

**A STUDY ON THE WORKING CAPITAL MANAGEMENT OF
BHARAT PETROLEUM CORPORATION LIMITED, ERNAKULAM**

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ABSTRACT

A study of working capital is of major importance to internal and external analysis because of its close relationship with the day-to-day operation of a business. The statement of changes in working capital for the year ended 2010-2011 which shows that decrease in working capital but the net result of the business is in an increasing trend which is favourable to the company operations and the working capital possessed by the company was adequate. So the overall efficiency of the company is satisfactory

Key Words: *Working capital, Indian petroleum industry, Bharat Petroleum Corporation limited, Kochi refinery*

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INTRODUCTION

WORKING CAPITAL MANAGEMENT

Working capital may be regarded as life blood of a business. Working capital management is a process of planning and controlling the level and mix of the current assets of the firm as well as financing these assets. A study of working capital is of major importance to internal and external analysis because of its close relationship with the day-to-day operation of a business. Even in a well-established business with a long history of successful operation, careful attention to the management of working capital results in greater profitability.

Funds which are needed for short term purpose for the purchase of raw materials, payment of wages and other day-to-day expenses are known as working capital.

The goal of working capital management is to manage each of the firm's current assets and current liabilities. Working capital is also known as circulating capital or current capital or revolving capital.

Capital required for a business can be classified under two main categories viz;

- Fixed capital
- Working capital

THE NEED FOR WORKING CAPITAL

The need for working capital cannot be over emphasized. Every business needs some amount of working capital. The need for working capital arises due to the time gap between production and realization of cash from sales. There is an operating cycle involved in the sales and realization of cash.

Working capital is needed for the following purposes:

- For the purchase of raw materials, components and spares.
- To pay wages and salaries.
- To incur day-to-day expenses and overhead cost such as fuel, power and office expenses, etc.,
- To meet the selling cost as packing, advertising, etc.,
- To provide credit facilities to the consumers.
- To maintain the inventories of raw material, work-in-progress, stores and spares and finished stock.

Objectives of study

To familiarize the following by analyzing annual report for the past 5 years.

- To analyze the liquidity position of the company.
- To analyze the performance of the company
- To estimate the amount of working capital of the company for a period of 5 years.
- To project the future position.
- To offer suggestions for improving the working capital position of the company.

Need and scope of the study

Working capital is needed in every organization to meet day-to-day business activities. Since there is a time lag between the sale of produce and realization of cash, every organization requires sufficient amount of working capital to meet the daily requirement and to tackle the problem as and when they arise for the smooth running of the business.

The study relates to the working capital management in Bharat petroleum Corporation Limited. The study gives an idea about the working capital position of the company. The study also reveals the method by which the company has been financed. The study will be helpful for the management in decision making relating to working capital

RESEARCH METHODOLOGY

Research methodology is a systematic way of solving the problem. It includes the overall research design, the sampling procedure, data collection method and analysis procedure.

Research design

A research design is the arrangement of condition for collection and analysis of data in a manner that may result in an economy in procedure. It stands for advance planning for collection of the relevant data and the techniques to be used in analysis, keeping in view the objectives of the research and availability of time, as the researcher is analyzing the past data and predicts the future trend, it is naturally comes under analytical research design.

Period of study

This study contains the working capital analysis for the period of four years from 2004-2005 to 2010-2011. The accounting year is starting from 1st April to 31st March.

Data collection

The analysis of financial condition and performance of the enterprise necessitates and reliable data therefore the data for the present study is collected with the help of secondary data.

Secondary data

The secondary data is mainly used for the study. It is taken from published source of the company like the annual report magazines, report and other financial official records.

Tools and techniques

The following tools and techniques of financial analysis are used as a measure of judging the degree of efficiency of financial performance analysis of the company

- **RATIO ANALYSIS**
- **TREND ANALYSIS**
- **CORRELATION**

Limitations of the study

- The data used for the study is secondary data which is said to be historical in nature.
- The study period is restricted for only five financial years.
- Current ratio considers only the quantity of current asset and ignored the quality of current asset.
- Credit sales and credit purchases were not separately given so all the sales and purchases are assumed to be credit sales and credit purchases

INDUSTRY PROFILE

The Indian petroleum refining industry is new over a century old. Its growth was not very significant till independence. The subsequent 25 years witnessed the emergence of several refineries in both private and public sector. The nationalization of oil companies in 1976 saw all Indian refineries coming under the government.

Bharat Petroleum Corporation Limited Kochi Refineries is the only refinery in Kerala which has achieved a great success in the production of petroleum products. It plays an important role in the industrial development of Kerala and is the sole supplier of petroleum products in South India.

Indian Petroleum Industry

In the post-independence era, India grew tremendously in terms of infrastructure in the petroleum industry, which in turn helped increase the production of petroleum and petroleum-related products.

- During 1947-57, 3 refineries were set up in Mumbai and Visakhapatnam by transnational oil corporations doing business in Indian
- During 1957-67, another 3 refineries were established in Guwahati, Barauni, and Koyali by Indian Refineries Ltd.
- During 1967-77. 2 more were set up in Chennai by Iranian companies and in Haldia by Indian Oil Ltd.

- During 1977-87, 2 more refineries were commissioned. The one at Bongaigaon was the first to have an amalgamated petroleum refinery-cum-petrochemicals unit. The other was established at Mathura.
- During 1987-97, 2 more were set up at Nagapattinam and Mangalore.
- During 1998-2008, refineries at Panipat and Numaligarh were set up.

Petroleum is the single largest source of energy used in the United States. The nation uses two times more petroleum than either coal or natural gas and four times more than nuclear power or renewable energy sources. Before petroleum can be used it is sent to a refinery where it is physically, thermally, and chemically separated into fractions and then converted into finished products. About 90 percent of these products are fuels such as gasoline, aviation fuels, distillate and residual oil, liquefied petroleum gas (LPG), coke, and kerosene. Refineries also produce non-fuel products, including petrochemicals, asphalt, road oil, lubricants, solvents, and wax. Petrochemicals (ethylene, propylene, benzene, and others) are shipped to chemical plants, where they are used to manufacture chemicals and plastics.

Indian Petroleum Retail Market

Expansion of Indian petroleum retail market is triggered by the growth in automobile sales that resulted in major foreign investments. The growth is estimated to sustain and the market is likely to expand further by 20 million every year till 2030, placing India at the world map in terms of being the biggest automobile market. Accordingly, the petroleum dealers Bharat Petroleum Corporation, Hindustan Petroleum Corporation and Indian Oil Corporation in collaboration with each other are looking forward to add 2,262 petrol pumps in India by 2011.

Investments in Indian Petroleum Industry

- In 2011 the state-owned oil firms are expected to splurge US\$ 11.34 billion on developing supplies and constructing new shipping networks for petroleum and natural gas.
- Indian Oil Corporation is looking forward to establish a petroleum plant in the state of West Bengal by bringing in investments worth US\$ 596.63 million
- ONGC will bring in US\$ 694 million for raising services at its oil fields in Assam and adjoining states to enhance the petroleum output. In addition it will also splurge US\$ 5.65 billion on capital expenses in the next two years.

- GAIL (India) Limited and OVL, the international associate of leading oil and gas player ONGC, are expected to bring in investments worth US\$ 250 million.

COMPANY PROFILE

Vision Statement

To be gradually competitive integrated energy and petrochemical company focused towards achieving excellence in natural priority areas with a strong conscience towards protection of environment and progress society.

Mission Statement

- To strengthen the presence in the petroleum refining and marketing of petroleum products and to grow into the energy and petrochemical sectors.
- To realign orientation of thinking and philosophies to become a market driven and customer friendly organization with focus on Total Quality Management.
- To enhance shareholders values and maximize returns through the best way of resources.
- To recognize employees as the most valuable asset of the organization and foster a culture of participation and innovation for employees growth and contribution
- To achieve global standards of excellence through Research & Development efforts technology up gradation and safety management and environmental protection.
- To be major contributor towards community development and welfare of society of the large.

Quality Policy

‘We are committed to customer satisfaction. We shall be continually proactive to customer needs through effective management of resources.

- Customer satisfaction
- Value added products and services
- Continual up gradation of technology
- Human Resource Development and Team work.
- Effective resource management

Board of Directors of Bharat Petroleum Corporation Limited

Chairman & Managing Director – Ashok Sinha

Director (H R) – S. Mohan.

Director (Marketing) – S. Radhakrishnan

Director (Refinery) – R.K. Singh

Director (Finance) – S.K. Joshi

Future plans of Bharat Petroleum Corporation Limited

- Reduce up gradation for value addition.
- Development of new process technologies.
- Value added products and solvent from refinery stream.
- Bio technological processes.
- Undertaking collaborated research programmes
- Extended Research & Development services to other refineries.

History of Kochi Refinery.

Kochi Refinery Limited (KRL) was started on 21st April 1963. It was formerly known as Cochin Refineries Limited (CRL). Fuel is vital to the country's progress it represents lifeline of any economy. Kochi Refineries Limited entered Indian industrial scenario injecting the economy with enthusiasm for growth in petroleum and related products. That was when Government of India, Philips Petroleum Company of USA and Duncan brothers of Calcutta executed an agreement for the construction of a petroleum refinery in South India. Thus Cochin Refineries Limited was born.

35 years back the Kochi Refineries Limited was started as a refinery with the capacity of 2.5 million metric tons per annum. Now it refines more than 7.5 million metric tons every year. Former Indian Prime Minister Indira Gandhi dedicated Kochi Refineries Limited to the nation on 23rd September 1996.

The company continued its Human Resource effect of providing development input to the employers through learning programs and through other learning opportunities to develop their knowledge, skills and attitudes. The company believes that transparency and teamwork improved productivity at all level.

The success of the company is built on the excellence of cutting edge capacities of its employees and the company recognizes that the employees constitute the primary source of sustainable competitive advantage as a frontline energy. To facilitate these goals the company's HR system has been continuously geared up towards developing an appreciation of the original challenges among the employees at all levels. Specific Human Resource initiatives were undertaken during the year towards building a performance oriented culture and to strengthen the Human Resource system and practices. The company establishes

common values and working philosophy so that it is personal could perform to achieve the company's goal with greater alignment.

In order to live upto the dream and vision of the organization and to meet with increasing demands the capacity of the refinery was augmented in different phases. The product range was grown more than 20 products which include Liquefied Petroleum Gas, Petrol, Kerosene, Naphtha, Benzene, Aviation Turbine Fuel, Jet propulsion fuel, Furnace oil, Sulphur, Bitumen, and natural rubber modified bitumen, special boiling point spirit toluene, textile grade and paint grade mineral turpentine oil.

Milestones of growth

1966 -- unit commissioned with crude oil refining capacity of 2.5 MMPTA.

1973 – capacity expanded from 2.5 to 3.3 MMTPA.

1984 – capacity expanded from 3.3 to 4.5 MMTPA.

1989 – Aromatic production commenced.

1990 – captive power plant commenced.

1994 – capacity expanded to 7.5 MMTPA.

1998 -- steam turbine generator commissioned

2000 – DHDS unit commenced.

2000 – company renamed KRL.

2000 – the MMTPA Diesel Hydro- Desulphurisation unit was commenced.

2001 – Bharat Petroleum Corporation Limited buys GOI stake in KRL.

2001 – tank farm automation facilities installed.

2001 – exporting products.

2003 – SAP as ERP initiative of KRL ‘ WENT LIVE’

2003 – LPG bottling plant commissioned.

2003 – started production of octane gasoline.

2003 – started hydrogen sale to HPCL through pipeline.

2003 – rated ISRS LEVEL 7 in the initial audit itself.

2003 – commercial operation of 2nd RO under Bharat Petroleum Corporation Limited banner near Thrissur

2004 – certified as ISO 9001 company.

2005 – completion of Bitumen emulsion plant

2006 – Erstwhile KRL becomes Bharat Petroleum Corporation Limited Kochi Refinery.

2009 – completion of Single Point Mooring (SPM) and Share Tank Farm (STF)

2011 – started capacity expansion cum modernization project.

Awards

- Bharat Petroleum Corporation Limited Kochi Refinery bags excellence award 6th January 2007 recognizing the continuous environment management efforts of Bharat Petroleum Corporation Limited KR. Kerala State Pollution Control Board has conferred the company on excellence award which has been instituted for the first time.
- Three star Export House Status from Joint Director General of Foreign Trade.
- Jawaharlal Nehru Centenary Award for energy performance of refineries.
- OISD award for overall performance in safety.
- FACT MKK Nayar Memorial Productivity award.

Certification

- **ISO 9001 – 2000 for Quality Management System**

This is recognition of the Quality Management System (QMS) initiatives in the refinery. The certification is valid for a period of three years starting from 19 august 2004.

- **ISO 14001 for Environmental Management System**

Bharat Petroleum Corporation Limited was accorded ISO 14001 certification first in 2002 by the international agency Bureau Veritas Quality International (BVQS) and again in 2005. The refinery was assessed and formed in accordance with the requirements of the environmental standards and operational scope of receipt, refining, processing and storage and dispatch of petroleum products.

- **Quality control is ISO 17025 certified**

Quality control in Bharat Petroleum Corporation Limited received ISO 17025 certificate of accreditation from National Accreditation Board for Testing and Calibration Laboratories under the Ministry of Science and Technology Government of India, New Delhi. NABL has assessed and accredited the laboratory in accordance with ISO / IEC 17025: 1999 standards. The standard stipulates the general requirement for the competence of testing.

- **Bharat Petroleum Corporation Limited rated level 8 in ISRS**

Bharat Petroleum Corporation Limited has been rated level 8 in the International Safety Rating System (ISRS) consolidating its place among the top companies and industrial units with audited by the independent foundation Det Norske Verctas (DNV).

➤ **OHSAS 18001 – 2007**

Bharat Petroleum Corporation Limited has achieved OHSAS 18001:2007 certification, the prestigious international standard for facilities with world-class safety and health management systems. Bureau Veritas Certification (India) Private Limited certified that the Management Systems of Bharat Petroleum Corporation Limited has been audited and found to be in accordance with the requirements of the standard BS OHSAS 18001:2007.

PRODUCT PROFILE

The collected crude oil and gas are of little use in their raw stage, their value lies in what created in them; fuels lubricating oils waxes and petrochemicals. The refining world is highly technical to the layman a refining appears to be strange conglomeration of illuminated towers and walls at night and an equally strange maze of pipes and tanks during the day. In reality a refinery is an organized and coordinated arrangement of manufacturing processes designed to produce physical and chemical change in crude oil and natural gas. These changes result in salable products of the quality and quantity desired by the market. A refinery also includes non processing facilities required to store crude oil and products maintain equipment and ensure continuous operation.

As crude oil comes from the well, it contains hydrocarbon components are relatively small quantities of other material such as oxygen, nitrogen, sulphur, salt and water plus traces of certain metals. In the refinery non hydrocarbon substances are removed from the crude oil. The oil is broken down into various components. Some of the components are chemically changed to give more desirable qualities. The resulting substances are blended into useful products. Some of the products of the companies are:

- Natural rubber modified Bitumen.
- Liquefied Petroleum Gas and Kerosene for household and industrial use.
- Petrol and diesel for automobile.
- Naphtha and major raw material for fertilizer and petrochemical industries.
- Benzene for manufacturing caprolactum phenol, insecticides and other chemicals.
- Furnace oil and low sulphur heavy stock for fuel in the industry.
- Aviation Turbine Fuel for aircrafts.

- Bitumen and natural rubber modified bitumen for road paving.
- Special boiling point spirit used as a solvent in tyre industry
- Toluene for manufacturing of solvent and insecticides, pharmaceuticals and paint.
- High speed diesel.
- Low Aromatic Naphtha / High Aromatic Naphtha
- Supreme kerosene oil.
- Aromatic Turbine Fuel.
- Mixed Aromatic solvent.
- Motor spirit.
- Light diesel oil.
- Low Sulphur Heavy Stock.
- Mineral turbine oil.
- MTO (textile grade) MTO (paint grade) for use in textile and industry.

These products are produced from crude oil through the various process of crude distillation, isomerisation, alkylation, catalytic cracking, hydro cracker etc.

FINDINGS

- In the case of current ratio the company has maintained an average of 1.26:1 which is not ideal for a growing company because the standard ratio is 2:1
- The quick ratio which shows increasing trend in the last 2 years. The quick ratio of the company being 0.52:1 is not upto the mark which is mainly due to the current market oil prices.
- The absolute liquid ratio shows decreasing trend in the year 2008 – 2009. The ratio which was highest in the year 2006 – 2007
- The inventory turnover ratio which shows increasing trend in 2008 – 2009.
- Debtors' turnover ratio implies that the company has adequate resources to sale goods on credit. The debtors' turnover ratio which shows increasing trend in through out the study period.
- The debtors' collection period is 4 days in the year 2008 – 2009.
- Creditors' turnover ratio shows a better settlement regarding dues. Creditors' turnover ratio which shows increasing trend in 2008 – 2009. The average payment period is

lower in the year 2010-2011. The shorter the payment period longer the liquidity position.

- Working capital turnover shows increasing trend in 2008 – 2009. It indicates that the company is generating a lot of sales compared to the money it uses to fund the sales.
- In current asset turnover ratio the company shows increasing trend in 2008 – 2009. The basic reason for this was decreased loans and advances outstanding.
- In 2008 – 2009 current asset to total asset of the company also shows decreasing trend. Decrease in ratio shows an increase in profitability as well as the risk.
- The fixed asset ratio is less than 1:1 it means that the entire fixed assets have been purchased out of long term funds. Through out the study period the fixed asset ratio is satisfactory.
- Fixed asset turnover ratio indicates better utilization of fixed asset.
- The inventory to current asset which shows increasing trend in 2008 – 2009 and the ratio which is lowest in the year 2007 – 2008. The lowest ratio indicate the inventory was managed efficiently
- The inventory to sales was decreased from 0.12 to 0.06. It indicates the inventory was managed efficiently.
- It is found that the trend percentage of current asset shows increasing trend but in the last year it shows decreasing trend.
- The fixed asset also shows increasing trend but in the last year it shows decreasing trend.
- It is found that the trend percentage of current liabilities shows increasing trend but in the last year it shows decreasing trend.
- It is found that the trend percentage of sales shows increasing trend.
- It is found that the trend percentage of working capital which is fluctuating every year.
- It is found that the there is a positive correlation exist between current asset and current liabilities.

SUGGESTIONS

On the basis of above findings the following suggestions have been put forward to improve the management of working capital of Bharat Petroleum Corporation Limited.

- The refinery modernizes its activities as per the requirement of the statutory bodies, but when new projects like Liquefied Natural Gas (LNG) come into play to Kochi the demand for at least few of the Bharat Petroleum Corporation Limited products will be reduced. Hence the refinery should give more importance to find new areas of market and research of new product of great demand to make the refinery sustainable in the long run.
- Give more importance to environmental friendly products due to increased pollution rates.
- The working capital turnover ratio which shows a decreasing trend in 2007 – 2008, then it shows increasing trend in 2008 - 2009 which is in favour of the company. Thus this has to be maintained.
- As the current ratio of the company is not ideal the company should improve its liquidity position by improving its current asset.
- The management should take necessary step to maintain the liquidity position in coming years.
- The company must think of modernization and diversification programs which help them to face tough competition in the market.
- The working capital has to be utilized efficiently by preparing working capital budgets so that long term and short term working capital needs can be properly estimated.
- The company should make a wide investment plan which yields them higher return.

CONCLUSION

During the period of study it is observed that the company's financial position has to be improved. The liquidity assets of the firm to meet its obligation promptly and efficiently. The working capital turnover ratio which shows increasing trend in 2010-2011 because of increase in sales and it indicates that the company is generating a list of sales compared to the money it uses to fund the sales. The statement of changes in working capital helps to measure the movement or changes in working capital during a particular period. The statement of changes in working capital for the year ended 2010-2011 which shows that decrease in working capital but the net result of the business is in an increasing trend which is favourable to the company operations and the working capital possessed by the company was adequate. So the overall efficiency of the company is satisfactory.

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