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INTRODUCTION

India has one of the fastest growing economies in the world, and the demand for oil and gas is rising at a matching rate. Not only is India’s market potential huge, but in recent years India has emerged as one of the most prospective regions in the world with major oil and gas discoveries, both onshore and offshore.

India has total reserves (proved & indicated) of 1,201 million metric tonnes (MMT) of crude oil and 1,437 billion cubic metres (BCM) of natural gas as on April 1, 2010, according to the basic statistics released by the Ministry of Petroleum and Natural Gas. Against a crude oil production of about 37 million tonnes per annum (MTPA), India’s consumption currently exceeds 138 million tonnes. In 2010, 194 MMT of crude oil was refined and actual natural gas production was 31.0 BCM. By the end of 2012, the refinery capacity is expected to reach 240.96 million metric tonnes per annum (MMTPA).

The refining capacity of the oil refineries in India has undergone nearly a three-fold increase in 2010. The country exported 50.974 MMT of petroleum products during 2009-10. To provide energy security, the Government of India is seeking private and foreign investments in excess of $250 billion in both the upstream and the downstream sectors during the next 10 years. India’s petroleum product consumption has grown by 4-5% over the past 10 years and the oil demand in India is expected to rise to 368 MMTPA by 2025. With widening gap between demand and supply, both for oil and gas, the outlook for the upstream sector is extremely positive. While oil and gas will continue to play a substantial role in the total energy mix, the need for harnessing alternate energy sources like Coal Bed Methane (CBM), Underground Coal Gasification (UCG) and Shale Gas (gas locked in sedimentary rocks) will become crucial to balance the demand and supply.

The Government of India approved the New Exploration Licensing Policy (NELP) on April 9, 2009, to tackle the increasing demand supply gap of energy in India. In the eighth round of the NELP-VIII, 1.62 km² areas will be covered comprising of 70 oil and gas blocks and 10 areas for the extraction of coal bed methane (CBM) gas from below the coal fields under CBM-IV. Petroleum & Natural Gas Ministry launched the ninth round of NELP (NELP-IX) in New Delhi on October 15, 2010. NELP-IX offered 34 exploration blocks comprising of 8 deepwater blocks,
7 shallow water blocks and 19 on land blocks. Moreover, the government is planning its first ever offer of shale gas exploration permits in 2012. Shale gas (gas locked in sedimentary rocks) is an emerging area and has become an important source of energy in a few countries which have been able to commercially exploit this resource.

In this report an attempt has been made to provide the broad understanding of the oil and gas sector in India across the industries. The upstream and downstream processing sectors, key players, key market, transportation and distribution network, fuel retailing, Indian taxation systems have been presented. The Western Australian capability/level of interest in the market have also been described. Oil has been used for lighting purposes for many thousands of years. In areas where oil is found in shallow reservoirs, seeps of crude oil or gas may naturally develop, and some oil could simply be collected from seepage or tar ponds. Historically we know the tales of eternal firs where oil and gas seeps ignited and burned. For e.g. famous oracle of Delphi was built around 1,000 B.C. written sources from 500 B.C. describe how Chinese used natural gas to boil water. It was not until 1859 that “Colonel” Edwin Drake drilled the first successful oil well, with the sole purpose of finding oil. The Drake well was located in the middle of quiet farm country in northwestern Pennsylvania, and sparked the international search for an industrial use for petroleum. Electricity did not emerge as an illuminant till the Edison Electric Light Company was founded in 1878. Well into the 20th century, kerosene, gas and electricity continued to compete as illuminants. Whilst the use of gas as an illuminant has virtually disappeared, a large population, especially in India, continues to use kerosene as illuminant. In 1890 Canadian Geologist Abrahma Gesner has found Kerosene, which was extracted from coal and oil. Kerosene was most common energy source during that time as was used in lighting of the lamp which would in return the increase the value of kerosene.
MAIN FINDINGS

CHAPTER 1 OVERVIEW OF OIL INDUSTRY

We all know that motor – oil and gasoline come from crude oil, what many people do not realize is that crude oil is also the starting point for many diverse products such as clothes, medical equipment, electronics, vitamin capsules and tires. Whether land or under the ocean crude oil comes from deep underground where the remains of plant and animals (fossil) from millions of years ago have been heated – pressurized over time. Generally blackish in colour, crude oil has a characteristic odour that comes from the presence of small quantities of chemical compounds containing sulphur and nitrogen. There are different grades of crude oil. Each has a specific composition that is determined by the original decomposed source, materials as well as the properties of surrounding soil or rock formation.

It can be light or heavy, referring to density and sweet or sour referring to its sulphur content, however in row state, crude oil is of little use, it must be refined to make it into useable products. Depending upon the type of crude oil, it is treated via different refining process to turn it into fuels, lubricating oils, waxes, chemicals, plastics, and many other products used every day in society.

In order to meet ever growing demand for petroleum products, the government has consistently endeavoured to enhance exploration and exploitation of petroleum resources, along with developing a concrete and structured distribution and marketing system. Despite this crude oil production for 2013-14 remained stagnant at around 37.8 million metric tonnes (MMT) as against 37.9 MMT in 2012-13, showing a marginal decrease of about 0.20%. The bulk of crude oil production is from ageing fields, with the exception of Krishana Godavari (KG) basin and Rajasthan blocks. Production of crude oil was also affected by environmental issue, bandhs/blockades, lower base potential and delay in production from wells in some states. The average natural gas production for 2013-14 was about 35.4 BCM as against 40.7 BCM for 2012-13, showing a decline of about 13%. India has an estimated sedimentary area of 3.14 million sq. Km. Comprising 26 sedimentary basin. A total of 254 production sharing contracts have so far been singed under nine rounds of New Exploration Licensing Policy (NELP) bidding, of which 148 blocks are currently operational and the remaining 106 have been relinquished by the contractors. An area of 1.5 million
sq. Km. Has so far been awarded under the NELP, which works out to almost 48% of the total sedimentary area in the country. Current average oil production from the NELP blocks is about 6938 barrels per day. Activities related to the 10th round NELP bidding (NELP – X) have been initiated. A total of 86 blocks (30 deep water, 23 shallow water and 33 on land) have been tentatively proposed

- According to a report released by McKinsey a global consultancy firm at the VI Asia Gas Partnership Summit, India's natural gas demand is expected to nearly double to 320 million metric standard cubic metres per day (mmnscmd) by 2015. According to the analysis the current demand of 166 mmnscmd—made up of nearly 132 mmnscmd supplies from domestic fields and the rest from imported liquefied natural gas (LNG)—is likely to rise to at least a minimum of 230 mmnscmd and a maximum of 320 mmnscmd by 2015.

- The government is planning for its first ever offer of shale gas exploration in 2012. Shale gas (gas locked in sedimentary rocks) is an emerging area. It has become an important source of energy in a few countries that have been able to commercially exploit this resource.

- Economic survey 2011-12: India's oil refining capacity likely to rise 15% to 214 MT

- Out of the 21 refineries operating in the country, 17 are in public sector, three in private sector, and one is a joint venture of BPCL and Oman Oil Company (6 MT a year refinery at Bina in Madhya Pradesh).

  "The refinery capacity is further expected to increase to 214.07 million tonnes per annum by the end of 2011-12," it said.

- Though the document did not name the new units that would be commissioned, it may be alluding to almost complete 9 MT Bhatinda refinery that has been built by a joint venture of state-owned Hindustan Petroleum and steel baron Lakhsmi Mittal-controlled Mittal Investment Sarl.

- Also, Essar Oil is expanding its Vadinar refinery in Gujarat to 18 MT from current 14 MT.

- The Survey said refinery production (crude throughput) during 2010-11 had reached 206.15 MT (including Jamnagar Refinery under a special economic zone by Reliance
Industries Ltd), showing an increase of 6.9 per cent compared to 192.77 MT in 2009-10.

- During the current financial year (April-December), refinery production was 158.26 MT.
- "The country is not only self-sufficient in refining capacity for its domestic consumption but also substantially exports petroleum products," it said.
- During 2010-11, the country exported 59.13 MT of petroleum products worth Rs 1,96,112 crore.
**OIL TRADING**

On average, 52 mbpd of oil were moved internationally in 2006. The USA, Europe and Japan were responsible for more than 60% of world oil imports, while the Middle East, Africa and former Soviet Union accounted for more than 65% of world oil exports.

The crude oil spot price averaged $US 72 per barrel in 2007, more than triple the average price in 2002. Towards the end of 2007, the price of crude oil breached US$ 100 per barrel and, in May 2008, US$ 120 per barrel.

**REFINING**

According to the 2007 BP Statistical Energy Survey, world 2006 refinery capacity was 87 mbpd and 2006 refinery throughput was 75 mbpd on average. The countries with the largest oil refining capacity are, in order, the USA, China, Russia, Japan, India, South Korea, Germany, Italy and Saudi Arabia. Saudi Arabia is currently doubling its refinery capacity before 2012.

**EXPLORATION AND DEVELOPMENT**

In June 2007, OPEC announced plans to invest US$ 130 billion in expanded production between then and 2012. Excluding Iraq, production is forecast to increase from 35.7 million bpd to 39.7 million bpd in 2010. Between 2013 and 2020 OPEC plans to spend a further US$ 500 billion provided biofuels doesn't change economics. Saudi Arabia alone is investing US$ 50 billion to increase crude production capacity from 10.5 million barrels a day in 2007 to 12 million bpd in 2009 and 15 million bpd after 2025.

A Harrison Lovegrove study of 200 non state-owned oil and gas companies found 2005 development costs rose 30% to US$ 159 billion, yet only yielded a 2% increase in proved reserves and a 1% increase in production. Part of the reason is that countries rich in oil are increasingly excluding foreign companies from participation. A later study showed spending by 228 oil and gas companies increased 45% in 2006 to US$ 400 billion but again only increased reserves by 2%.
A March 2007 report by Harrison Lovegrove estimated that state owned oil and gas companies invested US$ 75 billion in oil and gas asset acquisitions in 2006, 33% of the total of US$ 166 billion. Average 2006 prices paid were US$ 12.86 per barrel of proved oil / gas reserves, an increase of 34% on 2005.

Only three major fields have been discovered worldwide since 1969 and none since 1976. A study by Simmons found that since 1980, only three fields out of all of the new discoveries are producing over 200,000 barrels a day. In the 1990's, over 420 fields were discovered, but only 11 have production that exceeds 100,000 barrels per day.

To raise the interest of foreign companies in the E&P sector. The government decided to award some small and medium fields for development to the private and joint sectors respectively, and came out with two rounds in 1992 and 1993. These rounds evinced tremendous response from foreign players. Also in order to upgrade the information on the hydrocarbon potential of India’s unexplored sedimentary basins, the government offered blocks for geophysical survey during 1993 to 1995.
**SWOT Analysis of the Indian oil and gas industry Strengths**

<table>
<thead>
<tr>
<th>STRENGTH</th>
<th>WEAKNESS</th>
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<tr>
<td>• India is the world’s fifth biggest energy consumer and continues to grow rapidly</td>
<td>• The oil and gas sector is dominated by state-controlled enterprises, although the government has taken steps in recent years to deregulate the industry and encourage greater foreign participation</td>
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<tr>
<td>• Major natural gas discoveries by a number of domestic companies hold significant medium- to long-term potential.</td>
<td>• Increase in oil prices</td>
</tr>
<tr>
<td>• Demand for petroleum products</td>
<td>• Inadequate and slowly developing infrastructure</td>
</tr>
<tr>
<td>• Increase in demand for oil and gas</td>
<td>• Lack of awareness in safety issues</td>
</tr>
<tr>
<td>• High exploration portfolio</td>
<td>• Environmental issues</td>
</tr>
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<tr>
<th>OPPORTUNITY</th>
<th>THREATS</th>
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<tr>
<td>• Liquefied natural gas (LNG) imports are still set to grow rapidly over the longer term as domestic consumption expands</td>
<td>Increased competition within government and private players</td>
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<tr>
<td>• India has freed gasoline retail price controls</td>
<td>• Continuing government interference</td>
</tr>
<tr>
<td>• Untapped domestic oil and gas potential</td>
<td>• Changes in national energy policies</td>
</tr>
<tr>
<td>• Strong domestic energy demand growth</td>
<td>•</td>
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<tr>
<td>• High recovery rates from existing projects</td>
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</table>
The Indian Oil and Gas industry plays an important role in the Indian economy with major refineries and gas companies in the country. Indian oil and gas sector is majorly controlled by state owned Oil and Natural Gas Corporation (ONGC) which accounts for approx. 60% of India’s crude oil output. The Indian Oil industry consumption was around 3.27 mn barrels per day (b/d) in 2011 compared to around 3.15 mn b/d in 2010 and is expected to reach around 4.08 mn b/d by 2016. Indian refinery industry has around 21 refineries with total oil refinery capacity being around 3.6 mn b/d which is expected to reach around 4.29 mn b/d by 2016. India imports around 70% of the total oil needed, from countries like Saudi Arabia, Iran, UAE, etc, and has spent around US$ 91,490 million (mn) in 2011 on imports. India has a largely state-controlled oil and gas sector. The main government upstream vehicle is ONGC, which accounts for two-thirds of India’s crude oil and natural gas production. It is diversifying into refining and oil distribution. Privately owned domestic conglomerate Reliance Industries also participates in the Indian exploration and refining segments, with BP set to be a key partner in domestic upstream activities.
CHAPTER 2 RESEARCH METHODOLOGY

An Introduction to Oil Industry in India

Oil exploration and production in India is done by companies like NOC or National Oil Corporation, ONGC or Oil and Natural Gas Corporation and OIL who are actually the oil companies in India that are owned by the government under the Industrial Policy Rule. The National Oil Corporation during the 1970s used to produce and supply more than 70 percent of the domestic need for the petroleum but by the end of this amount dropped to near about 35 percent. This was because the demand on the one hand was increasing at a good rate and the production was declining at a steady rate.

CONCEPT OF PROFITABILITY

The word 'profitability' is composed of two words, namely; profit and ability. The term profit has already been discussed at length in detail. The term ability indicates the power of a firm to earn profits. The ability of an enterprise also denotes its earning power or operating performance. Also, that the business ability points towards the financial and operational ability of the business. So, on this basis profitability may be defined as —the ability of a given instrument to earn a return from its use Weston and Brigham defines profitability as "the net surplus of a large number of policies and decisions." Profit being an absolute figure fails to indicate the adequacy of income or changes in efficiency resulting from financial and operational performance of an enterprise

CONCEPT OF LIQUIDITY

By the term ‘liquidity’ is meant the debt-repaying capacity of an undertaking. It refers to the firm’s ability to meet the claims of suppliers of goods, services and capital. According to Archer and D’Ambrosio, liquidity means cash and cash availability, and it is from current operations and previous accumulations that cash is available, to take care of the claims of both the short-term suppliers of capital and the long-term ones. It has two dimensions; the short-term and the long-term liquidity
**SCOPE OF THE STUDY**

The scope or area of the study includes the analysis of profitability vis a vis liquidity of oil refinery industry in India for the period of 2007-08 to 2012-13. The research has been focused on top seven refinery companies on the basis of paid up capital as on 31st March 2012.

**UNIVERSE OF THE STUDY**

The universe of the study consists of all the limited oil refinery companies working in India and listed in Bombay Stock Exchange.

**SAMPLING DESIGN**

There are total numbers of 21 oil refinery companies working in India, out of which 17 are public sector units, 3 are private sectors and 1 is Joint Venture Company. The sample of seven oil refinery were selected considering the following factors:

- Listed on Bombay Stock exchange
- Paid up capital during the year as on year ended 31st March 2012
- For the period from 2007-08 to 2012-13.

**SOURCES AND COLLECTION OF DATA**

The main source of data was published financial reports, statistical figures, economic survey; central statistical organization survey etc, for the purpose of research secondary data will be considered.

**SAMPLE SIZE**

Out of the 21 oil refinery companies following six companies on the bases of their paid up capital (as on 31st March 2012) were selected for the research work.
Following companies were selected

<table>
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<tr>
<th>Sr.no.</th>
<th>Company name</th>
<th>*Paid up capital (Rs.Cr)</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>ONGC</td>
<td>4277.76</td>
</tr>
<tr>
<td>2</td>
<td>RIL</td>
<td>3271</td>
</tr>
<tr>
<td>3</td>
<td>IOCL</td>
<td>2427.95</td>
</tr>
<tr>
<td>4</td>
<td>MRPL</td>
<td>1752.60</td>
</tr>
<tr>
<td>5</td>
<td>BPCL</td>
<td>361.54</td>
</tr>
<tr>
<td>6</td>
<td>HPCL</td>
<td>338.63</td>
</tr>
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</table>

(*paid up capital as on 31-3-2012)

**ANALYSIS OF DATA**

For the analysis of data, various tools techniques were taken into consideration, for analytical purpose ratio analysis was used. For checking profitability position of the companies gross profit, net profit, return on capital employed, earning per share, dividend per share, return on net worth ratios were used. Further, for verifying significance level F test was used. While to verify liquidity position of the companies current ratio, quick ratio, inventory turnover, debtors turnover, debt to equity, fixed assets turnover ratio were used, to evaluate significance level, F test was used. While comparing profitability vis a vis liquidity position of companies, liquidity – profitability matrix was constructed, to further evaluating interrelationship multiple correlation was used. To verify interrelationship significance t test was applied.

**LIMITATIONS OF STUDY**

- The study is based upon the secondary data taken from published annual accounts and reports of selected companies
- There are different methods to measure the profitability and liquidity of an industry in these context views of experts can differ from one to another.
- The study is limited to period from 2007-08 to 2012-13.
CHAPTER 3 SAMPLE PROFILE

Bharat Petroleum Corporation Ltd

Bharat Petroleum Corporation Ltd (BPCL) operates in the petroleum industry in India. The company operates in a single segment - Refinery and Marketing activities, which includes Downstream petroleum sector. They are also engaged in the Exploration and Production of Hydrocarbons (E&P). BPCL on a regular basis imports their LPG requirements mainly from the Middle East. Occasional there are import requirements of Gasoil, Kerosene, Gasoline and Base Oil. The company refineries consist of Mumbai Refinery, Kochi Refinery, Numaligarh Refinery and Bina Refinery. BPCL exports Fuel Oil and Naphtha and Base Oil (Group II). During the year 2001-02, the company commissioned the Gas Turbine and Heat Recovery Steam Generator project at a cost of Rs.1750 million. Refinery Modernization Project was being implemented at a cost of Rs 18,310 million. This project besides improve distillate yield and energy efficiency of the company. The company had Allied Retail Business (ARB) also apart from the regular business, making them not only the largest non-fuel revenue generator in the oil industry, but also amongst the leading retail networks in the country, offering a basket of services ranging from C-stores, Quick Service Restaurants to financial and travel related services. In August 2010, Indian Oil Corporation Ltd, Bharat Petroleum Corporation Ltd and Hindustan Petroleum Corporation Limited entered into a memorandum of understanding (MoU) with Gujarat State Petroleum Corp Ltd to form a joint venture for trunk gas pipelines. In February 2011, the company signed an initial agreement with the provincial government of Rajasthan to sell fuel products from the state's proposed refinery. The company will sell at least 75% of the volume of the products from the proposed Rajasthan refinery under the agreement. The company plans to rise the capacity at its just commissioned Bina refinery in Madhya Pradesh to nine million tonne and is looking at the right time for a public offering of the unit. The company is planning to bid for city-gas projects in Kochi (Kerala) and Hyderabad (Andhra Pradesh) and plans to launch 600 new fuel retail outlets this fiscal, according to S Vardarajan, director, corporate finance. The company has lined up investments of Rs 50,000 crore ($11 billion) to expand their capacities in refining, retail and upstream projects over the next five years.
Hindustan Petroleum Corporation Ltd,

Hindustan Petroleum Corporation Ltd, a fortune 500 company, is one of the major integrated oil refining and marketing companies in India. The company is a Mega Public Sector Undertaking (PSU) with Navaratna status. The company operates in two business segments: Downstream, and exploration and production of hydrocarbons. The Downstream segment is engaged in refining and marketing of petroleum products. They operate two coastal refineries, one at Mumbai (West Coast) of 6.5 million metric tonnes per annum (MMTPA) and the other in Vishakapatnam, (East Coast) with a capacity of 8.3 MMTPA. They also hold an equity stake of 16.95% in Mangalore Refinery & Petrochemicals Ltd (MRPL), a refinery at Mangalore with a capacity of 9 MMTPA. The company owns the country's Lube Refinery with a capacity of 335,000 Metric Tonnes. The company's products and services include Refineries, aviation, bulk fuels & specialities, international trade, liquefied petroleum gas (LPG) - HP gas, Lubes - HP lubes. The company's subsidiaries include HPCL Biofuels Ltd and HPCL-Mittal Energy Ltd. In December 2000, the 'Guru Gobind Singh Refineries' was incorporated as a wholly owned subsidiary company. The company completed the Rs 378 crore pipeline project from Vijayawada to Secunderabad, which was commissioned on March 2002. They set up a new LPG Bottling plant with capacity of 44 TMTPA in Kota. The company implemented 15 company tank trucks in the year 2004. During the year 2008-09, the installation of facilities for production of Euro III / IV Petrol (Motor Spirit) at both the Refineries was completed. In pursuit of promoting alternate fuels, CREDA-HPCL Biofuel Ltd (CHBL) was incorporated on October 14, 2008, as a subsidiary company with equity shareholding of 74% by the company and 26% by Chhattisgarh State Renewable Energy Development Agency (CREDA). CHBL is to undertake cultivation of Jatropha plant, an energy crop used for production of bio- diesel, on 15,000 hectares of land leased by the Government of Chhattisgarh. In April 2011, the company approved the acquisition of balance 50% shares held by other joint venture partners in Prize Petroleum Company Ltd. In November 2011, the company entered into an MoU with Greater Calcutta Gas Supply Corporation Ltd (GCGSCL) and Gas Authority of India Ltd (GAIL) to carry out Natural Gas business in the City of Kolkata and its adjoining districts. The company is setting up a state of the art Green R&D Centre at Bangalore with an objective to become a technology leader through continuous &
innovative R&D efforts. The projects is being executed in a phase manner with a phase-I capital investment of Rs 210 crore.

**Indian Oil Corporation Ltd**

Indian Oil Corporation Ltd (Indian Oil) is India's flagship national oil company with business interests straddling the entire hydrocarbon value chain - from refining, pipeline transportation and marketing of petroleum products to exploration & production of crude oil & gas, marketing of natural gas and petrochemicals. The company is the leading Indian corporate in the Fortune 'Global 500' listing, ranked at the 98th position in the year 2011. Indian Oil Corporation Ltd was established in the year 1959 as Indian Oil Company Ltd. In the year 1964, Indian Refineries Ltd merged with Indian Oil Corporation Ltd. Indian Oil Blending Ltd a wholly owned subsidiary was merged with IndianOil on May 2006. The company transferred their entire equity holding in Indian Strategic Petroleum Reserves Ltd (ISPRL) to the Oil Industry Development Board, a government body functioning under the Ministry of Petroleum & Natural Gas. Consequently, ISPRL ceased to be a wholly owned subsidiary in May 2006. In the year 2007, the company received plenty of awards, Oil Industry Safety Directorate Awards, 'Most Admired Retailer of the Year' award, 'CIO 100 Award 2007', SAP ACE - Awards for Customer Excellence and the only petroleum company as 'The Most Trusted Brand' in ET's Brand Equity's annual survey. The SERVO acquires prestigious MAN Global approvals, Indian Oil’s R&D Centre gets special recognition for Bioremediation and also SERVO secures entry into NSF White Book - H1 Category during the period. The company won Retailer of the Year - Rural Impact Award and their XtraPower won Loyalty Summit Award during the year 2008. During the year 2010-11, the company enrolled about 46.8 lakh new Indane LPG customers and commissioned 245 new Indane distributors taking their total to 618.3 lakh and 5,311 respectively. The LPG Bottling capacity was enhanced to 5,518 TMTPA with capacity addition of 326 TMT. In order to provide LPG to rural India, the company commissioned 145 distributors under the Rajiv Gandhi Gramin LPG Vitaran Yojana under the auspices of Ministry of Petroleum & Natural Gas. As a part of their CSR activity, 10,052 new connections were released to BPL families. During the year, the company formed a joint venture company was formed with Nuclear Power Corporation of India Ltd (NPCIL) for setting up Nuclear power plants. In July
2010, the company commissioned their first gas pipeline between Dadri and Panipat and thus they commenced gas supplies to Panipat Refinery. In a bid to scale up their gas infrastructure, a 5 MMTPA LNG Import & Re-gassification Terminal Project was planned at Ennore, Tamil Nadu. This LNG Terminal would be the first of its kind on the East coast of India. Furthermore, in consortium with GSPC, HPCL and BPCL, the company won gas pipeline bids for Mallavaram to Bhilwara and Vijaypur via Bhopal, Mehsana to Bhatinda and Bhatinda to Jammu and Srinagar

**Mangalore Refinery and Petrochemicals Limited**

Mangalore Refinery and Petrochemicals Limited (MRPL), a Mini Ratna company was incorporated in 7th March of the year 1988 and commenced a business in 2nd August as a joint venture oil refinery promoted by Hindustan Petroleum Corporation and Indian Rayon & Industries Limited (IRIL) & Associates (AV Birla Group), now it is a subsidiary company of ONGC. MRPL is the only refinery in India to have two CCRs producing unleaded petrol of high octane. The refinery was conceived to maximize middle distillates with the capability to process light to heavy and sour to sweet crudes with 24 to 46 API gravity. In 2003, ONGC and MRPL had signed a Memorandum of Understanding for the supply of crude oil. As at 28th March of the year 2003, ONGC acquired the total shareholding of 37.39% held by A.V. Birla Group and further infused equity capital of Rs.600 crores consequently made MRPL a majority held subsidiary of ONGC. The Company had contributed Rs 20 crore to New Mangalore Port Trust towards construction of new jetty at the port for exclusive use of the company. Further it is participating as an equity shareholder in the 364 km long cross country multi product Mangalore-Hassan-Bangalore pipeline which will help the company in accessing wider consumption areas for its products. The Hassan-Bangalore Pipeline project of 367 KM long was operational and the first parcel of HSD was transported through this pipeline and was delivered at Bangalore on 1st August of the year 2003. The Centre for High Technology (CHT) selected the MRPL for the Jawaharlal Nehru centenary awards under energy performance of refineries for the year 2003-04. Shell made tie-up with MRPL for Petro products in the year 2004. During the year 2004-05, based on the MOU with ONGC the company purchased 3.7 MMT Mumbai High Crude on pricing formula applicable to other PSU Refineries. MRPL had signed a pact with Saudi, Iran firms for crude supply in the year 2005, also
in the same year; the company had forged alliance with Ashok Leyland for retail outlets. MRPL plans to initiate plant-scale experiments on spent caustic treatment with chlorine dioxide to treat phenols, conduct a study on ONGC-Hazira HCR samples on producing Gasoline using ONGC Hazira naphtha and MRPL reformate, and analyse the feasibility of producing US Military grade ATF-JP5. The company also plans to augment refining capacity from the present rating of 9.69 TPA to 15 TPA. Studies have been initiated to add fresh capacities to the tune of 15 TPA. Also the company plans to launch its unique branded petrol and diesel in very soon.

Oil & Natural Gas Corp. Ltd

During March 1999, ONGC, Indian Oil Corporation (IOC) and Gas Authority of India Limited (GAIL) both of three agreed to have cross holding in each other's stock to pave the way for Long-term strategic alliance amongst themselves for the domestic and overseas business opportunities in the energy value chain. The ONGIO International Pvt Ltd was incorporated in the year 2001 as 50:50 joint venture projects with Indian Oil Corporation Ltd with aim of providing Training, Consultancy & Services in Hydrocarbon Sector and later company has decided to wind up ONGIO due to loss. During 2001-02 the augment recovery from onshore fields of 13 projects 2 were resourcefully commissioned. By the end of the same year 2001-02 the company's subsidiary unit ONGC Videsh Ltd commenced its commercial production of gas. In the year of 2004 ONGC initiated Phase-I of a collaborative project on CBM in Jharia Field and successfully completed the same in 2005. During 2004-05 the company discovered its third deep-water exploration campaign 'Sagar Samriddhi' in Krishna-Godavari (KG) Basin at the location Vashistha (VA-1A) in block KG-OS-DW-IV. In the western offshore a shallow-water oil and gas was recorded in D-33, about 60 Kilometers South-West of Mumbai High, Onshore, Oil and Gas was found in Tiphuk-1 in North Assam Shelf and Oil was struck at Wamaj in Cambay Basin. Offshore, four new Platforms (2 Well Platforms, 1 Process Platforms and 1 Clamp-on) were Commissioned for enhancing production. New trunk pipelines are being laidsub-sea from Mumbai High Field to Urban Oil and Gas processing facility. In March 2005 ONGC launched its retail marketing business with commissioning of its first autofuels outlet at Manglore under the brand 'ONGC Values' and 'Shopp'njoy' for fuel and non-fuel business respectively. The company has also received
approval/license from the Government for marketing of non-subsidised LPG cooking gas, Kerosene and Aviation refueling sales. Tripura Power Development Company Pvt Ltd (TPDCL) was incorporated to set up a gas-based power-generating project in Tripura. TPDCL has been renamed as ONGC Tripura Power Company Pvt Ltd after the domination. In the same year the company has entered into various alliances in form of execution of Memorandum of Understanding with Kakinada Seaport & IL&FS with 26% equity stake for development of Port based SEZ at Kakinada, Andhra Pradesh. During the year 2006 the company was awarded 60 out of 110 exploration blocks by the Government in the five NELP rounds. Out of these 60 NELP Blocks 35 are in the form of unincorporated joint ventures and remaining blocks are company's 100% participating interest. For the sake of its excellent concert, the company has received numerous awards every year. The highlights are NDTV Profit Business Leadership Award, Motilal Oswal CNBC TV18 Biggest Wealth Creator of India for the period of 2001-06, Golden Peacock Award 2006 for Corporate Governance in PSU category, is this award has been conferred to the company regularly. Dun & Bradstreet-American Express Corporate Awards 2006 in the oil and gas exploration sector and Greentech Gold Safety Award in petroleum sector apart from this, the company listed and ranked in Indian level also in global level by various evaluators.

Reliance Industries Ltd

Reliance Industries Ltd is an India-based company. The company is India's largest private sector company on all major financial parameters. They are the first private sector company from India to feature in the Fortune Global 500 list of 'World's Largest Corporations' and ranks 117th amongst the world's Top 200 companies in terms of profits. The company operates world-class manufacturing facilities across the country at Allahabad, Barabanki, Dahej, Hazira, Hoshiarpur, Jamnagar, Nagothane, Nagpur, Naroda, Patalganga, Silvassa and Vadodara. The company operates in three business segments: petrochemicals, refining, and oil and gas. The petrochemicals segment includes production and marketing operations of petrochemical products. The refining segment includes production and marketing operations of the petroleum products. The oil and gas segment includes exploration, development and production of crude oil and natural gas. The other segment of the company includes textile, retail
business and special economic zone (SEZ) development. In the year 1966 the RIL was founded by Shri Dhirubhai H.Ambani, it was started as a small textile manufacturer unit. In May 8, 1973 RIL was incorporated and conformed their name as RIL in the year 1985. Over the years, the company has transformed their business from manufacturing of textiles products into a petrochemical major. The company has set up a texturising / twisting facilities in 1979, RIL has also set up plants for Polyester Staple Fiber (PSF) in 1986 and for Linear Alkyl Benzene (LAB) & Purified Terephthalic Acid (PTA) in 1988. RIL has setup a petrochemical facility to produce HDPE and PVC at Hazira, Gujarat in technical collaboration with DuPont and BF Goodich respectively. The Hazira petrochemical plant was commissioned in 1991-92. In the year 1995-96, the company entered the telecom industry through a joint venture with NYNEX, USA and promoted Reliance Telecom Private Limited in India. Reliance became the first corporate in Asia to issue bonds in the U.S at the year of 1996-97. The company commissioned an 80,000 tonne bottle grade PET chip plant at Hazira manufacturing complex. Reliance's PET chips has been accepted internationally due to their high quality during the year 1997-98 and in the same year Reliance Industries Planned to invest around Rs. 5000 crores (USD 1,250 million) in building two world-scale plants at the site of the Jamnagar refinery in Gujarat. In 1998-99, RIL introduced packaged LPG in 15 kg cylinders under the brand name Reliance Gas. In 1999-2000, RIL commissioned the world's largest 1.4 million tonnes per annum Paraxylene (PX) plant at its new integrated petrochemicals complex at Jamnagar which was planned at 1997-98. Reliance Petroleum Limited (RPL) was amalgamated with Reliance Industries Ltd in the year 2002-03.


CHAPTER 4 ANALYSIS OF PROFITABILITY

Gross profit margin ratio

During study period BPCL has maintained average gross profit margin of 1.70%, which was very low compared to industry average of 10.75%, the margin was ranged between 2.58% in 2008-09 to 0.93% in 2011-12, the standard deviation was 0.57 as compared to industry average of 16.06 which means there was a less fluctuation in gross profit margin during period of research. Overall the company has shown satisfactory gross profit margin. Gross profit margin of HPCL varied between 2% in 2009-10 to 1.1% in 2012-13. Average gross profit margin was 1.44% which was also the lowest among the average of other companies’ as well as industry average of 16.06%. Overall it was clear that company has maintained very poor gross profit margin on sales due to high cost of production and direct expenses. During period of study gross profit margin of IOCL was showing mix trend, ranged between 3.47% in 2007-08 to 1.9% in 2012-13. The company has maintained average gross profit margin of 3.13% which was less than the industry average of 16.06%. Overall the company has maintained satisfactory gross profit margin. MRPL was the only exception showing negative return of gross profit on sales. Although company has maintained average return of 3.60%, during last year it was negative. Highest return was in 2008-09 which was 6.21%. Due to heavy cost of production company couldn’t maintain positive return on sales. ONGC has shown very sound profitability position. It has shown average of 44.76% which was more than the industry average of 10.75%. Gross profit margin was ranged between 53.87% in 2009-10 to 30.34% in 2012-13. Standard deviation of 8.16% compared to industry average of 16.06% which means there was a less fluctuations in gross profit margin during period of research. RIL has shown downtrend in gross profit during research period, ranged between 13.35% in 2008-09 to 5.91% in 2011-12, during last four years of study, there was a continuous decrease in gross profit margin, which shows negative future profitability position. The company has managed average 9.85% return on gross profit which was also less than the industry average.
**Net profit margin ratio**

BPCL has maintained average 0.99% net profit margin which was less than industry average of 6.85%. The margin was ranged between 1.26% in 2009-10 to 0.54% in 2008-09. It was fluctuating during research period. Standard deviation was 0.35% which was less than the industry average of 9.36%. Overall it shows very low net profit margin as compared to other industry players of research sample. HPCL had the lowest average of net profit margin among other companies, i.e. 0.80% whereas average industry net profit margin was 6.85%, the margin was ranged between 1.2% in 2009-10 to 0.43% in 2012-13. During research period, the net profit margin has shown mix trend. In short the company had maintained poor net profit margin during research period. During study period, net profit margin of IOCL was ranged between 3.74% in 2009-10 to 0.95% in 2008-09. Average net profit margin was 1.96% which was below industry average of 6.85%. Overall it shows satisfactory net profit margin. MRPL had shown good net profit margin during the first three years of research, ranged between 3.89% in 2007-08 to 3% in 2010-11, but during last two years of study there was a downtrend in net profit margin, moreover it was negative 1.15% in 2012-13. Due to high cost of production company couldn’t maintain net profit margin. ONGC has shown better net profit margin during research period. The company was having the highest average of net profit margin i.e. 26.14% far better than the industry average of just 6.85%, margin was ranged between 31.02% in 2011-12 to 23.5% in 2008-09. The company is having very strong profitability prospectus RIL had maintained average 8.67% net profit margin slightly more than industry average of 6.85%, the margin was ranged between 14.45% in 2007-08 to 5.7% in 2012-13. The company was having very sound profitability position, except the constraint that negative trend of net profit margin will lead to adverse profitability condition in future.
**Return on net worth**

Return on net worth of BPCL. The ratio showed mix trend during research period. The average was 11.17% which was little less than industry average of 13.92%. The ratio was ranged between 15.88% in 2012-13 to 6.06% in 2008-09. The standard deviation was 3.46 which also less than the industry average of 7.79 showing less fluctuation in return on net worth of company. In short the company has maintained good ratio of return on net worth. The ratio of return on net worth of HPCL shows fluctuating trend. The company had given average return of 8.86% as compared to industry average of 13.92%, which was the lowest return compare to other companies included in research study. The ratio was ranged between 12.26% in 2010-11 to 5.35% in 2008-09. Overall the company has given satisfactory return on net worth during period of study. The ratio of return on net worth of IOCL has also shown mix trend, ranged between 20.22% in 2009-10 to 6.71% in 2008-09. Overall the company has maintained average return of 12.06% which was little less than industry average of 13.92. overall the company could maintain satisfactory return on net worth during period of study. The ratio of return on net worth of MRPL has shown exceptionally negative return in 2012-13 i.e. 11.7% due to negative profit after tax. However the company has managed average return of 16.30% on net worth which was more than the industry average of 13.92%, but as far as company is showing negative trend it was adverse for future profitability. ONGC has given the highest return on net worth at an average of 20.39% compared to industry average of 13.92%, ratio was ranged between 22.24% in 2011-12 to 16.81% in 2012-13. Standard deviation was mere 2.47 which mean less fluctuation in return. Overall the company has performed well and given good returns to shareholders. RIL has maintained return on net worth with an average of 14.75% which was better than industry average of 13.92%, although the ratio has shown decreasing trend during last three years of study period. The ratio was ranged between 24.66% in 2007-08 to 11.66% in 2012-13. Overall the company has given satisfactory return to their shareholders.
Return on capital employed

Return on capital employed of BPCL average return was 12.27% which was less than industry average of 16.24%. Standard deviation of 1.96 means there was a less fluctuations during research period of study. The average was between 14.86% in 2008-09 to 10.18% in 2011-12. Return on capital employed of HPCL was satisfactory at an average of 8.19% with industry average of 16.24% almost half of the industry average, which shows poor return on capital employed as compare to other companies, ratio was ranged between 9.91% in 2009-10 to 6.23% in 2007-08. Standard deviation of 1.36, less than the industry average means less fluctuation in return on capital employed during study period. Ratio of return on capital employed of IOCL was ranged between 15.83% in 2009-10 to 8.64% in 2012-13. The ratio has shown mixed trend. The average return was 12.76% which was also less than industry average of 16.24%. Overall the company has maintained satisfactory return on capital employed. MRPL was the only company which had given negative return to capital employed due to heavy loss after tax and high expenses to revenue. In 2012-13, it has shown negative return of 1.43%, however company could maintain average ratio of 20.55% which was unexpectedly higher than the industry average of 16.24%. ONGC has given the highest average return on capital employed i.e. 31.11%, ranged between 36.3% in 2007-08 to 24.6% in 2012-13. Standard deviation was 4.59 which was also less than the industry average of 9.6 which means there was less uncertainty in return on capital employed during study period. Overall the company is having good prospects in return on capital employed. RIL has maintained 12.55% average return on capital employed. The ratio was ranged between 15.68% in 2007-08 to 10.96% in 2008-09, however during last two years of research period, company has maintained upward trend in return on capital employed. Standard deviation was 1.67 compared to industry average of 9.6 means less deviation in return on capital employed.
**Dividend Per Share**

The Dividend Per Share of BPCL has shown increasing trend during first four years of study period, whereas during last two years company could maintain DPS of Rs.11 per share. Average DPS of BPCL was 10.17 Rs. Per share, which was little more than the industry average of Rs.9.67 per share. Overall it shows positive and satisfactory dividend per share. HPCL, has maintained increasing trend of DPS during first four years, whereas during last two years, company had shown constant DPS of Rs. 8.5 per share. The average DPS was Rs. 8.54, which was less than the industry average of Rs.9.67 per share. Standard deviation of 4.08 shows less fluctuations in dividend per share of a company. During study period, IOCL has maintained the average DPS of Rs. 7.78 per share, ranged between 13 in 2009-10 to Rs. 5 per share in 2011-12. Standard deviation was 3.02 which is less than industry average of 8.05 which means less changes in dividend payment during research period.

MRPL has shown average DPS of 0.97 per share, which was far below than the industry average of Rs.9.67 per share. During first four years of research company had constant DPS of Rs. 1.2, gradually it decreased to 1 re. per share and nil. Due to negative earnings after tax, company couldn’t maintain proper dividend policy. ONGC has shown the highest average of Rs. 20.83 per share, as compared to industry average of Rs. 9.67 per share, it was ranged between 33 Rs. Per share in 2009-10 to 8.75 per share in 2010-11. But dividend during last two years of study were near to industry average. Moreover the standard deviation is 12.61 which is also more than the industry average of 8.05, which means inconsistency in payment of dividend during study period. During period of study, Dividend Per Share of RIL was ranged between Rs.13 per share in 2007-08 to Rs.8 per share in 2010-11. Company has maintained average DPS of 9.75, which was also more than the industry average of Rs.9.67 per share. Standard deviation was 2.60, less than the industry average of 8.05, which means less change in dividend payment during study period. Overall the company has maintained satisfactory dividend payment policy.
Earnings Per Share

EPS of BPCL with an average of Rs. 41.78 per share, which was more than the industry average of Rs. 39.90 per share. EPS was ranged between Rs. 65.05 per share in 2012-13 to 36.27 Rs. Per share in 2011-12, standard deviation is 14.40 which was also less than the industry average of 29.18. Overall EPS of company was satisfactory. HPCL has shown average EPS of Rs. 31.34 per share, which was less than industry average of Rs.39.90 per share. The highest EPS was Rs.45.45 in 2010-11, where as it was minimum in 2008-09 i.e. Rs.16.98. standard deviation was 10.01, less than the industry average showing less changes in EPS. IOCL has shown average EPS of 32.13, which was lower than the industry average of Rs.39.90 per share. EPS was ranged between 58.39 in 2007-08 to 16.29 in 2011-12. Standard deviation of 15.68, below the industry average shows consistency in EPS.MRPL has shown negative EPS in the year 2012-13 i.e. -4.32 Rs. Per share. Moreover, the company has shown the lowest average of Rs.4.66 per share which was far below than the industry average of Rs.39.90. EPS was ranged between 7.26 per share in 2007-08 to -4.32 per share in 2012-13. Overall it was very dissatisfactory. ONGC has maintained EPS of Rs.78 to Rs.75 during first three years then after it was ranged between Rs.22.12 per share to Rs.29.36 per share during last three years. The average was Rs.51.30 per share which was more than the industry average of Rs.39.90 per share. Standard deviation was 28.59 slightly less than the industry average of Rs.29.18 per share. RIL, has performed well during research period showing average EPS of Rs.78.18 per share, which was almost double than the industry average of 39.90 per share. The EPS was ranged between 133.86 per share in 2007-08, which was also the highest among all companies to Rs.49.64 per share in 2009-10, overall the company has given good EPS.
CHAPTER 5 ANALYSIS OF LIQUIDITY

Current ratio

During research period, current ratio of BPCL was ranged between 0.78 in 2012-13 to 0.5 in 2008-09. The ratio shows fluctuating trend. The average ratio during the period was 0.69 which was the lowest one compare to other industry average. Company couldn’t maintain the ideal current ratio during the study period, hence not able to pay its current liabilities in time. During period of study current ratio of HPCL was between 1.03 in 2007-08 to 0.68 in 2012-13, with an average of 0.80 which was near to ideal current ratio, but below to industry average of 1.01. During most of the years company was not able pay its current liabilities as ratio was less than 1. The above table shows the current ratio of IOCL, which was the highest 0.84 in 2007-08 and the lowest in 2008-09 i.e. 0.61, trend shows very little fluctuations with an industry average of 0.78. liquidity position was good, but exact standard ratio couldn’t be maintained. While, MRPL shows ideal current ratio during most of the period, the ratio was ranged between 1.36 in 2008-09 to 0.92 in 2012-13. The company has also maintained average current ratio of 1.06 which was more than the industry average. ONGC was leading the race, maintaining standard current ratio throughout the research period, maximum 2.37 in 2012-13, to minimum 1.13 in 2011-12, with the highest average of 1.51. Overall the company has shown good liquidity position during period of study. RIL has also maintained the standard current ratio. The company has kept average current ratio at 1.19. The data shows very less fluctuations in current ratio. Current ratio was ranged between 1.44 in 2011-12 to 0.98 in 2007-08.

Stock turnover ratio or stock velocity ratio

Inventory turnover ratio of BPCL, the data shows fluctuating trend in ratio. It was 11.64 times in 2007-08, then the highest 21.91 times in 2008-09, and further declined to 11.09 times and lowest 9.86 times in the 2009-10 and 2010-11 respectively. The company has maintained average turnover at 13.70 times which was below to industry average of 19.61 times. Overall the company has maintained satisfactory turnover ratio. The inventory turnover ratio of HPCL has also shown mix trend. The turnover was ranged between 15.31 times in 2008-09 to 8.68 times in 2010-11. During study period, company has maintained average turnover at 10.93 times less than the industry average of 19.61 times. Overall the company has kept
moderate inventory turnover ratio. Whereas IOCL was having the lowest average of 9.17 times of inventory turnover. IOCL was struggling to move inventory faster as compare to other companies of sample study. The company has figured out the lowest turnover ratio of 7.56 times in 2010-11, and highest was 13.98 times in 2008-09. Overall it was dissatisfactory result for company. Inventory turnover ratio of MRPL shows fluctuating trend ranged between 23.6 times in 2008-09 to 7.32 times in 2011-12. The company has shown the lowest inventory turnover ratio to other companies under study. Overall it was dissatisfactory result of company. ONGC has shown tremendous inventory turnover ratio and also the highest among others. The company has shown the average of 61.42 times, almost 3.20 times more than the industry average of 19.61 times. This shows the company was very efficient in converting inventory to sales. During study period RIL has shown mix trend ranged between 12.92 times in 2008-09 to 8.29 times in 2009-10. The company could maintain 10.57 times inventory turnover during period of research which was less than industry average of 19.61 times.

**Debtor’s turnover ratio**

Average ratio was of 61.63 times more than the industry average of 36.08 times. Company’s average debtor’s turnover ratio was higher among all companies under study. The turnover was ranged between 88.37 times in 2008-09 to 46.16 times in 2012-13. Standard deviation was 15.80 and co variance was 25.64% shows greater fluctuations in debtors turnover ratio during study period. BPCL was quick to convert credit sales into cash and has implemented good collection policy. HPCL was next to BPCL in context to average debtors turnover ratio during study period. It was 55.18 times, more than the industry average of 36.08. the ratio was ranged between 63.44 times in 2007-08 to 48.7 in 2012-13. Standard deviation of 7.42 and co variance of 13.44% show fewer fluctuations in debtors turnover ratio. Overall the company has maintained good credit collection policy. The average debtors turnover ratio of IOCL was 41.49 times. It was also more than the industry average of 36.08 times. The turnover ratio was less fluctuating as standard deviation was 5.49 and co variance was 13.23%. Debtors turnover ratio was ranged between 48.15 times in 2008-09 to 36.01 times in 2011-12.Overall the company has maintained satisfactory collection policy. MRPL has maintained average debtors turnover ratio at 19.50 times, which was less than the industry average of 36.08 times. The ratio was maximum of 21.93 times in
2008-09 and minimum of 17.68 times in 2012-13. Standard deviations of 1.85 and covariance of 9.47% were the least among all companies under study. It means that there was a very little fluctuation in debtors turnover ratio during study period. Overall it shows moderate collection policy. ONGC has exceptionally shows the least turnover ratio among all companies under study. It shows average of 16 times. The debtors turnover ratio was ranged between 19.38 in 2010-11 to 12.71 times in 2012-13. Standard deviation was 2.26 and covariance was 14.09% shows major fluctuations in debtors turnover ratio. Overall it was very dissatisfactory result for a company as lower turnover ratio adversely affects the liquidity position of a company. It also leads to major blockage of working capital in the form of receivables. Average debtors turnover ratio of 22.68 times of RIL. The ratio was more than the industry average of 36.08 times. It was ranged between 26.87 in 2007-08 to 18.4 times in 2011-12. Standard deviation was 4.07 whereas covariance of 17.94% shows fewer fluctuations in debtors turnover ratio during period of study. Overall it shows good collection policy.

**Liquid/quick/acid test ratio**

BPCL has shown average quick ratio of 0.64 during research period, which was less than the industry average of 0.93. The ratio was mostly consistent during research period except the lowest one 0.45 in 2010-11. During last two years it was consistent as well as maximum i.e. 0.71. The company has also shown the lowest variation of 15.55% from average. HPCL had lowest average of quick ratio i.e. 0.52 among other companies. Moreover the company has shown the fluctuating trend in quick ratio, ranged between 0.52 in 2011-12 to 0.71 in 2012-13. The standard deviation was 0.10 which was also less than industry average of 0.37, means less inconsistency in ratio. IOCL has maintained mix trend of quick ratio during period of study showing average of 0.54 at a covariance of 19.67%, the company couldn’t maintain ideal quick ratio. The ratio was ranged between 0.74 in 2011-12 to 0.45 in 2009-10. MRPL had quick ratio ranged between 0.98 in 2008-09 to 0.5 in 2012-13. The company has maintained average of 0.64 which was less than industry average of 0.78. Standard deviation of 0.18 compared to industry average of 0.78 shows less fluctuations in quick ratio during study period. ONGC has maintained quick ratio well, showing average quick ratio of 1.41 highest among all sample companies. Quick ratio was ranged between 2.26 in 2012-13 to 1.08 in 2010-11. ONGC was also having
the highest co variance of 30.55% means there were greater fluctuations in trend of quick ratio throughout the research period. Overall it was a good management of working capital. During research period RIL has shown average quick ratio of 0.95, ranged between 1.17 in 2011-12 to 0.69 in 2009-10. Standard deviation was 0.18 less than industry average of 0.37. the company was the second highest in maintenance of quick ratio among all sample companies during period of study.

 Debt – equity ratio

BPCL has maintained average debt equity ratio at 1.46 during period of study, which was slightly less than industry average of 0.93. Debt equity ratio was ranged between 1.75 in 2008-09 to 1.17 in 2010-11. Standard deviation of 0.23 shows less variation in ratio as industry average was of 0.68. the ratio shows greater portion of debt to equity in company, which means company is having more debt fund compared to owners’ equity, on the other hand company at a greater side to take advantage of trading on equity. HPCL was having the highest proportion of debt equity ratio during period of study i.e. 2, as compared to industry average of 0.93. It means that company was having twice proportion of debt compare to its equity. Debt equity ratio was ranged between 2.36 in 2012-13 to 1.59 in 2007-08. Standard deviation of 0.26 was less than industry average of 0.68, it means that there was less inconsistency in debt equity ratio during study period. Greater portion of debt will adversely affect profitability during slag period, however proper utilization of debt funds may improve return to share holders. IOCL has shown average debt equity ratio of 0.99 which was near to industry average of 0.93. Debt equity ratio was ranged between 1.22 in 2011-12 and 0.86 in 2007-08. During study period the company has maintained almost ideal debt equity ratio. Standard deviation of 0.13 and co variance of 13.17% shows less fluctuation in debt equity ratio during research period. Overall it shows good balance of debt and equity. MRPL was having debt equity ratio at an average of 0.57, which was less than industry average of 0.93. Ratio was ranged between 1.08 in 2012-13 to 0.24 in 2010-11. During last three years there was continuous increase in the ratio. This shows that company was moving towards larger share of debt to finance new projects. Above table shows average debt equity ratio of 0.12 of ONGC as compared to industry average of 0.93. The ratios show very meagre proportion of debt in capital structure. The ratio was ranged between 0.2 in 2008-09 to 0.04 in 2012-13. During last three years it was almost negligible that means there was a greater control
of owners. Capital structure was not balanced one but lean towards equity share holders. It also means very little chance of trading on equity. RIL has maintained average debt equity ratio at 0.45. industry average was of 0.93, which means company has been maintaining lower level of debt compare to other companies under study. The ratio was ranged between 0.65 in 2008-09 to 0.30 in 2012-13. Standard deviation of 0.12 and co variance of 26.53% suggests less fluctuation in debt equity ratio.

**Fixed assets turnover**

Fixed assets turnover ratio of BPCL. The company has shown increasing trend after year 2007-08. The fixed assets turnover ratio of BPCL was ranged between 7.17 times in 2012-13 to 5.15 times in 2007-08. Standard deviation of 0.96 shows less fluctuations compared to industry average of 2. The average fixed assets turnover ratio of BPCL was 5.83 times which was also the highest among all sample companies under study. It means higher efficiency. Company is more efficient in using fixed assets to generating sales. The fixed assets turnover ratio of HPCL has shown fluctuating trend during research period. Highest 6.22 times in 2008-09, whereas the lowest 4.32 times in 2009-10. The standard deviation was 0.71 times which less than the industry average was. The mean ratio of company was 5.24 times, higher than industry average of 3.82 times. Thus it shows that the company has managed its fixed assets efficiently. With an average of 4.34 times, IOCL has maintained mix trend of fixed assets turnover ratio during research period. The ratio ranged between 4.98 times in 2008-09 to 3.61 times in 2010-11. Standard deviation was 0.50, less than the industry average. Average 4.35 times fixed turnover ratio was higher than industry average of 3.82 times. Overall it shows good management and utilization of fixed assets to produce sales. The fixed assets turnover ratio of MRPL has shown mix trend during first three years then after it has shown upward trend, the ratio was ranged between 5.97 times in 2011-12 to 4.29 times in 2009-10. Standard deviation was 0.69, less than the industry average of 2. Average fixed assets turnover ratio of company was 5.13 times, higher than the industry average of 3.82 times, which shows the satisfactory management of fixed assets. ONGC has shown the lowest average of fixed assets turnover ratio, i.e. 0.92 times compared to industry average of 3.82 times. It was consistent during first two years i.e. 1.05 times and was also the highest and then after it has shown almost downtrend, except in the year 2012-13 where there was a very little improvement. The result shows that the
investment in fixed assets is more than what is needed to generate sales. RIL has maintained average fixed assets turnover ratio of 1.57 times which is less than the industry average, the company has shown improvements in fixed assets turnover ratio after 2007-08. It was maximum in 2012-13 i.e. 2.24 times which indicates that necessary steps were taken to improve the ratio.
Chapter – 6 Profitability vis a vis liquidity analysis

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF CURRENT RATIO AND GROSS PROFIT RATIO

The table discloses that the ONGC has a strong position being in high profitability and high liquidity cell. While MRPL and RIL are having high liquidity but at the cost of low profitability. BPCL, HPCL and IOCL do not perform well, are come under cell -4, which denotes low liquidity low profitability.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF CURRENT RATIO AND NET PROFIT RATIO

Industry average of 6% is considered as a standard for Net profit. Industry average current ratio of 1 is considered as standard to evaluate Current ratio. ONGC and RIL were in cell -1 showing high liquidity and higher profitability, where as MRPL has maintained high current ratio but profitability in the form of net profit was low, hence occupied cell – 2. While BPCL, HPCL, and IOCL were in cell – 4 due to low current ratio and low net profit margin showing poor performance.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF CURRENT RATIO AND EARNING PER SHARE

Current Ratio was taken as the measurement of short term debt paying capacity, while Earning Per Share was used as profitability indicator. Industry average of Rs.39 per share is considered as a standard for EPS. Industry average current ratio of 1 is considered as standard to evaluate Current ratio. ONGC and RIL has maintained high current ratio and also managed profitability well in the form of EPS thus occupied cell -1, while BPCL shows profitability liquidity trade off situation by maintain low liquidity and earning well, company was placed in cell – 3. HPCL, IOCL and MRPL were not performing well in both, they maintained low current ratio but couldn’t improve profitability and hence occupied cell -4.
LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF CURRENT RATIO AND DIVIDEND PER SHARE

Current Ratio was taken as the measurement of short term debt paying capacity, while Dividend Per Share was used as profitability indicator. Industry average of Rs. 9 per share is considered as a standard for DPS. Industry average current ratio of 1 is considered as standard to evaluate Current ratio. ONGC and RIL has maintained liquidity profitability well and occupied the best position at cell – 1, MRPL has traditionally fit at liquidity profitability trade off, maintaining high liquidity at a cost low profitability. BPCL on other hand at cell -3 maintained low liquidity at a cost of high profitability. HPCL and IOCL didn’t perform well, had a low current ratio as well as low DPS.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF CURRENT RATIO AND RETURN ON NET WORTH

Current Ratio was taken as the measurement of short term debt paying capacity, while Return On Net Worth was used as profitability indicator. Industry average of 13% is considered as a standard for RONW. Industry average ratio of 1 is considered as standard to evaluate Current ratio. MRPL, ONGC and RIL performed well at both level showing high CR and high RONW, were placed at cell -1. While no companies were at liquidity profitability trade off zone. BPCL, HPCL and IOCL registered low CR and low RONW therefore continued at cell -4. MRPL was exceptional at cell -1, because during 2012-13 the company has shown negative return on net worth.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF CURRENT RATIO AND RETURN ON CAPITAL EMPLOYED

Current Ratio was taken as the measurement of short term debt paying capacity, while Return On Capital Employed was used as profitability indicator. Industry average of 16% is considered as a standard for ROCE. Industry average current ratio of 1 is considered as standard to evaluate Current ratio. MRPL and ONGC has maintained high CR as well as ROCE and placed at cell -1. RIL struggling little for ROCE, had
maintained high CR, therefore placed at cell -2. BPCL, HPCL and IOCL were low at CR as well as ROCE placed at cell -4 indicating poor performance.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF STOCK TURNOVER RATIO AND GROSS PROFIT RATIO**

Inventory Turnover Ratio was taken as the measurement of efficiency, while Gross Profit was used as profitability indicator. Industry average of 10% is considered as a standard for Gross profit. Industry average ratio of 19 times is considered as standard to evaluate ITR. ONGC was the only company which could maintain high ITR as well as high GP at cell -1. All other companies viz. BPCL, HPCL, IOCL, MRPL, RIL were registered low ITR as well as low GP and were placed at cell -4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF STOCK TURNOVER RATIO AND NET PROFIT RATIO**

Inventory Turnover Ratios was taken as the measurement of efficiency, while Net Profit was used as profitability indicator. Industry average of 6% is considered as a standard for Net profit. Industry average ratio of 19 times is considered as standard to evaluate ITR. ONGC was only company maintained high ITR as well as high NP, RIL at liquidity profitability trade off zone maintained low liquidity and high profitability. All other companies viz. BPCL, HPCL, IOCL, MRPL has shown very weak performance, as companies have maintained low ITR as well as low NP.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF STOCK TURNOVER RATIO AND EARNING PER SHARE**

Inventory Turnover Ratio was taken as the measurement of efficiency, while Earning Per Share was used as profitability indicator. Industry average of Rs. 39 per share is considered as a standard for EPS. Industry average ratio of 19 times is considered as standard to evaluate ITR. ONGC has maintained both liquidity as well profitability criterion very well, having high ITR as well as high EPS occupied the best position i.e. cell – 1. No companies were at cell -2. BPCL and RIL couldn’t maintain high ITR but managed to get EPS above industry average and hence
occupied place at cell – 3. HPCL, IOCL and MRPL failed in both categories, maintained low ITR as well as low EPS fall at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF STOCK TURNOVER RATIO AND DIVIDEND PER SHARE**

Inventory Turnover Ratio was taken as the measurement of efficiency, while Dividend Per Share was used as profitability indicator. Industry average of Rs. 9 per share is considered as a standard for DPS. Industry average ratio of 19 times is considered as standard to evaluate ITR. ONGC has performed well in both categories, having high ITR and more than industry average DPS, set at cell -1. BPCL and RIL has successfully maintained high DPS, but having low ITR, set at cell – 3. HPCL, IOCL and MRPL did not perform well and could not maintain both liquidity as well as profitability having low ITR and low DPS placed at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION STOCK TURNOVER RATIO AND RETURN ON NET WORTH**

Inventory Turnover Ratio was taken as the measurement of efficiency, while Return On Net Worth was used as profitability indicator. Industry average of 13% is considered as a standard for RONW. Industry average ratio of 19 times is considered as standard to evaluate ITR. ONGC again being market leader, sustained high ITR and high RONW set at cell -1, MRPL and RIL could maintain high RONW, but failed to achieve proper ITR hence set at cell -3. BPCL, HPCL, and IOCL struggling for both liquidity as well as profitability, maintained low ITR and low RONW, therefore occupied cell – 4

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF STOCK TURNOVER RATIO AND RETURN ON CAPITAL EMPLOYED**

Inventory Turnover Ratio was taken as the measurement of efficiency, while Return On Capital Employed was used as profitability indicator. Industry average of 16% is considered as a standard for ROCE. Industry average ratio of 19 times is considered as standard to evaluate ITR. ONGC has maintained high ITR and high
ROCE, hence set at cell -1, MRPL at profitability liquidity trade off, has shown low ITR and high ROCE at cell 3. Whereas BPCL, HPCL, IOCL and RIL couldn’t perform well and occupied position at cell – 4 for having low ITR and low ROCE.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBTORS TURNOVER RATIO AND GROSS PROFIT RATIO

Debtors Turnover Ratio was taken as the measurement of short term liquidity, while Gross Profit was used as profitability indicator. Industry average of 10% is considered as a standard for Gross profit. Industry average of 36 times considered as standard to evaluate DTR. ONGC has shown the best performance having high GP and high DTR, got the position at cell – 1. BPCL, HPCL and IOCL set at profitability liquidity trade off due to high DTR but low GP, no companies were at cell – 3. MRPL and RIL couldn’t maintain the industry standard and therefore placed at cell – 4.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBTORS TURNOVER RATIO AND NET PROFIT RATIO

Debtors Turnover Ratio was taken as the measurement of short term liquidity, while Net Profit was used as profitability indicator. Industry average of 6% is considered as a standard for Net profit. Industry average ratio of 36 times considered as standard to evaluate DTR. No companies were at cell – 1. BPCL, HPCL and IOCL were at cell – 2, having high profitability and low net profit, due to high DTR and low NP. ONGC and RIL were at liquidity profitability trade off, showing low DTR and high NP. MRPL has shown the worst performance and was not able to maintain both liquidity as well as profitability at industry average and fall in to cell –4 due to low DTR and low NP.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBTORS TURNOVER RATIO AND EARNING PER SHARE

Debtors Turnover Ratio was taken as the measurement of short term liquidity, while Earning Per Share was used as profitability indicator. Industry average of 36 times is considered as a standard for DTR. Industry average ratio of Rs. 39 per share is
considered as standard to evaluate EPS. BPCL has performed well under both cases, as the company maintained high DTR as well as high EPS. While HPCL, IOCl were at profitability liquidity trade off have maintained high DTR and low EPS, set at cell -2. Whereas ONGC and RIL, on other side have maintained high EPS at a cost of low DTR, so got position at cell -3. MRPL couldn’t perform well showing low DTR and low EPS got the worst position at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBTORS TURNOVER AND DIVIDEND PER SHARE**

Debtors Turnover Ratio was taken as the measurement of short term liquidity, while Dividend Per Share was used as profitability indicator. Industry average of Rs. 9 per share is considered as a standard for DPS. Industry average ratio of 36 times is considered as standard to evaluate DTR. BPCL significantly occupied cell – 1 due to high DTR as well as high DPS. HPCL and IOCL were at cell -2 as the companies have maintained high DTR at cost of low DPS, on other side at cell -3, there were ONGC and RIL both companies succeeded in maintaining high DPS, but couldn’t maintain industry average of DTR. MRPL didn’t perform well in both DTR as well as DPS, due to low DTR and low DPS, company got position at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBTORS TURNOVER RATIO AND RETURN ON NET WORTH**

Debtors Turnover Ratio was taken as the measurement of short term liquidity, while Return On Net Worth was used as profitability indicator. Industry average of 13% is considered as a standard for RONW. Industry average current ratio of 36 times is considered as standard to evaluate DTR. There was not a single company at the best position i.e. cell -1 as well as the worst one i.e. cell -4. All companies were struggling to maintaining liquidity profitability trade off. BPCL, HPCL and IOCL were at cell -2 due to high DTR and low RONW. MRPL, ONGC and RIL were occupied cell – 3 due to low DTR and high RONW.
LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBTORS TURNOVER RATIO AND RETURN ON CAPITAL EMPLOYED

Debtors Turnover Ratio was taken as the measurement of short term liquidity, while Return On Capital Employed was used as profitability indicator. Industry average of 16% is considered as a standard for ROCE. Industry average ratio of 36 times is considered as standard to evaluate DTR. There was not a single company at cell -1, BPCL, HPCL and IOCL have maintained high DTR but at cost of low ROCE therefore set at cell -2. On the other hand MRPL, ONGC were at cell -3 due to high ROCE and low DTR. RIL has shown exceptionally low DTR as well as low ROCE hence got the worst position at cell -4.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF QUICK RATIO AND GROSS PROFIT RATIO

Quick ratio was taken as the measurement of short term liquidity, while Gross Profit was used as profitability indicator. Industry average of 10% is considered as a standard for Gross profit. Industry average ratio of 0.78 is considered as standard to evaluate quick ratio. ONGC has performed well and has shown high QR as well as high GP, and got the best position at cell – 1. RIL at liquidity profitability trade off occupied cell -2 as the company maintained high QR but low GP. Whereas BPCL, HPCL, IOCL and MRPL couldn’t perform as per expectations and all companies have failed to maintain industry average of QR and GP. Due to low GP and low QR all companies were located at cell -4.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF QUICK RATIO AND NET PROFIT RATIO

Quick Ratio was taken as the measurement of short term liquidity, while Net Profit was used as profitability indicator. Industry average of 6% is considered as a standard for Gross profit. Industry average current ratio of 0.78 is considered as standard to evaluate Quick ratio. ONGC and RIL have performed well and succeeded in maintaining both QR and NP above the industry average, hence got position at cell –
1. There was not a single company at liquidity profitability trade off positions. BPCL, HPCL, IOCL and MRPL were below the industry average in both QR and NP, therefore located at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF QUICK RATIO AND EARNING PER SHARE RATIO**

Quick Ratio was taken as the measurement of short term liquidity, while Earning Per Share was used as profitability indicator. Industry average of Rs. 39 per share is considered as a standard for Return on Net Worth. Industry average ratio of 0.78 is considered as standard to evaluate Quick ratio. ONGC and RIL have maintained both QR and EPS at above industry average and therefore got placed at cell -1. BPCL have maintained high EPS but at cost of low QR, therefore occupied cell – 3. HPCL, IOCL and MRPL didn’t perform well, due to low QR and low EPS, these companies placed at cell -4. There was not a single company set at cell-2.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF QUICK RATIO AND DIVIDEND PER SHARE**

Quick Ratio was taken as the measurement of short term liquidity, while Dividend Per Share was used as profitability indicator. Industry average of Rs. 9 per share is considered as a standard for Return on Net Worth. Industry average ratio of 0.78 is considered as standard to evaluate Quick ratio. ONGC and RIL have maintained both QR and DPS at above industry average and therefore got placed at cell -1. BPCL have maintained high DPS but at cost of low QR, therefore occupied cell – 3. HPCL, IOCL and MRPL didn’t perform well, due to low QR and low DPS, these companies placed at cell -4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF QUICK RATIO AND RETURN ON NET WORTH**

Quick Ratio was taken as the measurement of short term liquidity, while Return on Net Worth was used as profitability indicator. Industry average of 13% is considered as a standard for Return on Net Worth. Industry average ratio of 0.78 is considered as
standard to evaluate Quick ratio. ONGC and RIL have performed exceptionally well, and have successful maintained both RONW and QR above industry average, due to high QR and high RONW, companies were placed at cell -1. MRPL at liquidity profitability trade off point maintained high RONW but at a cost of low QR, thus got placed at cell -3. BPCL, HPCL and IOCL were at cell -4 due to low QR and low RONW.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF QUICK RATIO AND RETURN ON CAPITAL EMPLOYED**

Quick Ratio was taken as the measurement of short term liquidity, while Return on Capital Employed was used as profitability indicator. Industry average of 16% is considered as a standard for Return on Capital Employed. Industry average ratio of 0.78 is considered as standard to evaluate Quick ratio. ONGC was the only company which has maintained both QR and ROCE above the industry average, the company has got cell -2 due to high QR and high ROCE. RIL was at liquidity profitability trade off due to low ROCE and high QR and hence occupied cell – 2. On the other hand MRPL has maintained low QR and high ROCE. All remaining companies BPCL, IOCL and HPCL couldn’t perform as per industry expectations, the companies have shown low QR and low ROCE, thus got position at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBT EQUITY RATIO AND GROSS PROFIT RATIO**

Debt Equity ratio was taken as the measurement of short term debt paying capacity, while Gross Profit was used as profitability indicator. Industry average of 10% is considered as a standard for Gross profit. Industry average ratio of 0.93 is considered as standard to evaluate Debt Equity ratio. There was not a single company at the best position i.e. at cell – 1. BPCL, HPCL and IOCL were at liquidity profitability trade off zone, as having low GP but high DE, these companies were placed at cell – 2. ONGC on the other hand couldn’t maintain DE ratio above industry average, but had GP more than the industry average which led the company to cell -3. MRPL and RIL did not perform up to thier standard, and having low DE and low GP, these companies were placed at cell – 4.
LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBT EQUITY AND NET PROFIT RATIO

Debt Equity ratio was taken as the measurement of short term debt paying capacity, while Net Profit was used as profitability indicator. Industry average of 6% is considered as a standard for Net profit. Industry average ratio of 0.93 is considered as standard to evaluate Debt Equity ratio. There was not a single company at cell – 1. BPCL, HPCL and IOCL were at cell – 2 due to high DE but low NP, whereas ONGC and RIL at cell – 3 due to having low DE and high NP. MRPL did not maintain DE as well as NP up to industry average and hence placed at cell – 4.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBT EQUITY AND EARNING PER SHARE

Debt Equity ratio was taken as the measurement of short term debt paying capacity, while Earning Per Share was used as profitability indicator. Industry average of Rs. 39 per share is considered as a standard for Earning Per Share. Industry average ratio of 0.93 is considered as standard to evaluate Debt Equity ratio. BPCL had maintained both liquidity as well as profitability at its best, due to high DE and high EPS company was placed at cell – 1. HPCL and IOCL were at liquidity profitability trade off point, having low EPS and high DE, placed at cell – 2. While ONGC and RIL have maintained high EPS at cost of low DE. MRPL continued with below industry average liquidity as well as profitability placed at cell -4. The company was having low DE as well as low EPS.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBT EQUITY RATIO AND DIVIDEND PER SHARE

Debt Equity ratio was taken as the measurement of short term debt paying capacity, while Dividend Per Share was used as profitability indicator. Industry average of Rs. 9 per share is considered as a standard for Dividend Per Share. Industry average ratio of 0.93 is considered as standard to evaluate Debt Equity ratio. BPCL has performed exceptionally well in both liquidity and profitability, the company was
having high DE as well as high DPS, so got placed at cell – 1. HPCL and IOCL were at cell-2 due to high DE but low DPS, ONGC and RIL on the other hand, at cell -3, maintained high DPS but at a cost of low DE. MRPL continue with the poor level, at cell -4, couldn’t find the proper balance between liquidity as well as profitability, as having low DE and low DPS, it was placed at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBT EQUITY RATIO AND RETURN ON CAPITAL EMPLOYED**

Debt Equity ratio was taken as the measurement of short term debt paying capacity, while Return on Capital Employed was used as profitability indicator. Industry average of 16% is considered as a standard for Return on Capital Employed. Industry average ratio of 0.93 is considered as standard to evaluate Debt Equity ratio. No companies were placed at cell – 1. BPCL, HPCL and IOCL were at liquidity profitability trade off point, as these companies were having high DE at cost of low ROCE, on the other hand RIL and ONGC were having high ROCE at a cost of low DE and hence set at cell – 3. MRPL having low DE as well as low ROCE occupied position at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF DEBT EQUITY RATIO AND RETURN ON NET WORTH**

Debt Equity ratio was taken as the measurement of short term debt paying capacity, while Return on Net Worth was used as profitability indicator. Industry average of 13% is considered as a standard for Return On Net Worth. Industry average ratio of 0.93 is considered as standard to evaluate Debt Equity ratio. There was not a single company at the best position i.e. cell – 1, as well as the worst at cell -4. All the companies were positioned at liquidtiy profitability trade off points. BPCL, HPCL and IOCL were having high DE at a cost of low RONW. Whereas MRPL, ONGC and RIL differently had high RONW at a cost of low DE.
LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF FIXED ASSETS TURNOVER RATIO AND GROSS PROFIT RATIO

Fixed Assets Turn Over ratio was taken as the measurement of short term efficiency, while Net Profit was used as profitability indicator. Industry average of 6% is considered as a standard for Net profit. Industry average ratio of 3 times is considered as standard to evaluate Fixed Assets Turn Over ratio. There was not a single company at the best position cell – 1 as well as the worst one at cell – 4. BPCL, HPCL, IOCL and MRPL had a low FATO but maintained NP above the industry average and thus placed at cell – 2. ONGC and RIL on other hand had low FATO and high NP, and thus placed at cell – 3.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF FIXED ASSETS TURNOVER RATIO AND NET PROFIT RATIO

Fixed Assets Turn Over ratio was taken as the measurement of short term efficiency, while Net Profit was used as profitability indicator. Industry average of 6% is considered as a standard for Net profit. Industry average ratio of 3 times is considered as standard to evaluate Fixed Assets Turn Over ratio. There was not a single company at the best position cell – 1 as well as the worst one at cell – 4. BPCL, HPCL, IOCL and MRPL had a low FATO but maintained NP above the industry average and thus placed at cell – 2. ONGC and RIL on other hand had low FATO and high NP, and thus placed at cell – 3.

LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF FIXED ASSETS TURNOVER RATIO AND EARNING PER SHARE

Earning Per Share was used as profitability indicator. Industry average of Rs. 39 per share is considered as a standard for Earning Per Share. Industry average ratio of 3 times is considered as standard to evaluate Fixed Assets Turn Over ratio. BPCL had performed well, and maintained both liquidity as well as profitability above industry average, thus placed at cell – 1. There was not single company at the worst point of cell – 4. HPCL, IOCL and MRPL were at liquidity and profitability trade off point,
maintained EPS below the industry average and FATO at above industry average, thus occupied place at cell -2. ONGC and RIL, on the other hand, had successfully maintained EPS above the industry average, and FATO at below industry average. These companies were placed at cell – 3.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF FIXED ASSETS TURNOVER RATIO AND DIVIDEND PER SHARE**

Fixed Assets Turn Over ratio was taken as the measurement of short term efficiency, while Dividend Per Share was used as profitability indicator. Industry average of Rs. 9 per share is considered as a standard for Dividend Per Share. Industry average ratio of 3 times is considered as standard to evaluate Fixed Assets Turn Over ratio. BPCL had performed well and maintained both DPS and FATO above the industry average. HPCL, IOCL and MRPL were having low DPS and high FATO and occupied position at cell – 2. ONGC and RIL, on the other hand at liquidity profitability trade off point, maintained high DPS and low FATO, and thus occupied position at cell – 3. There was not a single company at cell – 4.

**LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF FIXED ASSETS TURNOVER RATIO AND RETURN ON NET WORTH**

Fixed Assets Turn Over ratio was taken as the measurement of short term efficiency, while Return On Net Worth was used as profitability indicator. Industry average of 13% is considered as a standard for Return On Net Worth. Industry average ratio of 3 times is considered as standard to evaluate Fixed Assets Turn Over ratio. MRPL had high RONW as well as high FATO, thus placed at cell -1, but during 2012-13, the company has shown negative return and that was considered as an exceptional situation for research work under this case. There was not a single company at the worst position i.e. at cell – 4. BPCL, HPCL and IOCL were at liquidity profitability trade off points, having low RONW but high FATO placed at cell – 2. ONGC and RIL, on flip side maintained high RONW but at a cost of low FATO, and thus occupied place at cell – 3.
LIQUIDITY PROFITABILITY STATUS OF THE SELECTED REFINERY INDUSTRIES BASED ON THE COMBINATION OF CURRENT RATIO AND RETURN ON CAPITAL EMPLOYED

Fixed Assets Turn Over ratio was taken as the measurement of short term efficiency, while Return On Capital Employed was used as profitability indicator. Industry average of 16% is considered as a standard for Return On Capital Employed. Industry average ratio of 3 times is considered as standard to evaluate Fixed Assets Turn Over ratio. MRPL had performed exceptionally well got placed at cell – 1. The company had successfully maintained high FATO and high ROCE. BPCL, HPCL and IOCL had maintained high FATO but low ROCE, thus placed at cell – 2. ONGC, on the other hand, had maintained high ROCE at a cost of low FATO, and occupied place at cell – 3. RIL had performed the worst, as having both FATO and ROCE below industry average, occupied place at cell – 4.
SUGGESTIONS AND FUTURE RECOMMENDATIONS

1. Every company should increase its production as well as plant capacity to get the benefit of economies of scale, larger the refineries, more will be the output and less will be the cost of refining

2. To increase the profitability, there must be reduction in high administrative as well as raw materials cost. High cost of crude at international level may decrease the profitability but by considering and focusing on other cost of production, company can increase its profitability

3. Increase the stock turnover ration which in return lead towards increase in return on capital employed.

4. Companies are not paying constant or regular dividend which adversely affect the shareholders’ confidence, company should try to make regular dividend by taking proper care of profitability and liquidity position

5. Refinery industry is a capital intensive industry, which requires heavy capital expenditure; all capital expenditure for acquiring the assets should be taken after considering all the probable factors.

6. Use of non conventional sources of energy can also reduce the cost of refining and even positively help the environmental concern.

7. Company should properly observe sales and liquidity position, when its necessary to take proper steps for working capital crisis.

8. To improve the liquidity position in the business, the company should invest into long term interest generating assets, instead of any short run purpose.

9. For proper cash management in the company, it is better to take care of cost of inventory as well as size of inventory; even proper care should be taken at the time of collection. The company should be quick at collection of dues.

10. The policy of getting finance is also not proper, the company should try to get finance through competitive commercial bidding, and even should go for other options like debentures, equity etc. to finance their long term as well as short term needs. The companies are at present rely upon the conventional system of borrowing from governments

11. By the proper use of operating assets, and reduction in non operative expenses, companies can increase their profitability.
12. To be at international market, the companies should focus on quality of output, even the government should promote the export oriented units, and should export the final product to less developed as well as developing countries of the world.

13. For continuous production at proper quality level, the companies need decent infrastructure to satisfy their inventory storage needs.

14. Government, to promote the industry, can reduce the power rate, excise duty, corporate taxes and should also promote special economic zones.

15. Cost audit of refinery companies should be made compulsory, for better findings of facts and figures.

16. This research is based upon the refineries in India only, one can further compare these to other country’s refinery and can find out deviation in research.

17. This research has been carried out on the basis of annual reports and statistics from the government portals and sponsored magazines.

18. There are different methods for evaluating profitability and liquidity and are having their own limitations in analysis.

19. There are ideal ratios in general, but one should by proper research should develop the ideal ratios for refinery industry only.

20. There are also some erroneous facts in published reports of the company, therefore proper care should be taken in publishing financial data.

21. The business of refinery industry is not confined to geographical borders of the country, it is having international issues, various micro as well as macro factors should be considered.

22. Refinery industry is highly affected by dollar pricing, therefore mechanism of foreign trade should be considered

23. Geopolitical factors play a vital role, military exercise, embargo, restrictions, banned etc. may at regular intervals affecting the oil industry in general.