = Fixed assets + Investments + Current assets

Net capital employed = Fixed assets + Investments + Working capital .

Working capital = current assets – current liabilities.

Method --2. Alternatively, capital employed can be calculated from the liabilities side of a balance sheet. If it is calculated from the liabilities side, it will include the following items:

Share capital:

Issued share capital (Equity + Preference)

Reserves and Surplus:

General reserve

Capital reserve

Profit and Loss account

Debentures

Other long term loans

Some people suggest that average capital employed should be used in order to give effect of the capital investment throughout the year. It is argued that the profit earned remain in the business throughout the year and are distributed by way of dividends only at the end of the year. Average capital may be calculated by dividing the opening and closing capital employed by two. It can also be worked out by deducting half of the profit from capital employed.

Computation of profit for return on capital employed:

The profits for the purpose of calculating return on capital employed should be computed according to the concept of capital employed used". The profits taken must be the profits earned on the capital employed in the business. Thus, net profit has to be adjusted for the following:

- Net profit should be taken before the payment of tax or provision for taxation because tax is paid after the profits have been earned and has no relation to the earning capacity of the business.
- If the capital employed is gross capital employed then net profit should be considered before payment of interest on long-term as well as short-term borrowings.
- If the capital employed is used in the sense of net capital employed than only interest on long term borrowings should be added back to the net profits and not interest on short term borrowings as current liabilities are deducted while calculating net capital employed.

- If any asset has been excluded while computing capital employed, any income arising from these assets should also be excluded while calculating net profits. For example, interest on investments outside business should be excluded.
- Net profits should be adjusted for any abnormal, non recurring, non operating gains or losses such as profits and losses on sales of fixed assets.
- Net profits should be adjusted for depreciation based on replacement cost, if assets have been added at replacement cost.

Formula of return on capital employed ratio:

$$\text{Return on Capital Employed} = \frac{\text{Adjusted net profits}}{\text{Capital employed}} \times 100$$

Significance of Return on Capital Employed Ratio:

Return on capital employed ratio is considered to be the best measure of profitability in order to assess the overall performance of the business. It indicates how well the management has used the investment made by owners and creditors into the business. It is commonly used as a basis for various managerial decisions. As the primary objective of business is to earn profit, higher the return on capital employed, the more efficient the firm is in using its funds. The ratio can be found for a number of years so as to find a trend as to whether the profitability of the company is improving or otherwise.

Dividend Yield Ratio:

Definition: Dividend yield ratio is the relationship between dividends per share and the market value of the shares. Share holders are real owners of a company and they are interested in real sense in the earnings distributed and paid to them as dividend. Therefore, dividend yield ratio is calculated to evaluate the relationship between dividends per share paid and the market value of the shares.

Formula of Dividend Yield Ratio:

$$\text{Dividend Yield Ratio} = \frac{\text{Dividend Per Share}}{\text{Market Value Per Share}}$$

Significance of the Ratio:

This ratio helps as intending investor knows the effective return he is going to get on the proposed investment.

Dividend Payout Ratio:-

Dividend payout ratio is calculated to find the extent to which earnings per share have been used for paying dividend and to know what portion of earnings has been retained in the business. It is an important ratio because ploughing back of profits enables a company to grow and pay more dividends in future.

Formula of Dividend Payout Ratio:

$$\text{Dividend Payout Ratio} = \frac{\text{Dividend per Equity Share}}{\text{Earnings per Share}}$$

Retained Earning Ratio:-

A complementary of this ratio is retained earnings ratio. Retained earnings ratio is calculated by using the following formula:

$$\text{Retained Earning Ratio} = \frac{\text{Retained Earning Per Equity Share}}{\text{Earning Per Equity Share}}$$

Significance of the Ratio:

The payout ratio and the retained earnings ratio are the indicators of the amount of earnings that have been ploughed back in the business. The lower the payout ratio, the higher will be the amount of earnings ploughed back in the business and vice versa. A lower payout ratio or higher retained earnings ratio means a stronger financial position of the company.

Earnings per Share (EPS) Ratio :-

Definition: Earnings per share ratio (EPS Ratio) are a small variation of return on equity capital ratio and are calculated by dividing

the net profit after taxes and preference dividend by the total number of equity shares.

Formula of Earnings per Share Ratio:

Earnings per share (EPS) Ratio =

Net profit after tax - Preference dividend

No. of equity shares

Significance:

The earnings per share is a good measure of profitability and when compared with EPS of similar companies, it gives a

view of the comparative earnings or earnings power of the firm. EPS ratio calculated for a number of years indicates

whether or not the earning power of the company has increased.

Price Earnings Ratio (PE Ratio):

Definition:

Price earnings ratio (P/ E ratio) is the ratio between market price per equity share and earning per share. The ratio is calculated to make an estimate of appreciation in the value of a share of a company and is widely used by investors to decide whether or not to buy shares in a particular company.

Formula of Price Earnings Ratio:

Price Earnings Ratio = Market price per equity share

Earnings per share

Significance of Price Earnings Ratio:

Price earnings ratio helps the investor in deciding whether to buy or not to buy the shares of a particular company at a particular market price.

Generally, higher the price earning ratio the better it is. If the P/E ratio falls, the management should look into the causes that have resulted into the fall of this ratio.

Current Ratio:

Definition: Current ratio may be defined as the relationship between current assets and current liabilities. This ratio is also known as "working capital ratio ". It is a measure of general liquidity and is most widely used to make the analysis for short term financial position or liquidity of a firm. It is calculated by dividing the total of the current assets by total of the current liabilities.

Formula:

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

Components:

The two basic components of this ratio are **current assets** and current liabilities. Current assets include cash and those assets which can be easily converted into cash within a short period of time, generally, one year, such as marketable securities or readily realizable investments, bills receivables, sundry debtors, (excluding bad debts or provisions), inventories, work in progress, etc. Prepaid expenses should also be included in current assets because they represent payments made in advance which will not have to be paid in near future. **Current liabilities** are those obligations which are payable within a short period of time generally one year and include outstanding expenses, bills payable, sundry creditors, bank overdraft, accrued expenses, short term advances, income tax payable, dividend payable, etc. However, sometimes a controversy arises that whether overdraft should be regarded as current liability or not. Often an arrangement with a bank may be regarded as permanent and therefore, it may be treated as long term liability. At the same time the fact remains that the overdraft facility may be cancelled at any time. Accordingly, because of this reason and the need for conversion in interpreting a situation, it seems advisable to include overdrafts in current liabilities.

Significance :

This ratio is a general and quick measure of liquidity of a firm. It represents the margin of safety or cushion available to the creditors. It is an index of the firm's financial stability. It is also an index of technical solvency and an index of the strength of working capital.

A relatively high current ratio is an indication that the firm is liquid and has the ability to pay its current obligations in time and when they become due. On the other hand, a relatively low current ratio represents that the liquidity position of

the firm is not good and the firm shall not be able to pay its current liabilities in time without facing difficulties. An increase in the current ratio represents improvement in the liquidity position of the firm while a decrease in the current ratio represents that there has been deterioration in the liquidity position of the firm. A ratio equal to or near 2:1 is considered as a standard or normal or satisfactory. The idea of having doubled the current assets as compared to current liabilities is to provide for the delays and losses in the realization of current assets. However, the rule of 2:1 should not be blindly used while making interpretation of the ratio. Firms having less than 2 : 1 ratio may be having a better liquidity than even firms having more than 2 : 1 ratio. This is because of the reason that current ratio measures the quantity of the current assets and not the quality of the current assets. If a firm's current assets include debtors which are not recoverable or stocks which are slow-moving or obsolete, the current ratio may be high but it does not represent a good liquidity position.

Limitations of Current Ratio :

This ratio is measure of liquidity and should be used very carefully because it suffers from many limitations. It is, therefore, suggested that it should not be used as the sole index of short term solvency.

1. It is crude ratio because it measures only the quantity and not the quality of the current assets.
2. Even if the ratio is favorable, the firm may be in financial trouble, because of more stock and work in process which is not easily convertible into cash, and, therefore firm may have less cash to pay off current liabilities.
3. Valuation of current assets and window dressing is another problem. This ratio can be very easily manipulated by overvaluing the current assets. An equal increase in both current assets and current liabilities would decrease the ratio and similarly equal decrease in current assets and current liabilities would increase current ratio.

Liquid or Liquidity or Acid Test or Quick Ratio: -

Definition:

Liquid ratio is also termed as "Liquidity Ratio ", "Acid Test Ratio " or "Quick Ratio ". It is the ratio of liquid assets to current liabilities. The true liquidity refers to the ability of a firm to pay its short term obligations as and when they become due.

Components:

The two components of liquid ratio (acid test ratio or quick ratio) are liquid assets and liquid liabilities. Liquid assets normally include cash, bank, sundry debtors, bills receivable and marketable securities or temporary investments. In other words they are current assets minus inventories (stock) and prepaid expenses. Inventories cannot be termed as liquid assets because it cannot be converted into cash immediately without a loss of value. In the same manner, prepaid expenses are also excluded from the list of liquid assets because they are not expected to be converted into cash. Similarly, Liquid liabilities means current liabilities i.e., sundry creditors, bills payable, outstanding expenses, short term advances, income tax payable, dividends payable, and bank overdraft (only if payable on demand). Some time bank Over draft is not included in current liabilities, on the argument that bank overdraft is generally permanent way of financing and is not subject to be called on demand. In such cases overdraft will be excluded from current liabilities.

Formula of Liquidity Ratio:

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

Significance:

The quick ratio/acid test ratio is very useful in measuring the liquidity position of a firm. It measures the firm's capacity to pay off current obligations immediately and is more rigorous test of liquidity than the current ratio. It is used as a complementary ratio to the current ratio. Liquid ratio is more rigorous test of liquidity than the current ratio because it eliminates inventories and prepaid expenses as a part of current assets. Usually a high liquid ratio an indication that the firm is liquid and has the ability to meet its current or liquid liabilities in time and on the other hand a low liquidity ratio represents that the firm's liquidity position is not good. As a convention, generally, a quick ratio of "one to one" (1:1) is considered to be satisfactory. Although liquidity ratio is more rigorous test of liquidity than the current ratio , yet it should be used cautiously and 1:1 standard should not be used blindly.

A liquid ratio of 1:1 does not necessarily mean satisfactory liquidity position of the firm if all the debtors cannot be realized and cash is needed immediately to meet the current obligations. In the same manner, a low liquid ratio does not necessarily mean a bad liquidity position as inventories are not absolutely non-liquid.

Hence, a firm having a high liquidity ratio may not have a satisfactory liquidity position if it has slow-paying debtors. On the other hand, a firm having a low liquid ratio may have a good liquidity position if it has a fast moving inventory. Though this ratio is definitely an improvement over current ratio, the interpretation of this ratio also suffers from the same limitations as of current ratio.

Inventory Turnover Ratio or Stock Turnover Ratio (ITR):

Definition:

Stock turnover ratio and inventory turnover ratio are the same. This ratio is a relationship between the cost of goods sold during a particular period of time and the cost of average inventory during a particular period. It is expressed in number of times. Stock turnover ratio / Inventory turnover ratio indicates the number of time the stock has been turned over during the period and evaluates the efficiency with which a firm is able to manage its inventory. This ratio indicates whether investment in stock is within proper limit or not.

Components of the Ratio:

Average inventory and cost of goods sold are the two elements of this ratio. Average inventory is calculated by adding the stock in the beginning and at the end of the period and dividing it by two. In case of monthly balances of stock, all the monthly balances are added and the total is divided by the number of months for which the average is calculated.

Formula of Stock Turnover/Inventory Turnover Ratio:

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average inventory at cost}}$$

Significance of ITR :

Inventory turnover ratio measures the velocity of conversion of stock into sales. Usually a high inventory turnover/stock velocity indicates efficient management of inventory because more frequently the stocks are sold; the lesser amount of money is required to finance the inventory. A low inventory turnover ratio indicates an inefficient management of inventory. A low inventory turnover implies over-investment in inventories, dull business, poor quality of goods, stock accumulation, accumulation of obsolete and slow moving goods and low

profits as compared to total investment. The inventory turnover ratio is also an index of profitability, where a high ratio signifies more profit; a low ratio signifies low profit.

Debtors Turnover Ratio or Receivables Turnover Ratio:

A concern may sell goods on cash as well as on credit. Credit is one of the important elements of sales promotion. The volume of sales can be increased by following a liberal credit policy. The effect of a liberal credit policy may result in tying up substantial funds of a firm in the form of trade debtors (or receivables). Trade debtors are expected to be converted into cash within a short period of time and are included in current assets. Hence, the liquidity position of concern to pay its short term obligations in time depends upon the quality of its trade debtors.

Definition: Debtors turnover ratio indicates the velocity of debt collection of a firm. In simple words it indicates the number of times average debtors (receivable) are turned over during a year.

Formula of Debtors Turnover Ratio :

$$\text{Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Average Trade Debtors}}$$

The two basic components of the ratio are net credit annual sales and average trade debtors. The trade debtors for the purpose of this ratio include the amount of Trade Debtors & Bills Receivables. The average receivables are found by adding the opening receivables and closing balance of receivables and dividing the total by two

But when the information about opening and closing balances of trade debtors and credit

sales is not available, then the debtors turnover ratio can be calculated by dividing the total sales by the balance of debtors (inclusive of bills receivables) given. and formula can be written as follows.

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

Significance of the Ratio:

This ratio indicates the number of times the debtors are turned over a year. The higher the value of debtor's turnover the more efficient is the management of debtors or more liquid the debtors are. Similarly, low debtors turnover ratio implies inefficient management of debtors or less liquid debtors. It is the reliable measure of the time of cash flow from credit sales. There is no rule of thumb which may be used as a norm to interpret the ratio as it may be different from firm to firm.

Average Collection Period Ratio:

Definition: The Debtors / Receivable Turnover ratio when calculated in terms of days is known as Average Collection Period or Debtors Collection Period Ratio . The average collection period ratio represents the average number of days for which a firm has to wait before its debtors are converted into cash.

Formula of Average Collection Period:

$$\text{Average collection period} = \frac{\text{Trade Debtors} \times \text{No. of Working Days}}{\text{Net Credit Sales}}$$

Significance of the Ratio:

This ratio measures the quality of debtors. A short collection period implies prompt payment by debtors. It reduces the chances of bad debts. Similarly, a longer collection period implies too liberal and inefficient credit collection performance. It is difficult to provide a standard collection period of debtors.

Creditors / Accounts Payable Turnover Ratio:

Definition: This ratio is similar to the debtor's turnover ratio. It compares creditors with the total credit purchases. It signifies the credit period enjoyed by the firm in paying creditors. Accounts payable include both sundry creditors and bills payable. Same as debtors' turnover ratio, creditors turnover ratio can be calculated in two forms, creditors turnover ratio and average payment period.

Formula:

$$\text{Creditors Turnover Ratio} = \frac{\text{Credit Purchase}}{\text{Average Trade Creditor}}$$

Average Payment Period: -

Average payment period ratio gives the average credit period enjoyed from the creditors. It can be calculated using the following formula:

$$\text{Average Payment Period} = \frac{\text{Trade Creditors} \times \text{No. of Working Days}}{\text{Net Credit Purchase}}$$

(In case information about credit purchase is not available total purchases may be assumed to be credit purchase.)

Significance of the Ratio:

The average payment period ratio represents the number of days by the firm to pay its creditors. A high creditor's turnover ratio or a lower credit period ratio signifies that the creditors are being paid promptly. This situation enhances the credit worthiness of the company. However a very favorable ratio to this effect also shows that the business is not taking the full advantage of credit facilities allowed by the creditors.

Working Capital Turnover Ratio:

Definition: Working capital turnover ratio indicates the velocity of the utilization of net working capital. This ratio represents the number of times the working capital is turned over in the course of year and is calculated as follows:

Formula of Working Capital Turnover Ratio:

$$\text{Working Capital Turnover Ratio} = \frac{\text{Cost of Sales}}{\text{Net Working Capital}}$$

The two components of the ratio are cost of sales and the net working capital. If the information about cost of sales is not available the figure of sales may be taken as the numerator. Net working capital is found by deduction from the total of the current assets the total of the current liabilities.

Significance:

The working capital turnover ratio measures the efficiency with which the working capital is being used by a firm. A high ratio indicates efficient utilization of working capital and a low ratio indicates otherwise. But a very high working capital turnover ratio may also mean lack of sufficient working capital which is not a good situation.

Fixed Assets Turnover Ratio:

Definition: Fixed assets turnover ratio is also known as sales to fixed assets ratio. This ratio measures the efficiency and profit earning capacity of the concern. Higher the ratio, greater is the intensive utilization of fixed assets. Lower ratio means under-utilization of fixed assets.

Formula of Fixed Assets Turnover Ratio:

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

Debt –to- Equity Ratio:

Definition: Debt-to-Equity ratio indicates the relationship between the external equities or outsiders funds and the internal equities or shareholders funds. It is also known as external internal equity ratio . It is determined to ascertain soundness of the long term financial policies of the company.

Formula of Debt to Equity Ratio:

$$\text{Debt Equity Ratio} = \text{External Equities} / \text{Internal Equities}$$

Or

$$[\text{Outsiders funds} / \text{Shareholders funds}]$$

As a long term financial ratio it may be calculated as follows:

$$[\text{Total Long Term Debts} / \text{Total Long Term Funds}]$$

Components:

The two basic components of debt to equity ratio are outsiders' funds i.e. external equities and share holders' funds, i.e., internal equities. The outsiders' funds include all debts / liabilities to outsiders, whether long term or short term or whether in the form of debentures, bonds, mortgages or bills. The shareholders funds consist of equity share capital, preference share capital, capital reserves, revenue reserves, and reserves representing accumulated profits and surpluses like reserves for contingencies, sinking funds, etc. The accumulated losses and deferred expenses, if any, should be deducted from the total to find out shareholder's funds.

Significance of Debt to Equity Ratio:

Debt to equity ratio indicates the proportionate claims of owners and the outsiders against the firm's assets. The purpose is to get an idea of the cushion available to outsiders on the liquidation of the firm. However, the interpretation of the ratio depends upon the financial and business policy of the company. The owners want to do the business with maximum of outsider's funds in order to take lesser risk of their investment and to increase their earnings (per share) by paying a lower fixed rate of interest to outsiders. The outsider's creditors) on the other hand, want that shareholders (owners) should invest and risk their share of proportionate investments. A ratio of 1:1 is usually considered to be satisfactory ratio although there cannot be rule of thumb or standard norm for all types of businesses. Theoretically if the owner's interests are greater than that of creditors, the financial position is highly solvent. In analysis of the long-term financial position it enjoys the same importance as the current ratio in the analysis of the short-term financial position.

Proprietary or Equity Ratio:

Definition: This is a variant of the debt-to-equity ratio. It is also known as equity ratio or net worth to total assets ratio. This ratio relates the shareholder's funds to total assets. Proprietary / Equity ratio indicates the long-term or future solvency position of the business.

Formula of Proprietary/ Equity Ratio:

$$\text{Proprietary or Equity Ratio} = \frac{\text{Shareholders funds}}{\text{Total Assets}}$$

Components:

Shareholder's funds include equity share capital plus all reserves and surpluses items. Total assets include all assets, including Goodwill. Some authors exclude goodwill from total assets. In that case the total shareholder's funds are to be divided by total tangible assets. As the total assets are always equal to total liabilities, the total liabilities, may also be used as the denominator in the above formula.

Significance:

This ratio throws light on the general financial strength of the company. It is also regarded as a test of the soundness of the capital structure. Higher the ratio or the share of shareholders in

the total capital of the company better is the long-term solvency position of the company. A low proprietary ratio will include greater risk to the creditors.

Fixed Assets to Proprietor's Fund Ratio:

Definition: Fixed assets to proprietor's fund ratio establish the relationship between fixed assets and shareholders' funds.

The purpose of this ratio is to indicate the percentage of the owner's funds invested in fixed assets.

Formula:

$$\text{Fixed Assets to Proprietors Fund} = \frac{\text{Fixed Assets}}{\text{Proprietors Fund}}$$

The fixed assets are considered at their book value and the proprietor's funds consist of the same items as internal equities in the case of debt equity ratio.

Significance:

The ratio of fixed assets to net worth indicates the extent to which shareholder's funds are sunk into the fixed assets. Generally, the purchase of fixed assets should be financed by shareholder's equity including reserves, surpluses and retained earnings. If the ratio is less than 100%, it implies that owners' funds are more than fixed assets and a part of the working capital is provided by the shareholders. When the ratio is more than the 100%, it implies that owners' funds are not sufficient to finance the fixed assets and the firm has to depend upon outsiders to finance the fixed assets. There is no rule of thumb to interpret this ratio by 60 to 65 percent is considered to be a satisfactory ratio in case of industrial undertakings.

Current Assets to Proprietor's Fund Ratio:

Current Assets to Proprietors' Fund Ratio establishes the relationship between current assets and shareholder's funds. The purpose of this ratio is to calculate the percentage of shareholders funds invested in current assets.

Formula:

$$\text{Current Assets to Proprietors Funds} = \frac{\text{Current Assets}}{\text{Proprietors Fund}}$$

Significance:

Different industries have different norms and therefore, this ratio should be studied carefully taking the history of industrial concern into consideration before relying too much on this ratio.

Capital Gearing Ratio:

Definition and Explanation: Closely related to solvency ratio is the capital gearing ratio . Capital gearing ratio is mainly used to analyze the capital structure of a company. The term capital structure refers to the relationship between the various long-term form of financing such as debentures, preference and equity share capital including reserves and surpluses. Leverage of capital structure ratios is calculated to test the long-term financial position of a firm. The term "capital gearing" or "leverage" normally refers to the proportion of relationship between equity share capital including reserves and surpluses to preference share capital and other fixed interest bearing funds or loans. In other words it is the proportion between the fixed interest or dividend bearing funds and non fixed interest or dividend bearing funds. Equity share capital includes equity share capital and all reserves and surpluses items that belong to shareholders. Fixed interest bearing funds includes debentures, preference share capital and other long-term loans.

Formula of capital gearing ratio:

$$\text{Capital Gearing Ratio} = \frac{\text{Equity Share Capital}}{\text{Fixed Interest Bearing Funds}}$$

Significance of the ratio:

Capital gearing ratio is important to the company and the prospective investors. It must be carefully planned as it affects the company's capacity to maintain a uniform dividend policy during difficult trading periods. It reveals the suitability of company's capitalization.

Debt Service Ratio or Interest Coverage Ratio:

Definition: Interest coverage ratio is also known as debt service ratio or debt service coverage ratio . This ratio relates the fixed interest charges to the income earned by the business. It indicates whether the business has earned sufficient profits to pay periodically the interest charges. It is calculated by using the following formula.

Formula:

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit Before Interest and Tax}}{\text{Fixed Interest charges}}$$

Significance of debt service ratio:

The interest coverage ratio is very important from the lender's point of view. It indicates the number of times interest is covered by the profits available to pay interest charges.

It is an index of the financial strength of an enterprise. A high debt service ratio or interest coverage ratio assures the lenders a regular and periodical interest income. But the weakness of the ratio may create some problems to the financial manager in raising funds from debt sources.

FINANCIAL RATIOS OF NTPC LTD.

LIQUIDITY RATIOS

CURRENT RATIO

particulars	2008	2009
Current Assets	215,134	240,784
Current Liabilities	55,483	74,391
CURRENT RATIO	3.87	3.23

This is an indication that the firm is liquid and has the ability to pay its current obligations in time and when they become due. Company may have adapted aggressive working capital policy. The company has high liquidity because of high value of current ratio. The company can easily fulfill the short term liability

QUICK RATIO

particulars	2008	2009
Quick Assets	179,159	198,558
Current Liabilities	55,483	74,391
QUICK RATIO	3.22	2.66

It's a stringent test that indicates whether a firm has enough short-term assets to cover its immediate liabilities without selling inventory. The pay its short term obligations as and when they become due

STOCK TURNOVER RATIO

particulars	2008	2009
sales	370,501	419,238
closing stock	26,757	32,434
STOCK TURNOVER RATIO	13.84	12.92

The ratio indicates the efficiency of the firm in selling its product. A high inventory turnover is indicative of good inventory management. It also concludes that marketing efficiency of the concern is very sound and high.

LEVERAGE RATIOS

DEBT EQUITY RATIO

particulars	2008	2009
Long Term Loans	271,906	345,678
Net Worth	542,674	589,949
DEBT EQUITY RATIO	0.50	0.58

It indicates what proportion of equity and debt the company is using to finance its assets. Theoretically if the owner's interests are greater than that of creditors, the financial position is highly solvent.

PROPRIETARY RATIO

particulars	2008	2009
shareholder's funds	542,674	589,949
total assets	81,458.00	93,562.70
PROPRIETARY RATIO	6.66	6.3

Higher the ratio or the share of shareholders in the total capital of the company better is the long-term solvency position of the company. A low proprietary ratio will include greater risk to the creditors. Here the proprietary ratio is neither low nor too high. This shows that there is not much risk for the people who have invested in the company.

CAPITAL GEARING RATIO

particulars	2008	2009
equity share capital	542,674	589,949
fixed interest bearing funds	271,906	345,678
CAPITAL GEARING RATIO	1.9	1.7

Capital gearing ratio is important to the company and the prospective investors. It must be carefully planned as it affects the company's capacity to maintain a uniform dividend policy during difficult trading periods.

INTEREST COVERAGE RATIO

particulars	2008	2009
PBIT	87,313	74,449
interest paid	19,822	17,370
INTEREST COVERAGE RATIO	4.404	4.286

It indicates whether the business has earned sufficient profits to pay periodically the interest charges.

PROFITABILITY RATIOS

RETURN ON CAPITAL EMPLOYED (%)

particulars	2008	2009
PBIT	87,313	74,449
avg total capital employed	798,043	899,654
RETURN ON CAPITAL EMPLOYED	10.94	8.27

This ratio shows that the rate of return for the investors is good enough and is profitable.

GROSS PROFIT MARGIN

particulars	2008	2009
Gross profit	93,773	81,667
net sales	370,501	419,238
G P MARGIN (%)	25.31	19.48

A lower ratio may be because of both selling price and cost of goods sold may have changed, the combined effect being decrease in gross margin.

NET PROFIT RATIO (%)

particulars	2008	2009
Net profit	74,148	82,013
net sales	370,501	419,238

N P MARGIN (%)	20	19.5
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Net profit margin is an indicator of operational efficiency or inefficiency. Here net profit margin is less than the last year as in the 2008 net profit margin is 20% but in the year 2009 it decrease by 2.5% which is bad for the company.

OPERATING PROFIT RATIO (%)

particulars	2008	2009
operating profit	115,409	105,836
net sales	370,501	419,238
OPERATING PROFIT RATIO	31	25.24

It appears from the above data that the operating efficiency of the company has fallen down considerably.

EARNINGS PER SHARE

particulars	2008	2009
PAT (a)	74,148	82,013
dividends paid (b)	28,859	29,683
shares outstanding ©	8,245.40	8,245.40
EARNINGS PER SHARE [(a-b)/c]	5.4	6.3

The earnings per share have increased since last year. This shows that investors are benefited by their investment.

DIVIDEND PER SHARE

particulars	2008	2009
dividends paid	28,859	29,683
shares outstanding	8,245.40	8,245.40
DIVIDEND PER SHARE	3.5	3.59

The dividends per share have also increased since last year, which shows that the shareholders are getting good returns. Since the dividend per share is increasing which mean lower will be the amount of earnings ploughed back in the business.

RETURN ON CAPITAL EMPLOYED

particulars	2008	2009
PBIT	87,313	74,449
avg total capital employed	798,043	899,654
RETURN ON CAPITAL EMPLOYED	10.94	8.27

From the current trend of ROCE we say that NTPC is not fully utilising its various funds that it collected from its various instruments. It also shows that the profitability of the company is declining.

RETURN ON ASSETS

particulars	2008	2009
PAT (a)	74,148	82,013
Avg. total assets (b)	81,458.00	93,562.70
ROA {(a/b)*100}	91	88

The return on assets is also declining. This shows that NTPC is not able to fully employ its assets.

RETURN ON EQUITY

particulars	2008	2009
Net profit after tax	74,148	82,013
Net Worth	542,674	589,949
RETRN ON EQUITY	13.6	13.9

. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. Not much is the difference from the last year's return.

ACTIVITY RATIOS

DEBTORS TURNOVER RATIO

particulars	2008	2009
total sales	370,501	419,238
trade debtors	29827	35,842
DEBTOR TURNOVER RATIO	12.42	11.69

The higher the value of debtors turnover the more efficient is the management of debtors or more liquid the debtors are. Similarly, low debtors turnover ratio implies inefficient management of debtors or less liquid debtors. Here there is a decrease since last year. This shows that the velocity of debt collection of a firm is decreasing.

WORKING CAPITAL TURNOVER RATIO

particulars	2008	2009
sales	370,501	419,238
working capital.	159,651	166,393
WORKING CAPITAL TURNOVER	2.32	2.51

This shows the number of times the working capital is turned over in a year.

Findings:

There is a huge crisis over energy in the world especially in the field of electricity. India is also victim of the same condition. In spite of several efforts taken by the governments in this regard, there is enormous possibility exists. NTPC is a key organisation in India as far as the supply of power is concerned. After successfully conducting this project work, it can be said

that the financial health of NTPC is sound enough and it appears positive in accordance with its balance sheet and profit & loss A/c which are available to me.

RISK FACTORS FOR INVESTORS

Internal Risks

1. Company is presently involved in 88 criminal proceedings, including motor accident cases.

Company does not provide any assurance that these matters will be decided in their favour. Further, there is no assurance that similar proceedings will not be initiated against us in future.

2. Any inability to effectively execute the power projects and manage the growth or to successfully implement their business plan and growth strategy could have an adverse effect on its operations, results and financial condition.

3. The SEBs and state owned distribution companies account for more than 90% of the sales of electricity and any change that adversely affects company's ability to recover its dues from them will adversely affect its financial position unless the company diversify its customer base.

4. NTPC faces competition as a result of deregulation in the Indian power sector. Company cannot assure that it will be able to compete effectively and its failure to do so could result in an adverse effect on its business prospects, financial condition and results of operations.

5. Company's expansion plans are subject to a number of risks and uncertainties.

non-availability of adequate financing on acceptable terms

unforeseen engineering problems

delays in definitive agreements or termination of existing agreements for purchase of power

changes in laws or regulations that make current execution plans unfeasible or unprofitable

disputes involving workers at the power projects

6. NTPC has executed a letter of intent with Reliance Industries Limited (“RIL”) for the purchase of gas, which if not declared as a valid and binding contract between NTPC and RIL, may negatively impact the financial condition and results of operation.

7, Activities in the power generation business can be dangerous and can cause injury to people or property in certain circumstances. This could subject to significant disruptions in its business, legal and regulatory actions which could adversely affect the business, financial condition and results of operations.

8. Company may encounter problems relating to the operations of the joint ventures.

Company has formed sixteen joint venture companies with various third parties for undertaking specific business activities. The joint venture partners may

- be unable or unwilling to fulfill their obligations, whether of a financial nature or otherwise
- have economic or business interests or goals that are inconsistent with company’s
- take actions contrary to our instructions or requests or contrary to our policies and objectives
- take actions that are not acceptable to regulatory authorities
- become involved in litigation

9. Company’s ability to pay dividends in the future will depend upon its future earnings, financial

condition, cash flows, working capital requirements, capital expenditures and restrictive covenants in their financing arrangements.

External Risks

1. The development or operations at one or more units of the power plants or their coal mines could be disrupted, which may have an adverse effect on its financial condition and results of operations.

2. Political, economic and social developments in India could adversely affect its business.

BALANCE SHEET OF NTPC LTD.

(Rs. In millions)

PARTICULARS	31.03.2008	31.03.2009
SOURCES OF FUNDS		
SHAREHOLDERS' FUNDS		
Capital	82,455	82,455
Reserves and surplus	491,246	443,931
	526,386	573,701
DEFERRED REVENUE ON ACCOUNT OF ADVANCE AGAINST DEPRECIATION	13,734	19,360
DEFERRED INCOME FROM FOREIGN CURRENCY FLUCTUATION		6,077
LOAN FUNDS		
Secured loans	73,147	89,696
Unsecured loans	198,759	255,982
	271,906	345,678
DEFERRED FOREIGN CURRENCY FLUCTUATION LIABILITY	2,554	545
DEFERRED TAX LIABILITY (Net)	55,838	51,350
Less: Recoverable	55,837	51,349
	1	1
TOTAL	814,581	945,362
APPLICATION OF FUNDS		
FIXED ASSETS		
Gross Block	533,680	623,530
Less: Depreciation	272,743	294,153
Net Block	260,937	329,377
Capital Work-in-Progress	184,389	212,211
Construction stores and advances	40,394	51,838
	485,720	593,426
INVESTMENTS	152,672	139,835
DEFERRED FOREIGN CURRENCY FLUCTUATION ASSET		9,734
CURRENT ASSETS, LOANS AND ADVANCES		
Inventories	26,757	32,434
Sundry debtors	29,827	35,842
Cash and bank balances	149,332	162,716
Other current assets	9,218	9,792
Loans and advances	40,354	68,469
	255,488	309,253
LESS: CURRENT LIABILITIES AND PROVISIONS		
Current liabilities	55,483	74,391
Provisions	23,816	32,495

	79,299	106,886
Net current assets	176,189	202,367
TOTAL	814,581	945,362

PROFIT AND LOSS ACCOUNT

Rs. In millions

Particulars	31-3-2008	31-3-2009
Income:		
Sales (net of electricity duty)	370,501	419,238
Energy internally consumed	409	514
Provisions written back	64	170
Other income	29,203	32,806
Total Income	400,177	452,728
Expenditure:		
Fuel	220,202	271,107
Employees' remuneration and benefits	18,960	24,631
Generation, administration & other expenses	16,284	18,192
Depreciation	21,385	23,645
Provisions	71	246
Interest and finance charges	17,981	20,229
Total Expenditures	294,883	358,050
Profit before Tax, Prior Period Adjustments and Extraordinary Items	105,294	94,678
Prior period income/ expenditure (net)	2,745	1,083
Profit before Tax 102,549 93,595		
Provision for:		
Current Tax		
Current year	24,637	25,337
Earlier years	3,680	-13,953
Fringe Benefit Tax		
Current year	214	210
Earlier years	-45	-
Deferred tax	1,411	-4,488
Less:Deferred tax recoverable	1,411	-4,488
Current/Fringe benefit tax transferred to expenditure during construction /development of coal mine	85	12
Provision for Taxation (net)	28,401	11,582
Profit after Tax	74,148	82,013

CASH FLOW STATEMENT

Rs. In millions

A	CASH FLOW FROM OPERATING ACTIVITIES	31-3-2008	31-3-2009
	Net Profit before tax and Prior Period Adjustments	105,294	94,678
	Adjustment for:		
	Depreciation	21,385	23,645
	Provisions	71	246
	Deferred revenue on account of advance against depreciation	7,167	5,626
	Deferred foreign currency fluctuation Assets/liability	2,554	-11,743
	Deferred Income from foreign currency fluctuation		6,470
	Interest charges	16,598	24,921
	Guarantee fee & other finance charges	375	349
	Interest/income on bonds/investments	-12,573	-11,330
	Prior period adjustments (Net)	-2,745	-1,083
	Dividend income	-96	-138
	Provisions written back	-64	-170
	Bonds issue and servicing expenses	12	64
	Profit on disposal of fixed assets	-21	-127
	Loss on disposal of fixed assets	136	403
	Operating Profit before Working Capital Changes	138,093	131,811
	Adjustment for:		
	Trade and other receivables	-17,305	-6,014
	Inventories	-555	-4,833
	Trade payables and other liabilities	5,297	16,577
	Loans and advances	-1,877	-14,428
	Other current assets	316	-1,288
	Cash generated from operations	123,969	121,825
	Direct taxes paid/refund received	-26,109	-24,944
	Net Cash from Operating Activities - A	97,860	96,881

B.	CASH FLOW FROM INVESTING ACTIVITIES	31-3-2008	31-3-2009
	Purchase of fixed assets	-79,964	-100,087
	Disposal of fixed assets	89	248
	Purchase of investments	-3,854	-
	Sale of investment	21,322	16,920
	Investment in subsidiaries/joint ventures	-9,218	-4,093
	Loans & advances to subsidiaries	-167	-125
	Interest/income on bonds/investment received	13,640	12,054
	Income tax on interest/income on bonds/investment	-131	-59
	Dividend received	96	138
	Net cash used in Investing activities - B	-58,187	-75,004
C.	CASH FLOW FROM FINANCING ACTIVITIES		
	Proceeds from long term borrowings	50,231	73,600
	Repayment of long term borrowings	-21,987	-22,666
	Interest paid	-17,580	-24,298
	Guarantee Fee & other Finance charges Paid	-375	-347
	Dividend paid	-28,859	-29,683
	Tax on dividend	-4,905	-5,035
	Bonds issue and servicing expenses	-12	-64
	Net cash flow from financing activities - C	-23,487	-8,493
	Net increase/decrease in cash and cash equivalents (A+B+C)	16,186	13,384
Cash and cash equivalents (Opening balance)	133,146	149,332	
Cash and cash equivalents (Closing balance)	149,332	162,716	

Conclusion:-

The electricity supply has been in the public domain in most of the developing countries. Under public ownership, the sector has not been able to catch up with the growing demand for electricity. The operational inefficiency and financial losses often lead to poor quality of supply and under investment. A wave of reforms has swept through a number of developing countries. These reforms were primarily targeted to improve the performance of the state owned companies and to provide a conducive atmosphere for private investment in the sector. The erstwhile vertically integrated SEBs in India has been riddled with inefficiencies due to a lack of accountability and administrative bottlenecks. Reforms in the Indian power sector were initiated to restructure the SEBs and to set up independent regulatory institutions. The Electricity Act 2003 led to deepening of the reform process by enabling competition in the wholesale electricity market and retail electricity supply, in phases. Thirteen SEBs have so far unbundled into separate generation, transmission and distribution companies. Beginning with the establishment of an independent regulatory commission in Orissa in 1996, the SERCs have been set up in all states. Some of the smaller states in the North East have established a Joint Electricity Regulatory Commission. The process of tariff determination has become more transparent and limited tariff rationalisation has been undertaken against consumer opposition and political meddling.

The emerging competition in the bulk power market and phased direct access to large consumers is aimed at reducing the risks associated with sales to financially weak state utilities. The policy and regulatory developments are promising, but more needs to be done to improve the performance of distribution utilities. Amongst other factors, the autonomy to manage these utilities in a commercial manner remains a key issue. In the long-run, the state's objectives are best served by nurturing a financially sustainable sector that can improve access for poor and rural consumers. This research undertook a review of the policy and regulatory developments in the Indian power sector. A review of the literature and a comparative policy analysis helped us to unravel some of the lessons to be learned for the process of reform in developing countries in general. The initial phase of power sector reform in India allowed commercially-oriented IPPs to sell power to financially weak SEBs, which

do not rely on sound commercial principles. This marriage of convenience is not sustainable. The initial phase of reforms in developing countries should be aimed to restructure the sector and to set up an independent regulator. As private participation grows, it would be suitable to introduce competition in the sector. This would not only help lower the cost of power purchase, it would also provide greater incentive for performance improvement. The experience of private sector investment in Latin American countries relied on the introduction of commercial interest in the bulk power market by inviting IPPs as well as introducing commercial principles at the end of buyer utilities through their divestiture. The experience in East Asia and Latin America suggests that macroeconomic stability remains a key to attracting sustainable and increased investment in the infrastructure sectors. India continues to demonstrate macroeconomic stability along with prudent currency management. Future growth prospects in the power sector hold substantial potential for private investment. However, the financial performance of the state owned distribution utilities remains a key concern for investors. A positive outcome of existing distribution privatisation programs would guide such future plans, which remain politically sensitive. The regulatory challenge is to provide incentives for improvement in technical efficiency and financial performance. The unavailability of sovereign guarantees can be adequately addressed if state utilities become viable through greater commercialisation, if not privatization. Inability of the domestic capital market to provide long-term debt for the power sector needs to be adequately addressed by encouraging contractual saving through life insurance and pension funds, and channelizing these for the power sector. Securitisation of project loans after the construction period and development of secondary bond market would help garner funds for investment in the sector. The long-term interest of the consumers can only be served if reasonably priced electricity is available over the long-run. Political interests would best be served by depoliticizing tariffs, which would be beneficial to consumers in the long-term through improved quality and reliability of supply. Given the objective to electrify all villages by 2010 and to double the generating capacity in the country by 2012, the need to improve the policy environment and strengthen the regulatory framework cannot be ignored.

Learning outcomes

After doing this project and working in an esteemed organization I learnt:-

- ❖ To analyze financial statements (in the context of information provided in the accounts and corporate report) to comment on performance and position.
- ❖ To calculate and interpret the whole range of accounting ratios.
- ❖ To prepare a concise report on the results of an analysis of financial statements.
- ❖ To prepare and interpret inter-firm comparisons.
- ❖ To develop the necessary characteristics including:
 - ethics
 - punctuality
 - thoroughness
 - accuracy and
 - Neatness and present ability.
- ❖ To assess the current and projected financial strength of a business using financial statements.

Suggestion

- ❖ Regulatory commission should work properly. They should try to minimize the cost, so that general customer should meet the cost easily..
- ❖ They should try to improve the operational efficiency and financial performance of state utilities.
- ❖ Company has sound data system from where they can start the cost cut methods at different measures to improve their performance.
- ❖ The human resource can be optimizing to a certain extent for increasing profitability.

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DECLARATION

A Project Report on “**ANALYSIS OF FINANCIAL STATEMENT AT NTPC LTD.**”

As a partial fulfillment for the award of MPIB Degree under BIFT (2009 - 2011), is a bonafide work undertaken by me and it is not submitted to any other University or Institution for the award of any Degree / Diploma / Certificate or published any time before.

Name of the student

VELAGA SHAMILI

Signature of the Student

09-60

Date: 12-08-2010

Place: HYDERABAD































