

RESEARCH PROJECT ON
THE VALUATION AND DATA ANALYSIS: NTPC ,THE POWER HOUSE
OF INDIA

*FOR THE PARTIAL FULFILMENT OF THE REQUIREMENT
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UNDER THE GUIDENCE OF:

SUBMITTED BY:

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Certificate from Faculty Guide

This is to certify that the project report (The valuation and data analysis: NTPC, The power house of India) has been prepared by Mr. Rishabh Tiwari under my supervision and guidance. The project report is submitted towards the partial fulfillment of 3 year, full time Bachelor of Business Administration.

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Date: 20 – 03 - 2020

Declaration

I, Rishabh Tiwari, Roll No. 18021010845, student of BBA/BMS of School of Business, Galgotias University, Greater Noida, hereby declare that the project report on “The valuation and data analysis: NTPC, The power house of India” is an original and authenticated work done by me.

I further declare that it has not been submitted elsewhere by any other person in any of the institutes for the award of any degree or diploma.

Rishabh Tiwari

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EXECUTIVE SUMMARY

A research in which most valuable assets are compared and analyzed to make predictions to call out the undergone outcomes for the particular firm is what we have done in this project. Statistical answers are drawn for the research questions. The main idea is to make a valuation model for the company NTPC, to showcase its results on the country and the market.

Introduction

In this we introduced the NTPC firm. We explained the situation of our research and the conditions following it.

Literature Review

In literature review, we exploited over the resources and literature in general to accumulate patterns on how or what we can use to process our research.

Methodologies

The methods or processes used to process our results are explained in this.

Questions

The parts where we ask questions in order to arrange the pattern for our research are to be mentioned here. Also, the idea to relate general to specific research questions can be found in it.

Research Design

Here, the whole process with data and other entities have been explained. Data analysis procedure and sample design are mentioned.

Results

Results that are founded by statistical evidence and data analysis are then accumulated.

Limitations

The limitations in understanding the research and data analysis results are mentioned here.

Conclusions

The whole summary stating the end and beginning of the research in profile to NTPC firm is to be mentioned here. This will also include the conclusion of the relation of NTPC and India and its market.

Recommendations

Before ending we have also mentioned, the points on how to counteract the problems that the firm might face.

References

Lastly, here all the sources are mentioned to ensure the credibility of the report.

INTRODUCTION

The word „evaluate“ means to measure the whole summation of the worth of a particular system. Like evaluate, we the person of finance at some point of time are supposed to determine the present value of some kind of asset. This process of determining the fair value of asset or firm is known as Valuation.

Known as India’s largest power utility firm, the 1975 established company National Thermal Power Corporation of India is a government owned electricity generating firm. With its electric generating capacity of 62,086 MW it contributes to over 16% of the total national power capacity. The NTPC firm not only has contributed in generating thermal power but also has ventured in gas; hydro, solar and wind based power plants.

While the growth of this firm has been one of the drastic reasons in development of India, the valuation has been one on-set that have been a wanted milestone of this era. Power supply has been one of the most critical balance in development of a country and thus the growth somewhat is depended on it. With the valuation of the firm we will find the opportunities for growth in this firm and factors deciding it.

Situation:

With variety of measures being developed in the recent ages to measure a firm’s growth, we have to incline towards some of them to assess the growth of the firm in respect to a particular aspect.

For this particular issue we are going to measure the market in three different ways:

1. By analyzing the balance sheet of the company in the past year’s
2. By comparing the market of competitors companies of NTPC
3. By calculating the stock value in present and past

After analyzing these three situations we will be able to arrive onto a conclusive report on how the company is sustaining in present.

For such analysis there has been many methods formulated. For use of such methods we have to proceed to review such methods. The review of such methodologies gives you an idea what to extract from the data.

Literature Review:

The paper written by Don Hofstrand shows us how to use assets and liabilities to calculate the net worth of the firm.

- Assets – These are the valuable items that we purchase which will profit the company in future.
- Liabilities – These are the obligations that we borrow for current use and have to repay for them in future.

With the help of these two prospects of a company we can achieve the net worth of the company.

Don defined two approaches to calculate the worth using the above values.

- Market Approach: - The valuation of the assets and liabilities on the bases of their current value in the market.
- Cost Approach: - This is a more complex approach as this requires one to define the value of their assets by the cost and profit they are going to make on those.

Secondly for the competitive analysis, we will use the Porters 5 force model that allows us to detect the value of the company in terms of market competition. In an article written by Michael Porter in his classic 1979 Harvard Business Review article he described the five forces in relation to company's worth in market.

Lastly to compare the worth of the company in terms of growth of the company from previous years we are likely to evaluate the stock value in those years.

In an article presented by Karvy Stock Broking website it says that the stock valuation is done in two ways namely:

1. Absolute Valuation: This is done calculating the intrinsic value of the stock.
2. Relative Valuation: Utilizing this model, you can contrast certain boundaries of your stock and other comparable resources that would help in inferring the cost of the resource.

Research and Methodology:

For valuation of the company it is required to gather the data that describes the assets, liabilities and other factors responsible for calculation of worth of the firm.

Data gathering –

First we need to have their current asset, equity and liabilities of the current and previous years.

Then we have the CAPM model for which we need the risk and return of the stocks.

Afterwards we need the P/E, P/BV, EV/EBITDA, EV/EBIT and EV/Revenue for the relative valuation.

The competitors in the market are Reliance, ONGC, Power Grid, IOC and Tata Power.

Methodology –

To calculate the net worth of a company we have already decided to use the three methods which we have already defined above.

1. By creating balance sheet of a company : -

The net worth of a firm is computed from a balance sheet as such that:-

Total current assets – Total current liabilities = Net Worth

But as to declare the value of such assets and liabilities we have to choose between two approaches:

- a. Market approach – In this kind of approach we assess the value of the asset in accordance with the current market or sale value. Within this kind of approach we usually declare the business as solvent or insolvent on the basis of which is greater either assets or liabilities.
- b. Cost approach – This is the approach in which we try to measure the value of the assets inside a business in terms of its original purchase cost. With the assets depreciation and improvements we declare the new cost of the asset and the profitability it adds to the business.

2. By comparing with the competitors: -

For this method we will have to check the five forces defined by the Michael Porter in his Five Forces model.

- a. Bargaining power of Buyers
- b. Bargaining Power of Suppliers
- c. Threat of New Entrant
- d. Threat of Substitute Product or Services
- e. Rivalry Among Existing Competitors

With these five forces we will be able to analyze how the firm is able to compete in the market and what is its net worth based on its rivaling companies.

3. By the intrinsic value approach:

For this kind of approach we have to kinds of valuation methods:

- a. Absolute Valuation – In this we try to find the intrinsic value of a stock of a company.
- b. Relative Valuation - Using this model, you can compare certain parameters of your stock with other similar assets that would help in deriving the price of the asset.

Managerial Problems:

- Problems relating to acquisition of land – As with growing population of India, NTPC needs to generate more power with their plants; thus, it needs to build more plants. For this acquisition of more land is required. But with growing population shorter

availability causes a problem. As well as this the power plants require much more lands than any other industrial project.

- Sustaining efficient plant operations: There are a variety of jobs in the power plant that's why maintaining every job in perfect order is a must. This creates a variety of problems in related to precision.
- Inadequate fuel supply: Power plants have to use a lot of fuel to generate the power supply. As to this gathering a lot of fuel is a very difficult situation with increasing power supply and degradation of natural resources.

General Research Questions –

Throughout the project we will answer many questions regarding the growth of NTPC firm.

How NTPC is performing better than the past years?

How NTPC is competing in the market?

Specific research question -

When was the raise and drop in the stock value of the NTPC firm?

What assets and liabilities are the major factors in the growth of NTPC firm?

What are the competitions of the firm?

Where does the NTPC stand in the market?

Will NTPC be able manage to handle its competitors?

How the growth direction of the firm leads the country?

Which options should the company opt to grow further?

Relationship of the variables –

Balance Sheet – It contains all the assets and liabilities for valuation of the firm

P/E, P/BV, EV/EBITDA, EV/EBIT and EV/Revenue – These variables are used for relative valuation of the firm.

Stock Value – This is used for day to day evaluation of the firm.

By these variables we will be evaluating all the aspects of the firm in regards to valuation and the questions specified above. These evaluations have an impact on decisions taken regarding the

firm. The balance sheet produces the net worth of the company against the total assets and liabilities of the firm.

A rather simpler explanation tells us that to get the value of a firm its best to check where it stands in the market. This relates to the variables like P/E or P/BV which are aforementioned. This means to get the value of the above variables and compare their values for different firms.

With this available we will only need to the day to day evaluation of the firm to get the specifics of the per day effect of NTPC on India. For this we process and analyze the firm's stock value. By this we can get estimation of trends and seasonality for the firm.

For analysis of the general questions we need to relate with the specific questions as such:

To check the performance of the NTPC firm's growth we need to check for the assets and liabilities of the firm. As this we can do by calculating the net worth of the company in the current year and the past years. With this the calculation of the current value of assets stands important and with that we can check if company has improved or not.

On the other hand to calculate the market competition of the company we need to check for the competitors of the firm and evaluate them on the basis of the market variables. Further we need to understand will the firm be able to grow above the level of its competitions or will it be pushed to bankruptcy in future.

Another rounds of questions makes to question the current standing of the NTPC firm in the market as only with that we will be able to decide whether that NTPC can sustain in the country or not.

Research Objectives:

With the growth of the firm we want to analyze that how this Govt. sector power company will be able to lead the country in the upcoming generations. Will the private sector companies lead the India's power business or will NTPC be able to continue with supplying power to the whole country?

Research Design and Methodology - the research strategy and plan

Exploratory Research Design

The means to use the exploratory design is simple as we have imbedded inside the firm and the market as the whole to find out the net worth of the company.

Exploratory data analysis means to explore, extract, visualize and analyze the data in terms to come to a conclusion to the questions we asked before in the research. While to explore means to gather the data; extract means to form information from the raw data; visualize means to present the data into an understandable form and lastly, analyze means to draw conclusions.

As we speak of the process of the exploratory research design, first we explored all the news, stocks, past balance sheets and current assets and liabilities present for the NTPC firm.

Afterwards we used the aforementioned methods to evaluate the data. Finally we drew conclusions from the analysis.

The valuation of a firm is not descriptive process, as we cannot value the company on the basis of some facts or news. We need solid numerical data to get the net worth of the company.

Neither it is casual, as we can mention the value of the firm casually but it won't be a legitimate value and could not be based conclusions upon. With the mean value of the firm's potential across its market competition or change in balance of the company only then we can move forward with the conclusions.

Exploratory design uses the amount of the data given by the user in any case scenario and calculates statistical hypothesis problem in order to manipulate conclusions out of it. The more the data we present the more conclusions we'll get.

"Far better an approximate answer to the right question, which is often vague, than an exact answer to the wrong question, which can always be made precise."— John W. Tukey

In any case scenario we'll need to present the data out of which outcomes can be calculated. This data will be specified in in the next part.

Data Collection Methods:

First of all let's specify the data we will use in this research.

Data used in this particular research is of 3 types:

Data specific for Balance Sheet:

Equity Share Capital
Long Term Borrowings (% REV)
Deferred Tax Liabilities [Net]
Other Long Term Liabilities (% REV)
Long Term Provisions (% REV)
Short Term Borrowings

Trade Payables (DAYS)
Other Current Liabilities (% REV)
Short Term Provisions (% OF REV)
Tangible Assets (growth)
Intangible Assets (growth)
Capital Work-In-Progress
Intangible Assets Under Development
Non-Current Investments (% rev)
Current Investments
Long Term Loans And Advances (% rev)
Other Non-Current Assets (% rev)
Inventories (denominator COGS, day)
Trade Receivables (denominator Rev, day)
Short Term Loans And Advances (rev)
Other Current Assets (rev)

Equity Share Capital – When a company shares a portion of ownership of the company in exchange of money, then that portion of money is referred to equity share capital.

Long Term Borrowings – Loans or borrowings that a company has, which is outstanding and has a maturity of 12 months or longer.

Deferred Tax Liabilities – When difference between book tax and actual income tax but for very short period of time.

Other Long Term Liabilities – Group of liabilities which are not due in 12 months period are lumped together other than long term borrowings.

Long Term Provisions – The capita of the company which is set aside for employee’s gratuity, leave encashment, provision funds etc.

Short Term Borrowings - is defined as debt obligations that are due to be paid either within the next 12-month period or the current fiscal year of a business.

Trade Payables – These are the obligations that are required to pay in exchange of goods and services that have been provided by the suppliers in the ordinary course of business.

Other Current Liabilities – Liabilities which are of so less importance that they can't have their own line in the balance sheet.

Balance Sheet			
	2017A	2018A	2019A
EQUITIES AND LIABILITIES			
SHAREHOLDER'S FUNDS			
Equity Share Capital	8,245.46	8,245.46	9,894.56
Reserves and Surplus	89,592.56	95,318.01	100,142.43
Total Shareholders Funds	97838.02	103563.47	110036.99
Minority Interest	803.26	947.77	664.83
NON-CURRENT LIABILITIES			
Long Term Borrowings	104,075.12	116,775.81	137,792.88
Deferred Tax Liabilities [Net]	1,484.86	10,401.63	4,199.72
Other Long Term Liabilities	2,386.35	2,210.62	2,008.07
Long Term Provisions	463.15	480.9	589.09
Total Non-Current Liabilities	108409.48	129868.96	144589.76
CURRENT LIABILITIES			
Short Term Borrowings	3,119.54	6,680.38	15,994.56
Trade Payables	5,572.70	6,707.55	8,517.62
Other Current Liabilities	24,633.63	26,341.76	30,442.44
Short Term Provisions	8,120.73	8,251.78	7,150.20
Total Current Liabilities	41446.6	47981.47	62104.82
Total Capital And Liabilities	248497.36	282361.67	317396.4
ASSETS			
NON-CURRENT ASSETS			
Tangible Assets	104,238.54	127,913.66	137,490.86
Intangible Assets	293.12	331.76	330.5
Capital Work-In-Progress	86,461.08	82,916.74	106,379.66

Intangible Assets Under Development	434.63	469.36	397.8
Fixed Assets	191427.37	211631.52	244598.82
Non-Current Investments	7,613.92	8,875.61	8,099.98
Long Term Loans And Advances	401.34	454.67	434.38
Other Non-Current Assets	18,522.81	13,390.80	15,346.66
Total Non-Current Assets	26538.07	22721.08	23881.02
CURRENT ASSETS			
Current Investments	0	0	0
Inventories	6,586.13	6,140.29	8,119.43
Trade Receivables	8,963.89	8,812.19	10,147.68
Cash And Cash Equivalents	3,301.46	4,387.60	2,782.32
Short Term Loans And Advances	211.92	238.43	238.29
OtherCurrentAssets	11,468.52	28,430.56	27,628.84
Total Current Assets	30531.92	48009.07	48916.56
Total Assets	248497.36	282361.67	317396.4

Net working capital			-15,970.58
changes in NET WC			
CAPEX			
OTHER ADDITIONAL INFORMATION			
CONTINGENT LIABILITIES, COMMITMENTS			
Contingent Liabilities	54,878.36	87,949.67	114,316.50
BONUS DETAILS			
Bonus Equity Share Capital	0	0	1,649.09
NON-CURRENT INVESTMENTS			
Non-Current Investments Quoted Market Value	112.08	104.88	88.14
Non-Current Investments Unquoted Book Value	7,501.84	1.4	3.78
CURRENT INVESTMENTS			

Current Investments Unquoted Book Value	0	0	0
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Table 1 – Balance Sheet

Data specific for Market Competitors:

Comparable	P/E	P/BV	EV / EBITDA	EV / EBIT	EV / Revenue
Reliance	20.344	0.23	646.17	748.24	135.27
ONGC	6.827	0.922	229.67	323.58	44.27
Power Grid	4.33	0.33	5.843	5.43	2.57
IOC	7.608	1.36	14.83	22.92	1.05
Tata Power	-5.46	0.41	4.40	8.79	-0.0868
Industry Average	6.73	0.65	180.18	221.79	36.61

Table 2 – Market Specific Data

TARGET COMPANY	
NTPC	
Current Market price	132.8
EPS	13
P/E Ratio	10.21538462
Revenue	288437.52
Shares Outstanding(Lakhs)	9894.56
Sales per share	29.15
P/ Sales Ratio	4.56
Net worth (BV)	121.91
P/BV Ratio	1.09
Enterprise Value	857830.64
EBITDA	216805.00
EV/EBITDA	3.96
EV/EBIT	4.10
EV/Revenue	3.99

Table 3 – NTPC Market Research Data

P/E – Price to Earnings ratio

P/BV – Price to Book-value ratio

EV/EBIDTA – Enterprise Multiple

EV/EBIT – Enterprise value to Earning before account of interest and taxes

EV/Revenue - Enterprise value to Revenue ratio

Data specific for Stock Analysis:

Covariance	0.0000345788
Variance of Market	0.00005230
Beta	0.661144066
Risk Free Return	5.93%
Average Market Return	0.060%
Annualized Market Return	16.33%
Return from CAPM Model	12.81%

Table 4 - CAPM model – Capital Asset Pricing Model

Sampling design and plan

The target used is company's assets and liabilities of year 2017, 2018 and 2019. It is profound that we are going to use this for self-evaluation of the company in relation with the past years.

And we can see the net working capital on the demand basis of the particular year.

Further we have market specific data recorded for 5 competitor companies.

Reliance – Reliance power or Reliance Energy Generation Limited as we call it is a power development, construction and operation firm specifically used generate electricity was founded by Dhirubhai Ambani on 17 January 1995.

ONGC – This public sector multinational crude oil and gas company is owned by GOI. Established in 1956, its current CEO is Shashi Shanker.

Tata power – Dorabji Tata's Indian electric utility company founded in 1911 is one of the major competitors of NTPC

Power Grid – Another GOI owned power Distribution Company which transmits about 50% of the total power generated in India's transmission network.

Finally, we have SENSEX and NIFTY; close and return for evaluations of the stock from date 2 February 2017 to 19 March 2019.

SENSEX – BSE SENSEX, first incorporated in quite a while, determined on a 'Market Capitalization-Weighted' technique of 30 segment stocks addressing huge, grounded, and monetarily stable organizations across key areas.

NIFTY – The NIFTY 50 is the flagship index on the National Stock Exchange of India Ltd. (NSE).

Data analysis procedure

i. Balance Sheet – The first procedure for valuation was the balance sheet which we have produced using the following procedure:-

The basic accounting equation is used here.

Assets = Liabilities + Equity

First, we need to discuss about assets:-

What can be counted as asset in company is mentioned in the assets measurement.

These include everything from firms Cash to furniture, land, fixtures or account receivables or more.

Then we further try to classify these into the asset columns of the balance sheet that we have discussed above.

Secondly, we instate liabilities:-

Liabilities that a company has are important factor in calculating debt. These are referred to the amount owned to creditors. These are basically referred as credit balance. This means the balance which is on credit basis and has to be refunded back, but not in urgency.

For example:-

- Accounts Payable
- Salaries and Wages Payable
- Interest Payable
- Income Taxes Payable
- Customer Deposits

Now these are subdivided into two parts which are Current Liabilities and Long Term Liabilities.

Current means which are to completed in the current fiscal year and other means we which have a long repayment time left.

Lastly, we have equity:-

ii. The Competitor Analysis – For this we have used relative valuation in which 5 market competitors were used. P/E, P/BV, EV/EBITDA, EV/EBIT and EV/Revenue were calculated using the company’s market value information available in public info boards.

iii. Stock Valuation – Its stock has been evaluated using the CAPM model which encloses the value of the close and return in sensx and nifty.

General statistical methods that were used were used in calculate the CAPM model –
Covariance – relation between two variables.

$$cov_{x,y} = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{N - 1}$$

$cov_{x,y}$ = covariance between variable a and y

x_i = data value of x

y_i = data value of y

\bar{x} = mean of x

\bar{y} = mean of y

N = number of data values

Fig1 - Covariance

Variance of the market – This means how far the random variables have deviated from the mean of the market.

$$S^2 = \frac{\sum(x_i - \bar{x})^2}{n - 1}$$

S^2 = sample variance

x_i = the value of the one observation

\bar{x} = the mean value of all observations

n = the number of observations

Fig 2 - Variance

Average market return – This is referred to as the mean of the return from the market.

$$A = \frac{1}{n} \sum_{i=1}^n a_i$$

A = arithmetic mean

n = number of values

a_i = data set values

Fig 3 - Mean

Then we need to calculate the market values for competitor analysis:

P/E – This is called price to earning ratio which means its current share price in accordance to its per-share earnings.

$$P/E = \frac{\text{Share price}}{\text{Earnings per share}}$$

Fig 4 – P/E

P/BV – The price/book value is the price of a share of a stock in its book value per share.

$$P/B \text{ ratio} = \frac{\text{Stock price}}{\text{Shareholders' equity per share}}$$

Fig 5 – P/B

EV/EBITDA – This is the ratio of the enterprise value divided by the company's earnings before any depreciation in it.

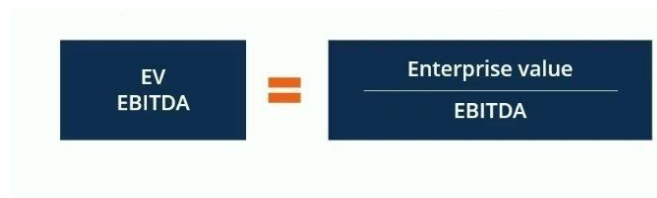


Fig 6 – EV/EBITDA

EV/EBIT – This is referred as earnings of a firm before paying taxes and interest.

$$EV/EBIT = \frac{\textit{Enterprise Value}}{\textit{Operating Earnings}}$$

Fig 7 – EV/EBIT

EV/Revenue – This is a value measurement of the company which measures enterprise’s value to its revenue. It is one of the several indicators that investors use to determine if the stock of the firm has a legitimate price.

Results

The company NTPC looks to have a fair potential in upcoming years without having that much trouble with competitors. The firm has a fair amount of assets on basis of which it can lead the country with high demand of power supply. This estimation has been deduced with a fair approach by calculating the above factors.

The balance sheet approach, which has fair criteria for the self-valuation of the firm has made it clear that with the steady increase in assets value the company has a fair value operation to cover for its liabilities. While we check the records we can see that, the total assets are steadily increasing over the past years. In 2017, it was recorded to have 248,497.36 which increased to 282,361.67 in 2018 and 317,396.4 in 2019. While we have total current assets equal to 48,916.56 which is increased by 907.49 from last year. This tells us that the company is able to grow each year. As Assets should equal to liabilities + equity, the total capital and liabilities of the company is amounting equal to assets each year from which we can state that the company is balanced. Within this the firm has also degraded its short term provisions from 8,251.78 to 7,150.20 this year which means that with the increase in profit the firm will have to undertake lower depreciations currently. The total funds which shareholders contain have also been increased from 103,563.47 to 110,036.99 in 2019. In conclusion the value of the capita consisted in the share funds has also been increased. Thus more shares are being bought and investment is consistent.

Talking about the Non-Current situation, the liabilities have increased from 1,29,868.96 to 1,44,589.76, which are a lot; rather than Non-current assets which only increased by 1,159.94. Although, the fixed assets has also been increased by 32,967.3. This majorly means that for 14,720.80 liabilities we were able to produce 34127.24 assets. Even if this affects the firm's current situation, we still need to know that if the firm is able to produce enough assets that can, keep in checks with the future liabilities.

Further we calculated that the net working capital is -15,970.58. This statement refers that the company is in debt after paying all the current liabilities and excluding Cash and Cash Equivalents. This in turn would make the company take more liabilities in the future.

Although, if we look at the past, we will get that the company has always been in similar fashion of the net-working capital. In 2017, it was noticed to have -14,216.14 but in 2018, it had -4360.00 net-working capitals. Thus, by this approach we found the net worth to be -15,970.58. This generally means, in accordance with the company needs to add more plants in increase its fixed assets that will provide them a way to deal with more liability. This way the country will also be maintained by the govt. sector power company and we'll have fair development part in this.

Then we compared the firm's competitors with its 5 values.

For first we discuss P/E ratio, this describes that how much does the firm can make profit in terms with conversion of price to earnings of the company. In this we sought that the reliance power is the major competitor of the firm and is able to generate 20.344 P/E value rather than

NTPC's 10.2153 P/E value. Even in this we can see that the NTPC has the second largest P/E value.

If we were to check the P/BV data, then we will find that the price of the firm's stock is properly valued with 1.09. As market rule says, if a stock is valued over 3 P/BV then stock is declared expensive or overvalued and if it is less than 1 P/BV then it is undervalued. The data displays that Reliance, ONGC, Power Grid and Tata Power are all undervalued. While only NTPC and IOC are properly valued in terms of stakeholders. IOC has a P/BV value of 1.36. Others have values less than one which means they are undervalued.

Afterwards we checked for EV/EBITDA which is considered healthy when the value is less than 10. The value for the current NTPC firm is 3.96, which can be considered healthy. While only two other firms have EV/EBITDA less than 10 which are Power Grid and Tata Power with 5.843 and 4.40 values respectively. Thus Tata Power and Power Grid are healthy companies if we regard their earnings before acquisition of taxes and other liabilities. Other companies are rather in total in regards with this. Thus, this makes them as a competitor regarding to that. In this sense, NTPC has done fairly well and can be said to score more than those companies.

Relatable to that are EV/EBIT, this refers to the company's personal growth without leverage. We can spot the difference in the numbers of this value is huge. The reliance power has most EV/EBIT while NTPC has a value of 4.10. Grouped again with Power grid and TATA power, this company has the most suitable pricing before paying of taxes and revenue.

Moving to the last comparable resort we have EV/Revenue which is a comparison of company's total value to its sales. The EV/R has tendency to be better when it is lower as the company might be undervalued. The NTPC firm has a EV/R total of 3.99 which can be considered a good possession. The lowest is EV/R value is handled by TATA Power which is -0.0868. This means the company is highly undervalued. The point of being too undervalued becomes a significant risk factor for the company too. Whereas Reliance and ONGC are overvalued, thus have a probability of a high risk downfall in the market. The group Power Grid, NTPC and IOC are stable in this ratio. This means that investors might see a good investment in these companies.

Last but not the least we analyzed the stock potential for NTPC firm.



This figure represents the primary and secondary movements of the firm's stock value from year 2017 to 2019. As we can see the primary movement of the firm was a large downfall around February to March last. Afterwards we saw some rise with noise in the stock from May to July.



This figure shows the moving average of two windows. The windows are of 21 and 10 and have their averages as 97.06 and 94.16 respectively. Regarding this we have shown that two major downfalls were recorded at 16 April and 17 August.

With the both graphs we came to a conclusion that the NTPC firm's stock price can reach an average low of 80 and average high of 102. While this is true the firm is constantly growing and expanding thus is a good investment for future.

Limitations

In various situations we sought that the results were mostly in favor of NTPC excluding some situations which we were not able to detect. There were cases with the balance sheet that declared that the NTPC could be able to cover up the liabilities. These were the cases assumed when we checked that the fixed assets mixed with the non-current assets were more than the non-current liabilities and vice-versa for the current assets. Most frequent ups and downs of the current stocks decide the price of the assets and the down fall of the 16 April could make a case for increase in liabilities. This can be considered as one case of the limitations.

Other case could represent the undervalued stock of the firm. This case represents that when the firm was being undervalued, it could process into a stage of unresolved conflicts with stakeholders. As stakeholders being one of the major sources of the company's assets then this could be one major turnover for the firm. Unlike normal accounting, we cannot anticipate when stock price could reach its low. The possibility of the firm not able to uphold the reputation is one of the limitations that the firm is responsible for. When a stock is undervalued it can be because of the assets of the company. The statistical measures cannot take into account of the value of the assets to be declared with the appreciation of the goods that it consists of.

Lastly, if the assets of the company are being damaged by the means of natural disaster or uncertain causes then this would frame as a limitation of the results. The results cannot interpret any kind of damage to the firm recorded in uncertainty as the values until now are fixed or happened in the past. The case of this happening is very random and unknown to us. But very instance of this happening has recorded to make company's fall. This requires them to re-establish their assets from beginnings. Moreover, causalities caused in this duration can range from minor to major. Although the firms always keep precautionary measures to keep damage to the minimum, we still don't find it as possible to stop it as a whole.

Conclusions

The firm NTPC from my perspective has a very efficient managerial system. This could be said as such, that the broader perspective of the firm has always been to grow and serve a larger population. When we look at the balance sheet the most investment done is on fixed assets rather than Non-current assets. This makes their power plants more efficient as in all purpose the firm has been upgrading their plants to produce more supply of power. Rather than producing specific supply of power it has also sub merged itself to other subsidiaries. It will likely grow up to live the expectations of being the powerhouse of India. The firm is not valued over all, but with time it is one of the most expected firms to grow. The competitors are overvalued other than reliance power. The firm will lead India to new market heights if well sponsored. Fact that the firm has established itself with its competitors and has led to possession of 25% of India's power demand coverage is incredible feat in itself.

Conceptual evidence provides with a graph that is not stable but moving upwards. This means that even if at some point the firm might lose its appreciation, but it will recover from it eventually.

India as a whole cannot be seen into relying on private sector power plants until the firm stands. With NTPC as a government firm India might be able to grow in its own unique path for power development.

Recommendations

Though some points are to be recommended to firm for its growth. Such points are mentioned in the upcoming paragraphs.

Firstly, the firm should increase its P/E value as it stands that reliance power has a chance of outperforming NTPC.

Secondly, NTPC should improve its assets. As the current situation of the non-current assets doesn't sound enough to accompany the firm's future.

With more and more companies incoming in the line of power generation, NTPC should be ready to have a close market analysis on smaller firms.

Even if TATA as Power Supply Company is undervalued it is still one of the most prominent companies and can easily counteract the market.

References

- Tim Stobierski .(2019). HOW TO PREPARE A BALANCE SHEET: 5 STEPS FOR BEGINNERS. Harvard Business School Online
- Darrell S. Mockus. (2003). Do You REALLY Know What The Competition Is Doing?
- Susan MaGee. (2007). ThomasNet Industrial Newsroom
- Masha Maksimava. (2018). How to Perform a Best-in-Class Competitor Analysis (w/ Template). Awario
- Obaidullah Jan. (2019). Stock Valuation. XPLAIND