A PROJECT REPORT ON

"WORKING CAPITAL MANAGEMENT

OF

OIL AND NATURAL GAS CORPORATION (ONGC)"

PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTERS IN MANAGEMENT STUDIES

MUMBAI UNIVERSITY

Submitted By

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STUDENTS DECLARATION

I hereby declare that the project report entitles:

‘WORKING CAPITAL MANAGEMENT IN ONGC’

Conducted at

ONGC office, Bandra kurla complex, Mumbai, submitted in partial fulfillment at the requirements for the degree of Master of Management Studies (M.M.S.) to MET’s Institute of Management Mumbai is my original work and not submitted for the award of any other degree, diploma, fellowship or similar title or prize.

Date :

Place :

ACKNOWLEDGEMENT

With warm regards, I would like to thanks Mr. CHANDRANATH S.I, Chief Manager ONGC, for the encouragement and guidance continuously provided by him to undergo my vocational training in this esteemed organization. The present project work; a study of working capital management in ONGC, deals with the problem faced in financial management and gives the solution of the same, which is basic for organization whether Govt. Public or Private sector.

I owe my special thanks to Mr. subir tete for providing valuable ideas and suggestions which enabled me to prepare this report.

(ANKUR JAIN)

EXECUTIVE SUMMARY

Working Capital is the lifeblood and controlling nerve of an organization. ONGC being a large organization, dealing in exploration and exploitation of hydrocarbons requires a large amount of funds. The complexity and risks involved in exploration business like whole procedure of search of oil, geographical and physical conditions, day to day reduction in oil reserves and many other things tend to maintain a substantial amount of working capital. Hence there is a need for proper management of working capital, so that day by day operations do not hamper; at the same time there would not be any idle investment in working capital.

In this project, a modest attempt has been made to analyze the trend in working capital of ONGC during last five years i.e. from 2004-05 to 2008-09.

COMPANY PROFILE

Oil and natural gas corporation ltd., a "Maharatana" public sector enterprise is one of the leading enterprises in the country with significant contributors to industrial and economic growth. ONGC is in the business of exploration and production (E&P) of hydrocarbons.

ONGC is India's highest profit making company with record profit exceeding Rs. 16000 crores in the financial year 2009. ONGC has its headquarters at Dehradun and registered office at New Delhi. Its operation is spread all over the country-east to west and north to south and employees over 33000 trained man power.

ONGC undertakes socio-economic activities in area where it operates as a part of its social responsibility. The activities include, grants in aid to agencies educational institutes, social welfare organizations development of infrastructure by constructing roads, bridges and plantation of trees etc.

ONGC has two subsidiaries as ONGC VIDESH LTD. (OVL) and MANGALORE REFINERY AND PETROCHEMICAL LTD. (MRPL).

GLOBAL RANKING:

- ONGC ranks as the Numero Uno Oil & Gas Exploration & Production (E&P) Company in Asia, as per Platts 250 Global Energy Companies List for the year 2008.
- ONGC ranks 23rd Leading Global Energy Major amongst the "Top 250 Energy Majors of the World in the Platt's List" based on outstanding performance in respect of Assets, Revenues, Profits and Return on Invested Capital (RIOC) for the year 2008.
- ONGC has 9th position in the Industry of Mining, crude oil production.
- ONGC ranks 239th position in the prestigious Forbes Global 2000 and Numero Uno ranking amongst Indian Companies.
- ONGC retains Numero Uno position from India in terms of Profits with overall global ranking of 121st.

- ONGC ranks 21st among the top 50 publicly traded Companies in Oil & Gas Industry, based on the year-end market Capitalization by PFC Energy.
- CRISIL and ICRA also reaffirmed ONGC the highest credit rating of AAA and LAAA respectively.

Products of ONGC are:

1. Crude Oil
2. Gas
3. LPG (Liquefied Petroleum Gas)
4. Natural Gas
5. Natural gas liquid
6. Aromatic naphtha
7. Superior kerosene oil
8. C2-C3 (Ethane -propane)

FINANCIAL HIGHLIGHTS (2008-09):

Networth: Rs. 780,848 million

Sales Revenue: Rs. 650,494 million

Profit After Tax (PAT): Rs. 161,263 million

Return on Capital Employed: 50%

Debt Equity Ratio: 0.0003:1

Earning Per Share: Rs. 75.40

Book value Per Share: Rs. 365

METHODOLOGY USED

Methodology of the study refers to the methods used to collect the required data for research work. The data required has been collected from the following sources**:**

PRIMARY SOURCES:

Discussions with the management. Briefings with the concerned officers.

SECONDARY SOURCES:

- The secondary data of the organization helped me a lot. I have collected all the figures from the Annual Reports and Financial Statements of ONGC.
- Records of the company: This helped me to get details regarding the history of the organization.
- Library Research: A number of books on finance were referred to collect theoretical background related to finance.
- ONGC LTD website: www.ongcindia.com

CONCEPTS OF WORKING CAPITAL

There are two concepts of working capital namely**, Gross concept and Net concept.**

GROSS WORKING CAPITAL

According to this concept, working capital refers to the firm's investment in current assets. The amount of current liabilities is not deducted from the total of current assets.

This concept views Working Capital and aggregate of Current Assets as two inter-changeable terms. This concept is also referred to as 'Current Capital' or 'Circulating Capital'.

Gross Working Capital = Total Current Assets

NET WORKING CAPITAL

The Net Working Capital refers to the difference between Current Assets and Current Liabilities or the excess of Current Assets over Current Liabilities.

Net Working Capital = Current Assets - Current Liabilities

CURRENT ASSETS are assets, which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle.

The Current Assets are acquired with the intention of sale or conversion into cash. They include:

- Cash
- Inventories
- Bills Receivable
- Prepaid Expenses
- Accrued Income
- Marketable Securities

CURRENT LIABILITIES represent the obligations of the business and arise in the ordinary- course of operating business. They are expected to be payable within one year. These liabilities are generally said to have claim over Current Assets and must be discharged out of Current Assets.

They include:

- Creditors
- Bills Payable

- Short term Loans
- Advance Payments

Net Working Capital can be positive or negative. A positive Net Working Capital would arise when Current Assets Exceed Current Liabilities. A negative Net Working Capital occurs when Current Liabilities are in excess of Current Assets.

'Net Working Capital' is a qualitative concept, which indicates the liquidity position of the firm and the extent to which Working Capital needs may be financed by permanent sources of funds.

Current Assets should be sufficiently in excess of current liabilities to constitute a margin or buffer for obligations maturing within the ordinary operating cycle of a business. A weak liquidity position poses a threat to the solvency of the company and makes it unsafe. Excessive liquidity is also bad. It may be due to mismanagement of Current Assets. Therefore, prompt and timely action should be taken by the management to improve and correct the imbalance in the liquidity of the firm.

FACTORS DETERMINING WORKING CAPITAL REQUIREMENTS

The Working Capital needs of a firm are determined and influenced by various factors. Following are some of the factors which are relevant in determining the working capital needs of the firm:

- **Nature of Business**

  Trading concerns usually have smaller needs of working capital as most of the transactions are undertaken in cash and the length of operating cycle is generally small. However, in certain cases, large inventories of goods may be required and consequently, the working capital may be large. In case of financial concerns there may not be stock of goods but these firms do have to maintain sufficient liquidity all the times. In case of manufacturing 'concerns, there is a requirement of substantial working capital as operating cycle is usually a longer one and sales are made generally on credit terms.

  ONGC is in the business of exploration and production (E & P) of hydrocarbons. E&P business require large capital expenditure in the development of platforms, rigs, pipelines etc. to extract the oil lying down beneath the earth crust. so huge amount of money gets blocked in the form of machinery forming fixed assets of the company. Hence, it can be said that high initial investment is required in the business.

- **Business Cycle Fluctuations**

  In case of boom conditions, inflationary pressure appears and business activities expand and working capital requirement is more. In case of recession period, there is dullness in business activities and working capital requirement is less.

In one of the worst global recessions witnessed by the world in 2008-09, ONGC has not only stood up the pressure but also help the Indian economy to get back to the track. There were not major fluctuations in the business cycle of ONGC and entire working of capital management went swiftly.

- **Seasonal Operations**

  If a firm is operating in goods and services having seasonal fluctuations in demand, then the working capital requirement will also fluctuate with every change. e.g. for a cold drink factory demand is higher during summer season and working capital requirement is more. If the operations are smooth and even throughout the year then the working capital requirement will be constant.

  Being an oil exploration & production company, operations of ONGC go on throughout the year as demand of oil is very high as compared to its supply. So the requirement of working capital almost remains constant throughout the year.

- **Market Competitiveness**

  In view of the competitive conditions prevailing in the market, the firm may have to offer liberal credit terms to the customers, or even larger inventories may be maintained. Thus the working capital requirement is higher. A monopolistic firm may not require large working capital. It may ask the customers to pay in advance or to wait for someone after placing the order.

  In terms of the market competitiveness, ONGC has the major chunk of market share. Although there are some other E&P companies also working such as OIL (OIL INDIA LTD.), CAIRNS ENERGY, RIL (RELIANCE INDUSTRIES LTD.) but the very low production of crude oil by these companies as compared to ONGC makes the ONGC nearly monopoly firm in the market.

- **Credit Policy**

  The credit policy means the totality of terms and conditions on which goods are sold and purchased. A firm has to interact with two types of credit policies at a time. One, the credit policy of the supplier and two, the credit policy which it extended to its customers.

ONGC has the very strict credit policy for the OMC's such as IOC (INDIAN OIL CRPORATION), HPCL (HINDUSTAN PETROLEUM CORP. LTD.), BPCL (BHARAT PETROLEUM CORP. LTD.), GAIL (GAS AUTHORITY OF INDIA LTD.). ONGC gives the credit period of 15 days for the supply of crude oil and 7 days credit period for the natural gas.

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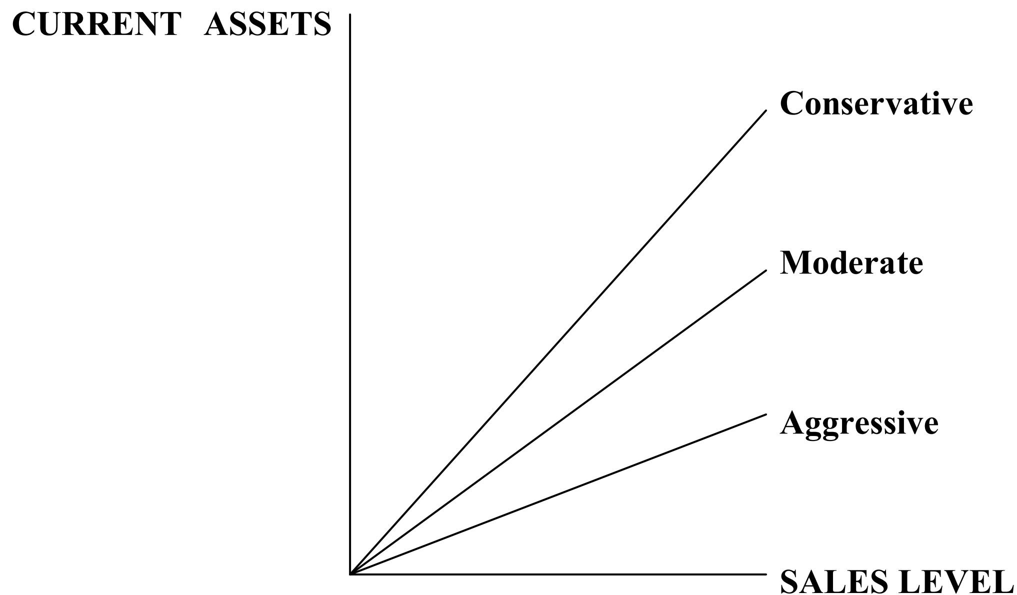
WORKING CAPITAL POLICY FOLLOWED AT ONGC

There are three types of working capital policies which a firm may adopt i.e. Moderate working capital policy, Conservative working capital policy and Aggressive working capital policy. These policies describe the relationship between sales level and the level of current assets.



Different types of Working Capital policies

ONGC follows the MODERATE Working Capital policy, as the increase in sales result in proportionate change in current assets. . This means that percentage increase in sales (5.46%) is nearly equal to increase in current assets (4.1%).

The calculations are as follows:

SALES (Rs. in crores) for 2007-08: 61,542

For 2008-09: 65,049

Increase in Sales = 65049 -61542

= 3507

Percentage Increase in Sales = 3507/61542*100

= 5.46%

CURRENT ASSETS (Rs. in crores)

For 2007: 32,225

For 2008: 33,495

Increase in Current Assets = 33495 - 32225

= 1270

Percentage Increase in Current Assets = 1270 / 32225 * 100

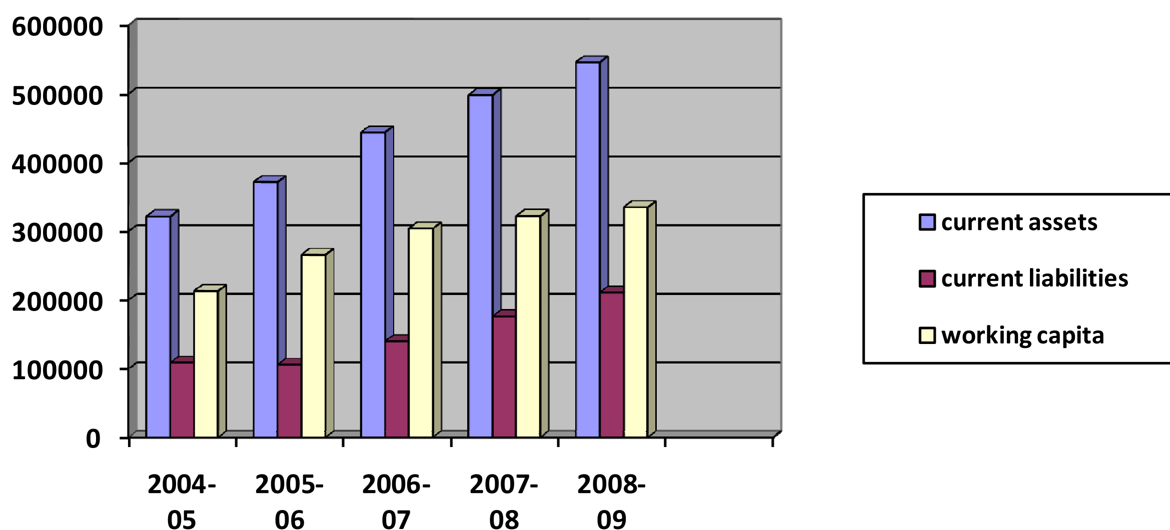
= 4.1%

This type of Policy has many implications:

- The risk of insolvency of the firm decreases as the firm maintains higher liquidity.
- The firm is exposed to lower risk, as it may be able to face unexpected change in the market.
- Increased investment in current assets will result in decrease in profitability of the firm.

CURRENT ASSETS & CURRENT LIABILITIES OF ONGC

OIL & NATURAL GAS CORPORATION (ONGC)					
					(RS. In millions)
	2008 - 09	2007 - 08	2006 - 07	2005 - 06	2004 - 05
WORKING CAPITAL					
A) CURRENT ASSETS					
i) inventories	40607	34806	30338	30385	25692
ii) debtors	40838	43604	27594	37043	37293
iii) cash and bank balance	121405	160143	136704	42792	58488
iv) deposit with bank under site restoration	69557	64033	56103	45336	36181
v) loans and advances and others	273593	195745	193214	216059	164004
GCA	546000	498331	443953	371615	321658
B) CURRENT LIABILITIES					
i) current liabilities & provision	211051	176083	139932	105951	108763
NET WORKING CAPITAL	334949	322248	304021	265664	212895



INVENTORY MANAGEMENT

Nature of Inventory

Inventory in ONGC has been broadly classified into two groups:

a) Stores
b) Spares

STORE section comprises of Drill pipes and Casing pipes; Electrical material such as cables, insulating material etc. ; Chemicals, oil, grease, lubricants whereas SPARES section comprises of spare parts of drilling equipments, production equipments, geological equipments, workshop, machinery etc.

POLICY:

1) Inventory of stores and spares is valued at **weighted average cost** or **net realizable value** whichever is less.
2) Liability in foreign currency is booked at exchange rate prevailing on date of transaction.

RECOUPMENT OF MATERIALS:

Recoupment of stores and spares is done on the basis of **ABC ANALYSIS.** For this, Numerical ledger cards are maintained by all material management (MM) organizations in the project. Cards indicate the minimum and maximum levels (safety stock, E.O.Q) for the purpose of automatic replenishment. Also these cards consist of the last two years total consumption and month wise for the current year so that past and current consumption figures are readily available.

Review of each card is conducted at the following stages:

1) When the stocks and dues of item reach the minimum level. This is a must.
2) At time when physical stocks reach the safety stock level.
3) Irrespective of above two stages, each card should be reviewed annually.
4) In addition to above one should take note of any abnormal issue viz. variation of over 20% consumption over 6 months period.

In order to have an effective control over inventories, the minimum and maximum limits of stores and spares are fixed as:

MINIMUM LEVEL: It varies from item to item and range from **0-3 months**.

MAXIMUM LEVEL: The maximum the quantity to be recouped at a time should be limited to **6 months.**

Quantity required to be recouped should be = Max. (E.O.Q) – stock – dues on order + known pending demands, if any.

STOCKING OF MATERIALS:

1) All materials are kept in racks / bins.
2) All racks / bins are given numbers. Same is to be recorded on cards.
3) While stocking materials, heavier item will be kept at lower rungs of rack and lighter on higher ones.
4) Fast moving item should be stored at easily accessible place and to nearest point of issue.
5) Stocking of items follow the principle of "FIRST IN FIRST OUT" (FIFO).

Raw Material Storage Period (2008-09)

1) Annual Consumption of Raw Material= Rs. 23889.07 million

2) Average Daily Consumption = (Annual Consumption) / 365 of Raw Materials

= 23889.07 / 365

= Rs. 64.45 million

3) Average Stock of Raw Material = (Opening Stock + Closing Stock) / 2 Material

$$= \frac{29881.29 + 34860.59}{2}$$

= Rs. 32371 million

4) Raw Material Storage = Average Stock of R.M./Average Daily

Period Consumption of R.M. (Raw Material)

= 32371 / 64.45

= 502 days

CASH MANAGEMENT

CASH FORECASTING

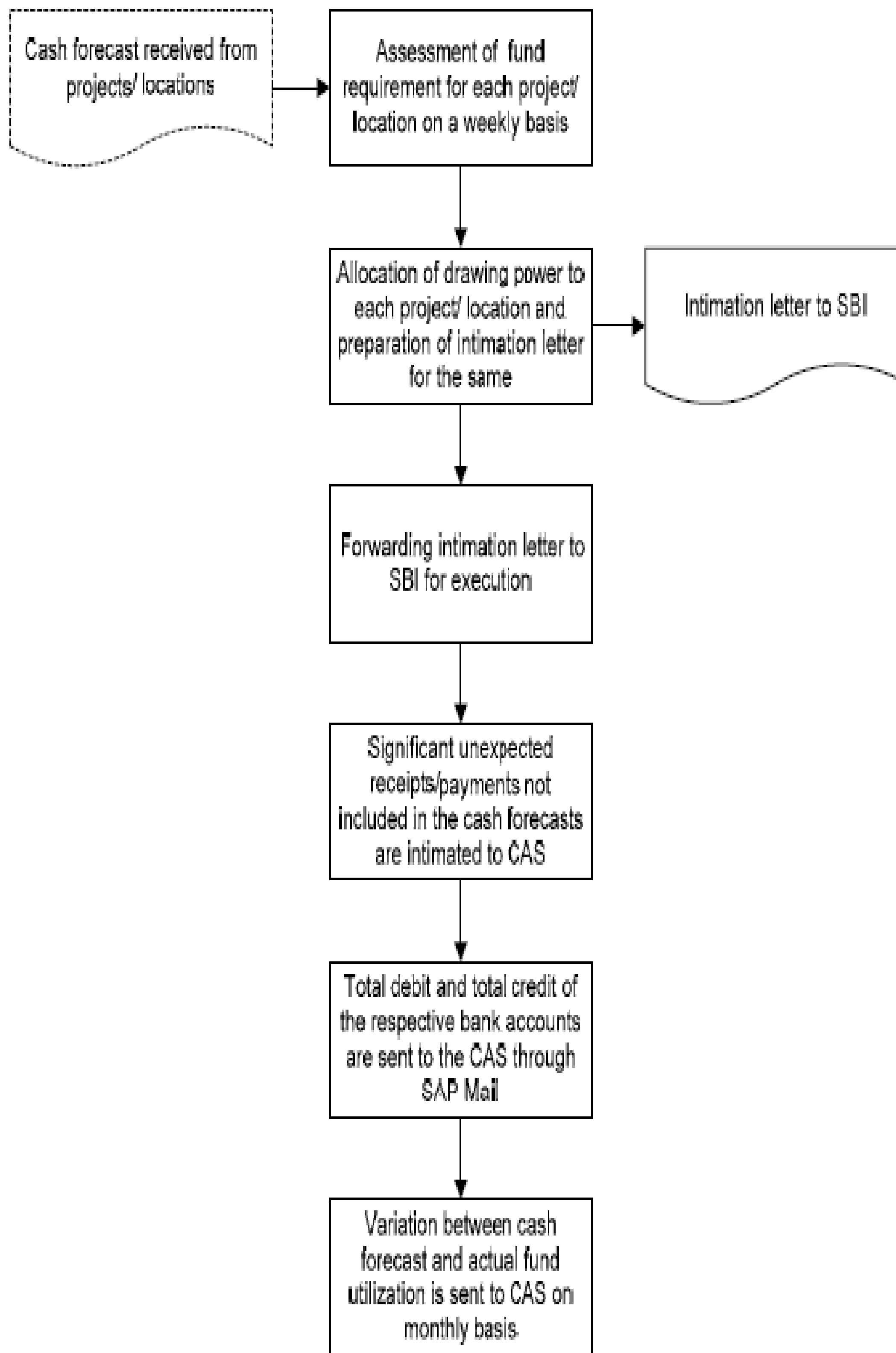
As per the existing practice, cash forecast is prepared at Corporate Accounts Section (CAS) after compiling the cash forecasts of all project locations and considering all other payments and receipts of the company on a composite basis.
Figure 1 herewith outlines the inflows and outflows that are used in the preparation of the cash forecast.

Inflows & Outflows used in the preparation of Cash forecast
(Opening Balance + Inflows (A) – Project Outflows (B) – Corporate Outflows (C) = Cash Surplus/ Deficit

Inflows (A)	*Project Outflows (B)*	*Corporate Outflows (C)*
• Sales Receipt	• Offshore expenses	• Corporate tax payment
• Maturity of investments	• JV Cash Calls	• Payment to OVL
• Interest on investments	• Sales tax/ VAT	• Investments
• Interest on loan(s) to subsidiary(ies)/ Associate(s)	• Cess	• Fringe benefit tax
• Final dividend	• Royalty	• Dividend/ other payments
• Re-payment of loans by Subsidiary(ies)/ Associate(s)	• Foreign debt	• CPF soft loan
• Interest on oil bonds	• Other payments	• Annual incentive
• Maturity of Oil Bond(s)	• Onshore expenses	• Subsidy
	• Sales tax/ VAT	• TDS on investments
	• Cess	
	• Royalty	
	• Indian debt including interest	
	• Other payments	

Figure 1

3.1.1.B Process flowchart



Raising of short term funds

The Company raises short term funds as and when required in accordance with the decisions taken by the Board of Directors (BoD) of the Company. The following sources/instruments are Used for these borrowings:
a) Cash Credit/ Over Draft
b) Inter-corporate borrowings;
c) Commercial papers; and
d) Certificate of deposit.

Inter-corporate borrowings are made using an inter office memo including details of amount to be borrowed by the Company, terms and conditions, period and rate of interest. Subsequently a BoD resolution is passed to approve the borrowing.

Commercial papers are unsecured promissory notes issued by corporations and foreign governments. These are low cost alternatives to bank loans for large credit issuers such as the Company. It is usually not used to finance long-term investments but rather for purchases for inventory or to manage working capital.

Certificate of deposit is a document evidencing a time deposit placed with a depository institution and contains details of amount of deposit, date of maturity, rate of interest, and the method under which the interest is calculated.

Average Collection Period (figures in millions)

Sales: Rs. 636,187
Average Sundry Debtors: Rs. 40,838

Operating Cycle: Sales/Avg. Sundry Debtors
= 636,187/40,838
= 15.57

Debtors Turnover Ratio: 360/Operating Cycle
= 360/15.57
= **23 days**

RECEIVABLES MANAGEMENT

CREDIT POLICY

The first step for implementing credit policy will be gather credit information about customers. This information should be adequate enough so that proper analysis about the financial position of customer is possible. This credit information will certainly help in improving the quality of receivables. The information should be available from financial statements, credit rating agencies, Reports firm's banks, firm's records etc.

CREDIT PERIOD

a) Crude Oil: For local refineries i.e BPCL & HPCL invoice is raised on the weekly basis. The billing to coastal refineries is done on the date of bill of lading.

Receipt is received on the following basis:

Pipeline supply (Local refineries)	I week	II week	III week	IV week
	25th of same month	2nd of next month	11th of next month	18th of next month
Tanker supply (coastal refineries	30 days from bill of lading			

b) Natural Gas: Invoice is raised on the fortnightly basis.1st fortnight is 1st day of the month to 15th of the month and 2nd fortnight is 16th day of the month to last day of the month. Payment is done within 7 days of bill of lading.

PAYMENT COLLECTION FROM THE REFINERIES

Age-wise dues to be received from the debtors are properly maintained. On delayed payments from debtors a debit note for interest is send to the concerned refinery.

RATIO ANALYSIS

Current Ratio: This ratio is an indicator of the firm's commitment to meet its short-term liabilities. The current ratio is the ratio of current assets and current liabilities.

$$\text{Formula} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Standard Ratio: 2:1

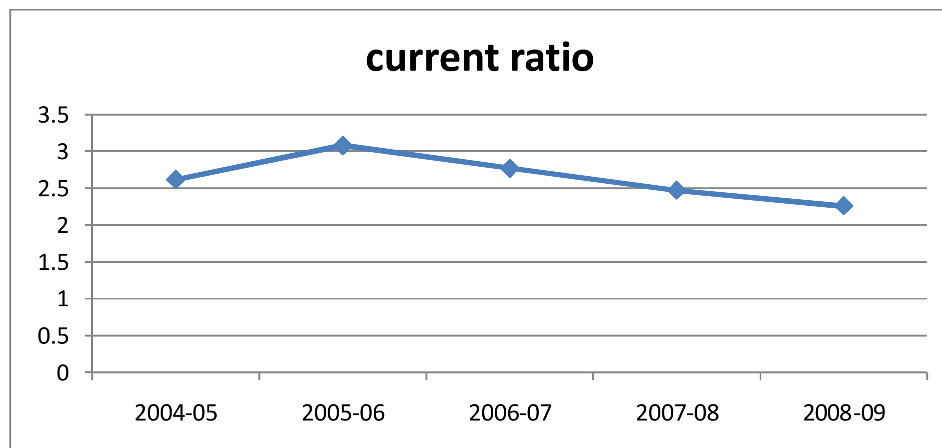
2004-2005 Current Ratio $= \frac{285477}{108763} = 2.62:1$

2005-2006 Current Ratio $= \frac{326279}{105951} = 3.08:1$

2006-2007 Current Ratio $= \frac{387850}{139932} = 2.77:1$

2007-2008 Current Ratio $= \frac{498331}{176083} = 2.47:1$

2008-2009 Current Ratio $= \frac{546000}{211051} = 2.26:1$



Interpretation:

The financial performance of the company is very sound as the ratio is above 2:1 but still Company's current ratio is more than standardratio so company should control assets asit is not better for the health of the company. This decreasing trend could be seen from the graph which is for the betterment of the company.

Working capital turnover ratio: This ratio indicates whether working capital has been effectively utilized in sales or not. So we should know it by calculating following ratio:

$$\text{Formula} = \frac{\text{Total sales}}{\text{Net Working capital}}$$

Here, net working capital = current assets - current liabilities

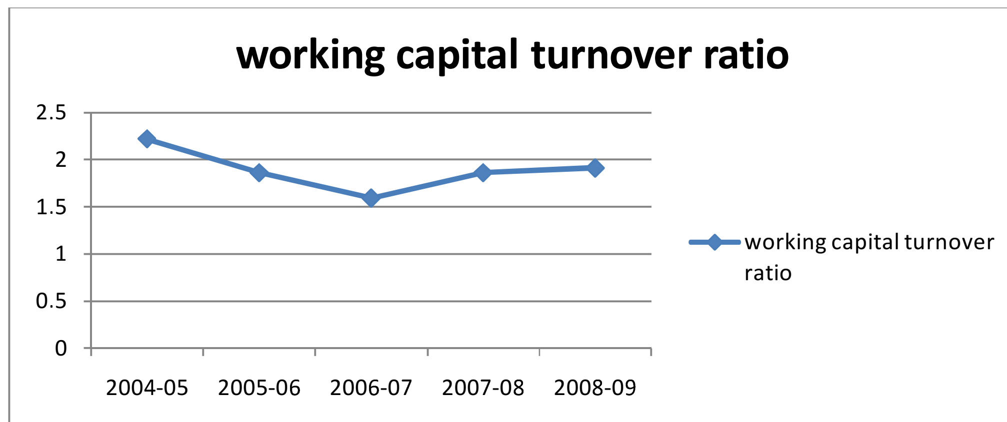
2004-2005 Working Capital Turnover Ratio = $\frac{472454}{212895}$ = 2.22:1

2005-2006 Working Capital Turnover Ratio = $\frac{494397}{265664}$ = 1.86:1

2006-2007 Working Capital Turnover Ratio = $\frac{482444}{304021}$ = 1.59:1

2007-2008 Working Capital Turnover Ratio = $\frac{601373}{322248}$ = 1.86:1

2008-2009 Working Capital Turnover Ratio = $\frac{639493}{334949}$ = 1.91:1



Interpretation:

The company's working capital position is moderate in last five years. Position of company has become better and company is able to meet its current obligation whenever it is required.

Debt Equity ratio: This ratio tells about the position of total debt of the company with respect to the total equity.

Formula = $\frac{\text{Debt}}{\text{Equity Shareholder Funds}}$

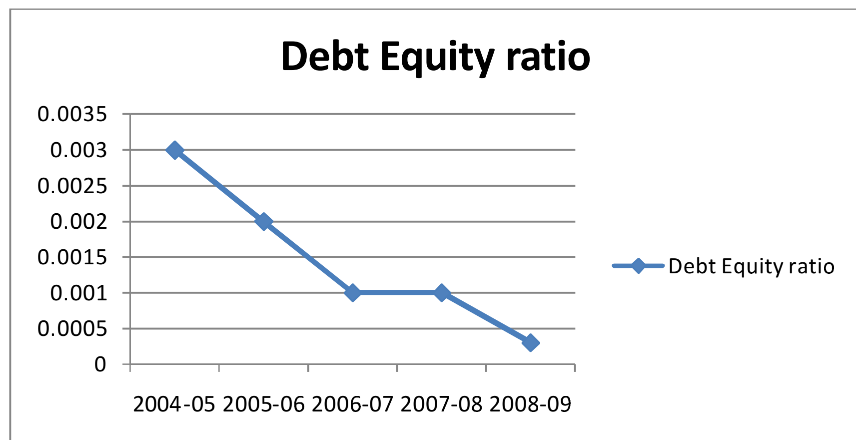
2004-2005 Debt Equity Ratio = $\frac{1490}{463142}$ = 0.003:1

2005-2006 Debt Equity Ratio = $\frac{1069}{535934}$ = 0.002:1

2006-2007 Debt Equity Ratio = $\frac{696}{614099}$ = 0.001:1

2007-2008 Debt Equity Ratio = $\frac{369}{699435}$ = 0.001:1

2008-2009 Debt Equity Ratio = $\frac{267}{780848}$ = 0.0003:1



Interpretation:

The declining trend of the debt equity ratio is favorable for the health of the company as it means that total debt is reducing with every passing year and company is operating on their own capital. Also the figure is not very high. For the year 2008-09 it is only 0.0003 which makes ONGC nearly DEBT FREE COMPANY.

Return on capital employed: This ratio tell that how effectively a company is making use of its resources. It gives the return on the total amount of money that is infused in an organization.

Formula = $\frac{\text{PBIDT}}{\text{Total capital employed}}$

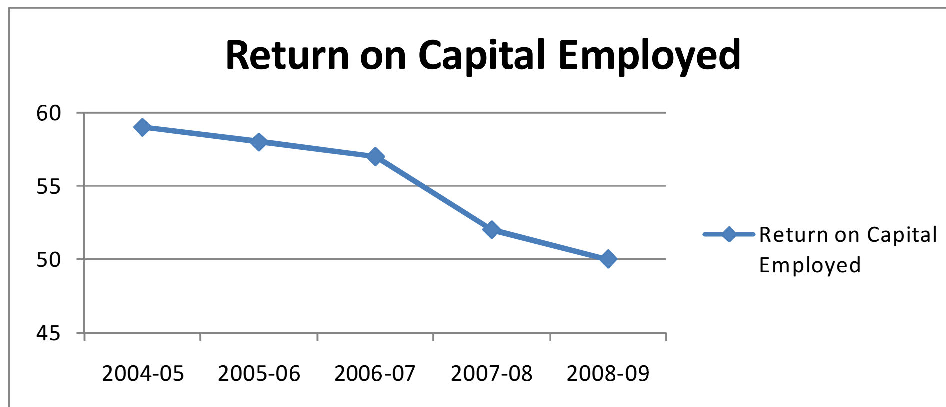
2004-2005 Return on Capital Employed = $\frac{246784}{419926}$ = 59%

2005-2006 Return on Capital Employed = $\frac{283731}{493763}$ = 58%

2006-2007 Return on Capital Employed = $\frac{306465}{540744}$ = 57%

2007-2008 Return on Capital Employed = $\frac{314790}{604844}$ = 52%

2008-2009 Return on Capital Employed = $\frac{319684}{640583}$ = 50%



Interpretation:

Although the profit of company has increased in the last five years but the total return on the capital employed has come down from 59% in 2004-05 to 50% in 2008-09. ROCE is continuously decreasing. This is because of the increase in investments in oil producing properties such as basins and oil fields which has lead to decrease in ROCE despite of increasing profits.

SUGGESTIONS

1) Return on the capital employed is decreasing continuously over the last 5 years. This is because of the increase investments in producing properties such as basins and oil fields leading to decrease in the ROCE. To arrest this decreasing trend the company may probably explore and adopt more cost effective technology for its activities.

2) The high current ratio from the standard indicates that additional amount of money is blocked in the current assets than required. So there are possibilities of using this blocked money in normal business activities which expected to fetch more return.

3) The portion of inventory needs greater attention. The corporation sometimes face problem of excess stock of one type of inventory. This is because of the high lead time of certain casing and drill pipes making the inventory storage period very high.

4) The business of the corporation is such that the working capital of the corporation tends to go high. Therefore it is important to have a more accurate method of cash forecasting.

5) ONGC being nearly a debt free company is not utilizing its strength for capturing fund from market through debt instead using own fund for normal business activity. In the process it is losing its leveraging capability.

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