A

PROJECT REPORT ON

# EIC Analysis of Bharat Petroleum Corporation Limited

**Submitted By:**
ANURAG PAREEK
MBA (Executive)
2017-19

**Under the Guidance of:**

Dr. Archana Singh

Professor

**DELHI SCHOOL OF MANAGEMENT**

**Delhi Technological University**

**Bawana Road Delhi 110042**

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# <u>DECLARATION</u>

I, Anurag Pareek, student of EMBA 2017-19 of Delhi School of Management, Delhi Technological University declare that the dissertation "**EIC Analysis of Bharat Petroleum Corporation Limited**" submitted in partial fulfillment of the requirements for the reward of the <u>Degree of Masters in Business Administration – Executive is an original work conducted by me.</u>

The information and data given in this report is authentic to best of my knowledge and this report has not been submitted to any other University for award of any other degree, fellowship or diploma.

Anurag Pareek,
2017/EMBA/508
Date:
Place:

# CERTIFICATE

This is to certify that the project entitled "**EIC Analysis of Bharat Petroleum Corporation Limited**" has been successfully completed by Anurag Pareek – 2K17/EMBA/508 – EMBA 2017-19 batch and is submitted to Delhi School of Management, Delhi Technological University in partial fulfillment of the requirements for the award of the Degree of Masters in Business Administration – Executive for 4th Semester.

Dr Archana Singh
Assistant Professor,DSM
Date:
Place:

# ACKNOWLDGEMENT

The following dissertation "**EIC Analysis of Bharat Petroleum Corporation Limited**" is successfully completed under the guidance of Dr Archana Yadav, Asst. Professor, DSM, Delhi Technological University and would like to thank her for providing me necessary guidance, encouragement and motivation to contribute positively in completion of this project.

I would also like express my gratitude to other professors, teaching staff and other officials at DSM who directly or indirectly helped me in this project.

Anurag Pareek,

2K17/EMBA/508

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# EXECUTIVE SUMMARY

- **Report Summarized:** The report summarized is an equity valuation report of Bharat Petroleum Corporation Limited. The valuation is subject to the statement of limiting conditions contained in the report.

- **Purpose of Valuation:** Valuation of shares to compute the fair price per equity share.

- **Method of Valuation:** 1. Balance Sheet valuation

  2. Discounted Cash Flows Valuation

  3. Relative valuation

- **Standard of value:**Fair Value

- **Premise of value:** Equity shares are valued assuming the business of BPCL will continue on a going concern basis

- **Date of Valuation:** 01/03/2018

- **Price on valuation date:** Rs. 441.90

# COMPANY OVERVIEW

Incorporated in 1952, Bharat Petroleum Corporation Limited ("**BPCL**" or the "**Company**") is an Indian state-controlled oil and gas company. The Company was formerly known as Bharat Refineries Limited and changed to its current name 1977. The Company is engage in the refining of crude oil and marketing of petroleum products, as well as exploration and production of hydrocarbons. BPCL offers liquefied petroleum gas (LPG), naphtha, motor spirit, aviation turbine fuel, kerosene oil, high speed diesel, light diesel oil, and mineral turpentine oil; and furnace oil and lubricants.

The Company serves diversified industries including automotive, residential complexes, government establishments, such as defense, railways, state transport undertakings, state electricity boards; and airlines. The Company's marketing network includes depots, aviation service stations, retail outlets, LPG bottling plants, and LPG distributors.

BPCL has interests in 26 exploration blocks, which include 11 blocks located in India; and 15 blocks located in Australia, East Timor, Indonesia, United Kingdom, Mozambique, and Brazil.

The Corporation operates two large refineries of the country located at Mumbai and Kochi. The company is ranked 314th on the *Fortune Global 500* list of the world's biggest corporations as of 2018.

# FUNDAMENTAL ANALYSIS (EIC APPROACH)

Fundamental Analysis is the examination of the underlying forces that affect the interests of the economy, industry and company. It tries to forecast the future movement of the capital market using signals from the economy, industry and company. Fundamental analysis requires an examination of the market from a broader perspective. The presumption behind the fundamental analysis is that a thriving economy fosters industrial growth whwich leads to development of companies.

## I. ECONOMIC ANALYSIS

India's GDP growth rate currently is 7.2%. In FY 2015 and 2018, India's economy became the world's fastest growing major economy surpassing China.

- **Role of Oil and Natural Gas Industry in Indian Economy**

Petroleum products and chemicals are a major contributor to India's industrial GDP, and together they contribute over 34% of its export earnings. India hosts many oil refinery and petrochemical operations, including the world's largest refinery complex in Jamnagar that processes 1.24 million barrels of crude per day. By volume, the Indian chemical industry was the third-largest producer in Asia, and contributed 5% of the country's GDP.
India is one of the five-largest producers of agrochemicals, polymers and plastics, dyes and various organic and inorganic chemicals. Despite being a large producer and exporter, India is a net importer of chemicals due to domestic demands.

- **Government Initiatives**

Some of the major initiatives taken by the Government of India to promote oil and gas sector are:

- State-run oil firms are planning investments worth Rs. 723 crore (US$ 111.30 million) in Uttar Pradesh to improve the liquefied petroleum gas (LPG) infrastructure in a bid to promote clean energy and generate employment, according to Mr. Dharmendra Pradhan, Minister of Petroleum and Natural Gas, Government of India.
- A gas exchange is planned in order to bring market-driven pricing in the energy market of India and the proposal for the same is ready to be taken to the Union Cabinet, according to Mr Dharmendra Pradhan, Minister of Petroleum and Natural Gas, Government of India.
- The Oil Ministry plans to set up bio-CNG (compressed natural gas) plants and allied infrastructure at a cost of Rs 7,000 crore (US$ 1.10 billion) to promote the use of clean fuel.

- **<u>FDI's role in industry</u>**

According to data released by the Department of Industrial Policy and Promotion (DIPP), the petroleum and natural gas sector attracted FDI worth US$ 6.86 billion between April 2000 and September 2017.
Following are some of the major investments and developments in the oil and gas sector:

1) World's largest oil exporter Saudi Aramco is planning to invest in refineries and petrochemicals in India as it looks to enter into a strategic partnership with the country.
2) Foreign investors will have opportunities to invest in projects worth US$ 300 billion in India, as the country looks to cut reliance on oil imports by 10 per cent by 2022, according to Mr. Dharmendra Pradhan, Minister of Petroleum and Natural Gas, Government of India.
3) During the bilateral meeting held in Tokyo between Mr. Dharmendra Pradhan, Minister of Petroleum and Natural Gas, Government of India and Mr. Hiroshige Seko, Minister of Economy, Trade, and Industry of Japan, signed a memorandum of cooperation on establishing a liquid, flexible and global liquefied natural gas (LNG) market by exploring joint cooperation in the areas of sourcing, swapping and optimization of LNG sources.
4) State-owned Oil and Natural Gas Corporation (ONGC) has come up with the new blueprint to increase the crude oil production by 4 million tonnes and to double its natural gas production by 2020 to curb the country's import dependency by 10 percent. The company will raise its crude oil production from 22.6 million tonnes in 2017-2018 to 26.42 million tonnes in 2021- 2022.

## II. INDUSTRY ANALYSIS

**Salient Statistics:**

- India is expected to be one of the largest contributors to non-OECD petroleum consumption growth globally.
- Oil imports rose sharply year-on-year by 27.89 per cent to US$ 9.29 billion in October 2017.
- India's oil consumption grew 8.3 per cent year-on-year to 212.7 million tonnes in 2016, as against the global growth of 1.5 per cent, thereby making it the third-largest oil consuming nation in the world.
- India is the fourth-largest Liquefied Natural Gas (LNG) importer after Japan, South Korea and China, and accounts for 5.8 per cent of the total global trade.
- Domestic LNG demand is expected to grow at a CAGR of 16.89 per cent to 306.54 MMSCMD by 2021 from 64 MMSCMD in 2015.
- The country's gas production is expected to touch 90 Billion Cubic Metres (BCM) in 2040 from 21.3 BCM in 2017-2018 (Apr-Nov).
- Gas pipeline infrastructure in the country stood at 16,470 km in September 2017.

**FY 2016**

Oil Production (MMT): 36.942; Gas Production (BCM): 32.249

**FY 2017**

Oil Production (MMT): 37.085; Gas Production (BCM): 34.119

**Growing demand**

-> India is the world's 4th largest energy consumer (2014); oil & gas account for 37% of total energy consumption.

-> Demand for primary energy in India is to increase 3-fold by 2035.

-> About 1,36,347 people were employed in the petroleum industry at the end of FY 2013.

-> The University of Petroleum & Energy Studies in Dehradun, Uttarakhand, is Asia's 1st & only energy university.

**Supportive FDI guidelines**

-> The GOI allows 100% FDI in upstream & private sector refining projects.

-> The FDI limit for public sector refining projects has been raised to 49% without any disinvestment or dilution of domestic equity in the existing PSUs.

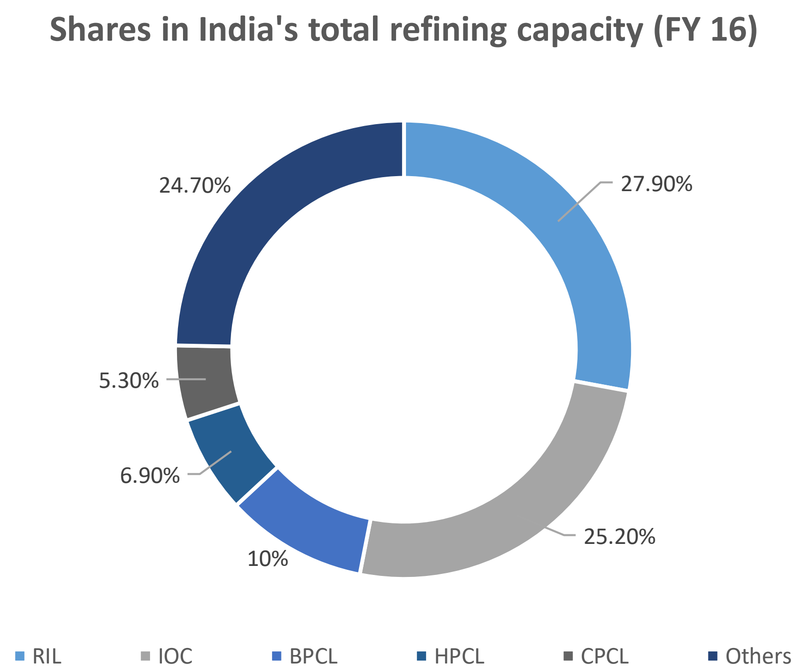
**Policy Support**

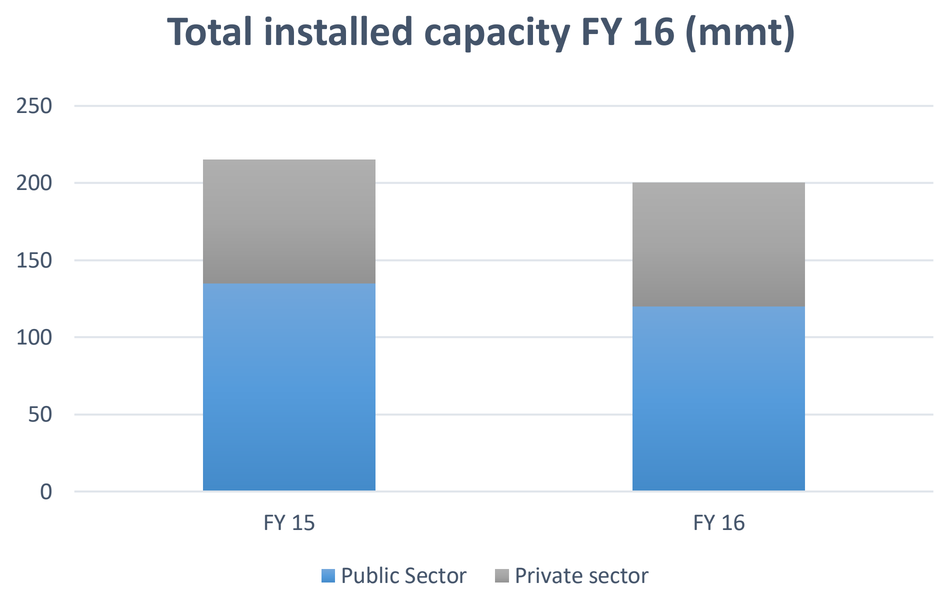
-> Government has enacted various policies such as the New Exploration Licensing Policy & Coal Bed Methane policy to encourage investments

-> New domestic natural gas pricing guidelines has been enforced on 10th january 2014

## Major Player in the Industry

- India has 19 refineries in the public sector & 3 in the private sector.
- In FY 2015, the sector's total installed provisional refinery capacity was 215.1 mmt.
- In FY 2016, IOC emerged as the largest domestic refiner with a capacity of 54.2 mmt
- Top 3 companies RIL, IOC & BPCL contributes around 63% of India's total refining capacity.






| Company | Ownership (per cent) as on FY 2014-15 | FY 16 turnover (USD billion) |
|---|---|---|
| Indian Oil Corporation Limited | 68.57% state- owned | 61.04 |
| Reliance Industries | Public Listed | 45.23 |
| Bharat Petroleum Corporation Limited | 54.93% state-owned | 28.79 |
| Hindustan Petroleum Corporation Limited | 51.1% state-owned | 32.49 |
| ONGC | 68.94% state-owned | 20.10 |
| GAIL India Limited | 56.11% state-owned | 7.88 |
| Oil India Limited | 67.64% state-owned | 1.00 |

**TABLE 1: MAJOR PLAYERS, OWNERSHIP & THEIR TURNOVER**

## III. COMPANY ANALYSIS

BPCL is one of the most prominent companies in the Indian petroleum industry with market share of 22.77% amongst the public sector oil companies as at 31st March, 2017.

The company is increasing its investment in the pipelines business, to stabilize margins, and venturing into E&P business. The BPCL Group owns a robust network of 2241 km of Product pipelines with design capacity of 17.84 MMT.

Pipelines have achieved a throughput of 14.06 MMT in the year 2016-17 which is the highest so far. Pipelines have transported about 5072 MMTKM of petroleum products to BPCL's marketing locations spread across Northern, Central, Western & Southern parts of the country, which accounts for approximately 40% of the total primary transportation.

BPCL has evolved from being an oil refining and marketing entity to a group having a presence, not only across the country but in several parts of the world. BPCL has been amongst the first in India to embrace cutting edge technology in key areas of operations and introduce products and services aimed at meeting existing and emerging needs of the consumer. BPCL is engaging itself in developing green energy projects with great enthusiasm to mitigate green-house gas emission.

### ➢ Company Performance

- During the year 2016-17, the crude throughput at BPCLs Refineries at Mumbai and Kochi was 25.39 MMT as against 24.12 MMT achieved in 2015-16. The Market sales of the Corporation grew by 3% to 37.68 MMT in 2016-17 from 36.53 MMT in 2015-16.

- During the year, 2016-17, BPCLs market sales volume increased by 3.15% to 37.68 MMT as compared to 36.53 MMT in the previous year.

- BPCL's market share amongst the public sector oil companies stood at 22.77% as at 31st March, 2017 as compared to 22.94% as at the end of the previous year.

- The earnings per share amounted to Rs. 61.31 in 2016-17 as compared to Rs.102.78 in 2015-16.

- Borrowings from banks increased from Rs.6,179.08 Crores as at March 31, 2016 to Rs.11,737.95 Crores at the close of the current financial year. Loans from Oil Industry Development Board stand at Rs.1,795.13 Crores as at 31st March, 2017 as compared to Rs.1,725.24 Crores at the end of the previous year.

- Debentures worth Rs.550 Crores were issued during the year 201617.The Gross Capital Expenditure during the year 2016-17 amounted to Rs.9,476 Crores as compared to Rs.10,311 Crores during the year 2015-16 and including Investment in Joint Venture Companies and Exploration during the year 2016-17 was Rs.16,949 Crores (Budget estimate of Rs.13,097 Crores) as compared to Rs.11,978 Crores during the year 2015-16.

# VALUATION METHODOLOGY

Valuation by its very nature, cannot be regarded as an exact science and the conclusions arrived at in many cases will be subjective and dependent on the exercise of individual judgment. Given the same set of facts and using the same assumptions, expert opinions may differ due to the number of separate judgment decisions. There can therefore be no standard formulae to establish an indisputable value, although certain formulae are helpful in assessing reasonableness. The International Accounting Standard Board (IASB), which is the independent standard setting body of the IFRS foundation, has set out two ***internationally accepted valuation methodologies*** for arriving at the fair value of a share namely, the ***income approach*** and the ***market approach.***

Guidance is also available from the Institute of Chartered Accountants of India (ICAI) which has published a *"Technical Guide for Valuation"*in 2009 and prescribes the approaches for ***generally accepted valuation methodologies*** such as the ***Income approach*** and the ***market approach*** similar to the internationally accepted valuation methodologies. However, ICAI also allows for a third method which is the ***asset approach*** for arriving at the fair value of a share.
For the purpose of determining fair value, a Valuer may therefore, use any of the approaches as per the generally / internationally accepted valuation methodologies which in its opinion are most appropriate based on the facts of each valuation.
The internationally / generally accepted valuation methodologies have been discussed hereinafter, along with the reasons for choice of approach used based on the facts of BPCL.

**(I)** **BALANCE SHEET VALUATION:** This approach is also known as Assets Based Approach. Under this approach, the book value / replaceable value realizable value of the underlying assets of the company is determined to arrive at the value of the business, depending on the facts and circumstances applicable to a company.

Usually under the assets based approach, the methods that maybe applied are Net Book Value Method, Net Replaceable Value & Net Realizable Value.

**(II)** **DISCOUNTED CASH FLOWS VALUATION:** Under DCF approach, the future free cash flows of the business are discounted to the valuation date to arrive at the present value of the cash flows of the business or capitalized using a discount rate depending on the capital structure of the company. This approach also takes into account the value of the business in perpetuity by the calculation of terminal value using the exit multiple method or the perpetuity growth method, whichever is appropriate.

**(III)** **RELATIVE VALUATION:** Under this approach the valuation is done on the basis of the quoted market price of the company in case it is a publicly traded company, or publicly traded comparable businesses / date is reviewed in order to identify a peer group similar to the subject company and then their multiples are applied to the entity being valued to determine the fair value. Usually under the market based approach, the methods that maybe applied are Market Price Method or Comparable Multiple Method (CMM). Under CMM method various multiple like EV/ Sales, EV/ Cash Flows, P/BV, P/E & Price/Sales can be used to value a business depending upon the facts and circumstances of the cases.

# VALUATION ANALYSIS

## ➢ BALANCE SHEET VALUATION

Under the book value valuation approach, total external liabilities of the company are subtracted from the total assets of the company to arrive at the Net Asset Value. Alternatively, the sum of paid-up Share Capital and Reserve and Surplus can also be calculated to arrive at the Net Asset Value.
The Net Asset Value (NAV) is divided by the total number of outstanding equity shares to arrive at the fair value per share.

**Reason for choice:**
BPCL is a capital intensive business, as can be seen from the Audited Financial Statements of FY 2016-17 (Annexure), where a capital work in progress of Rs. 11,216.73 Crores is present. Therefore, the Balance Sheet valuation was considered appropriate to determine the fair value of the business.
BPCL is a going concern, therefore Net Replaceable Value and Net Realizable value approaches were not considered appropriate. Accordingly, the Net Book Value approach has been considered appropriate to determine the fair value of BPCL.

**Conclusion:** The fair value is Rs. 226.26 per Equity Share based on the Audited Financial Statements as 31st March 2017. Whereas, current market price of the share is Rs. 441.9.

| Particulars | Mar-17 |
|---|---|
| Equity Share Capital | 1,311.25 |
| Reserves & Surplus | 28,357.13 |
| **Net Worth (A)** | **29,668.38** |
| No. of shares (B) | 131.13 |
| **Net Asset Value per share (A/B)** | **226.26** |

**Recommendation:** Therefore, as per this valuation technique the investor should sell the shares of BPCL that they are holding immediately, as the intrinsic value of share is approximately half of the current market price, which shows that the share is overvalued and the share price can drop anytime in near future.

## ➢ DISCOUNTED CASH FLOWS VALUATION

Under this method, the future cash flows are discounted to the date of valuation in order to arrive at the Present Value of business. We used the Dividend Discount Model for the same.

**Reason for choice:**
In our view, the projections of future cash flows are reasonably achievable, therefore, it was considered appropriate to use DCF approach to determine the intrinsic value of the share of BPCL.

### Divdend Discount Model

The dividend discount model is a procedure for valuing the price of a stock by using the predicted dividends and discounting them back to the present value. If the value obtained by the DDM is higher than the current trading price, then the stock is undervalued.

Following variables need to be determined before deriving the value of the business:

**Future Cash Flows:** The expected dividend is calculated by applying ***Three-stage growth model*** and the calculation for the same has been shown below in the Table 3.

| Particulars | Mar-13 | Mar-14 | Mar-15 | Mar-16 | Mar-17 |
|---|---|---|---|---|---|
| Dividend per share | 11 | 17 | 22.5 | 31 | 44.5 |
| Dividend growth rate | - | 54.54% | 32.35% | 37.78% | 43.55% |

**TABLE 2: PAST TREND OF DIVIDENDS**

| Particulars | Mar-18 | Mar-19 | Mar-20 | Mar-21 | Mar-22 |
|---|---|---|---|---|---|
| ProjectedDividendpershare | 60.08 | 81.10 | 109.49 | 136.86 | 171.07 |

| | | | | | |
|---|---|---|---|---|---|
| ProjectedDividendgrowthrate | 35% | 35% | 35% | 25% | 25% |

**TABLE 3: PROJECTED TREND OF DIVIDENDS**

The projected growth rates for the dividends are assumed on the basis of following trends & EIC analysis that we have done above:

- We assume that the growth in BPCL follows the ***three stage-growth model***.
- In the year 2018 & 2019, the growth rate is less than year 2017 because of the commercialization of e-rickshaws and introduction of hybrid vehicles and as more and more people will try the hybrid (electric vehicles) and adopt it, the average growth rate being 35% for the first two years and 25% for the next three years.
- Further as people adopt to the electric vehicles, the trend will shift towards using more of hybrid (electric) vehicles in place of regular petroleum fuel vehicles plus the trend of clean energy making the demand increase for the LPG and CNG powered vehicles will also shift to electric as electric powered vehicles it being emission friendly fuel which contributes as a factor in decreasing growth of the company.
- The purchasing power of people in India being unevenly distributed and the resistance to change following huge investments in vehicles, it will still take time of around 2-3 years for the electric powered hybrid vehicles to commercialize successfully.
- Further looking at the EIC analysis for the company, we can see that there are many factors contributing towards the positive trend in the future growth but all of them are in small magnitude. While the negative factors being few in number, but affecting the energy industry as a whole largely due to the shift in the trend. The net effect being a decline in the growth rate, although being positive but less than before.

**Growth Rate in Perpetuity:** The terminal value growth rate in perpetuity needs to be determined. ~2.5% was assumed to be reasonable based on a going concern principle.

**Cost of equity ($K_e$):** In order to determine the fair value of the business under the DCF valuation approach, the Capital Asset Pricing Model has been used to calculate cost of equity.

| Ke | Rf | Beta | E(RM) |
|---|---|---|---|
| 0.17 | 0.0766 | 1.1341 | 0.1590 |

**Beta:** Beta is a measure of volatility, or systematic risk of the return on a particular security to the return on a market portfolio. To determine the beta for BPCL, we have taken its comparison w.r.t. Energy sector which gives us the value of **1.1341**.

**Market Risk Premium ($R_{p)}$):** Market Risk Premium is the premium earned on equities issued in India over and above the risk free return (Rf) earned i.e.

$$R_p = (R_m - R_f)$$

The average rate of return on Equity ($R_m$) is taken on the basis of the average equity market return of Nifty over the past 5 years is 15.90% ($R_m$). Accordingly, the market risk premium is **9.62%**.

**Risk free rate ($R_f$):** Rate of 10 year Government Bonds is taken as risk-free rate which stands at 7.66%.

**Intrinsic Value:** Intrinsic value of the share of the company is the sum of future discounted dividends that is expected to be realized from the business in perpetuity. Based on the valuation analysis, Present value of expected dividends of 5 years and then growing @2.5% till perpetuity is Rs. 824.31.

**Conclusion:** On the basis of above analysis, the intrinsic value of the share is resulting as Rs.824.31 against its current price of Rs. 441.9 which is way too above and shows that the company is highly undervalued and it is recommended to buy the share immediately.

## ➢ RELATIVE VALUATION

Relative Valuation methods are also called comparable methods because they use peers or competitors value to derive the value of the equity. The importance here is of deciding which factor to be considered for comparison and which companies should be considered peers.

In case of BPCL, its peer comparison is done with following four companies:

1. Indian Oil Corporation Limited (IOCL)
2. Reliance Industries Limited (RIL)
3. Hindustan Petroleum Corporation Limited (HPCL)
4. Oil and Natural Gas Corporation (ONGC)

Following are the well-known methods used for such comparison:

- **Price to Earnings Ratio (P/E Ratio)**

P/E Ratio = MPS/ EPS

A company with high P/E Ratio is trading at a higher price per rupee of earnings than its peers and is considered overvalued. Likewise, a company with a low P/E Ratio is trading at a lower price per rupee of EPS and is considered undervalued.

| Company | Ratio |
|---|---|
| **BPCL** | **7.21** |
| IOCL | 9.46 |
| RIL | 9.78 |
| HPCL | 4.65 |
| ONGC | 13.60 |
| **AVERAGE** | **8.94** |

**TABLE 4: P/E RATIOS**

The average industrial P/E ratio is 8.94, it means the average price of a stock from a company in this industry trades at 8.94 times its EPS.

P/E Ratio of BPCL is 7.21, which is lower than the industrial average, which means the company is undervalued. If BPCL was trading at 8.94 times its EPS, it would be trading at Rs. 548.17, which is the relative value.

In other words, based on the industry average, the company is trading at a price that is Rs. 106.27 lower than it should be, representing an ***opportunity to sell.***

- **Price to Sales Ratio**

| Price to sales ratio = MPS/ Sales |
|---|

Lower the ratio, more attractive the investment. Therefore, a company with low P/S ratio is trading at a lower price against a rupee of its sales than its peers.

| Company | Ratio |
|---|---|
| **BPCL** | **0.28** |
| IOCL | 0.51 |
| RIL | 1.23 |
| HPCL | 0.203 |
| ONGC | 2.86 |
| **AVERAGE** | **1.02** |

**TABLE 5: PRICE/ SALES RATIO**

The average industrial P/S ratio is 1.02, it means that investors in this industry are willing to pay Rs. 1.02 for Re. 1 sales.

It is higher than the P/S ratio of BPCL which is 0.28, that indicates that investors are paying Rs. 0.28 for every rupee of sales in BPCL. If BPCL was trading at 1.02 times its sales, it would be trading at Rs. 1609.779, which is way above than its MPS.

Hence, this analysis shows that the stock of BPCL is ***undervalued, representing a good bargain.***

- **Price to Book Value Ratio**

  The Market to Book ratio (also called the Price to Book ratio), is a financial valuation metrics used to evaluate a company's current market value relative to its book value. In other words, the ratio is used to compare a business's net assets that are available in relation to the sales price of its stock.

| Price to Book Ratio = MPS/ Book Value of Net Assets |
|---|

This ratio is used to denote how much equity investors are paying for each rupee in net assets. A lower ratio could indicate that the stock is undervalued and a higher value could mean that the stock is overvalued.

| Company | Ratio |
|---|---|
| **BPCL** | **1.95** |
| IOCL | 1.86 |
| RIL | 1.07 |
| HPCL | 1.88 |
| ONGC | 1.31 |
| **AVERAGE** | **1.61** |

**TABLE 6: PRICE/ BOOK VALUE RATIO**

The average industrial P/BV ratio is 1.61, it means that investors in this industry are willing to pay Rs. 1.61 for Re. 1 in net assets.

It is lower than the P/BV ratio of BPCL which is 1.95, that indicates that investors are ready to pay Rs. 1.95 for every rupee of net assets in BPCL. If BPCL was trading at 1.61, it would be trading at Rs.364.85, which is the relative value in this case. Hence, this analysis shows that the stock of BPCL is ***overvalued, and it is recommend to sell.***

- **Price to Cash Flow Ratio**

  Price to Cash Flow Ratio is calculated with a similar approach to what is used in other price-based metrics.

| Price to Cash Flow Ratio = MPS/ Cash flow from operating activities |
|---|

A high P/CF ratio indicated indicates that the firm is trading at a high price but not generating enough cash flows.

| Company | Ratio |
|---|---|
| **BPCL** | **7.35** |
| IOCL | 6.68 |
| RIL | 5.99 |
| HPCL | 3.83 |
| ONGC | 7.42 |
| **AVERAGE** | **6.26** |

**TABLE 7: PRICE/ CASH FLOW RATIO**

The industrial average P/CF Ratio is 6.26, which is lower than that of BPCL which is 7.35. It indicates that the investors are paying more for each share of BPCL as compared to industrial average w.r.t. cash flows. If BPCL was trading at 6.26, it would be trading at Rs.376.37, which is the relative value in this case.

It shows that the stock of BPCL is ***overvalued, and it is recommend to sell.***

**Conclusion:** To give weights to the different factors, we have calculated correlation between the variables which is shown in the following table and then calculated weighted average by multiplying weights to intrinsic value of the share:

| Particulars | Correlation (w.r.t. MPS) | Weights (on the basis of correlation) | Intrinsic Value (based on industry average) | Weighted Average |
|---|---|---|---|---|
| EPS | 0.8081 | 0.51 | 547.93 | 281.27 |
| Sales | -0.4523 | 0.00 | 1609.78 | 0 |
| Book Value | 0.6627 | 0.27 | 364.85 | 101.81 |
| Cash Flow | 0.5557 | 0.21 | 376.37 | 78.79 |
| **Total** | **1.5742** | **1.00** | | **461.24** |

**TABLE 8: TABLE SHOWING CORRELATION OF VARIOUS VARIABLE WITH MPS AND CALCULATION OF INTRINSIC VALUE**

The above table gives us the intrinsic value of Rs.461.24 on the basis of relative valuation, which is slightly above than the current market price. It implies that the company is undervalued, and the ***share is recommended to be bought.***

# CONCLUSION

On the basis of valuations done above with the help of three methods, we will now allot weights to the methods and will calculate a final weighted average intrinsic value accordingly.

- Balance Sheet Valuation does not consider future earning potential of the business. So, it is not advisable to use this method of valuation, hence, we allotted it the lowest weightage of 0.15.
- Over the period of 5 years, dividends has been grown by 41.8% whereas the share price has been increased by 14.4% only. Also, share price has moved both upwards and downwards during 5 years, whereas dividend has shown upward movement only. So, we are giving a weightage of 0.25 to DCF valuation technique, as the movement of dividends is not depicting movement of share price to a great extent.
- Relative valuation is most suitable and preferred in case of BPCL. Hence, the highest weight of 0.60 is allotted to it.

| Method | Weights | Intrinsic Value | Weighted Average Intrinsic Value |
|---|---|---|---|
| Balance Sheet | 0.15 | 226.26 | 33.94 |
| Discounted Cash Flow | 0.25 | 824.31 | 206.07 |
| Relative | 0.60 | 461.24 | 276.75 |
| **Total** | | | **516.76** |

**TABLE 9: TABLE SHOWING CALCULATION OF FINAL INTRINSIC VALUE**

The final intrinsic value is coming out to be Rs.516.76 which is less than the current price, which brings us to the final conclusion that the share is underpriced, and can be bought as the chances of price going up are high.

# ANNEXURES

- LINK TO ANNUAL REPORT OF FY 2016-17

2016-17.pdf

- LINK TO EXCEL SHEET FOR CALCULATIONS

Calculations_final.xlsx

# REFERENCES


- Annual Reports of BPCL
- www.moneycontrol.com
- www.nseindia.com
- Website of the Company