

A Study on Financial Health of Oil and Natural Gas Corporation

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ABSTRACT

The Indian oil and gas sector is one of the six core industries in India and has very significant forward linkages with the entire economy. India has been growing at a decent rate annually and is committed to accelerate the growth momentum in the years to come. This would translate into India's energy needs growing many times in the years to come. Hence, there is an emphasized need for wider and more intensive exploration for new finds, more efficient and effective recovery, a more rational and optimally balanced global price regime - as against the rather wide upward fluctuations of recent times, and a spirit of equitable common benefit in global energy corporation. The purpose of this study is to study of financial performance, of India's leading oil and petroleum companies, i.e. Oil and Natural Gas Corporation, for the study. The most common tool of financial analysis Altman's Z-score to verify the financial health of the petroleum industry. It is concluded that the overall performance of Oil and Natural Gas Corporation found satisfactory in soundness and solvency capacity and investment analysis.

INTRODUCTION

India is the sixth largest consumer of oil. There is a huge demand-supply gap in oil and gas in India. The Indian oil and gas sector is of strategic importance and plays a predominant pivotal role in influencing decisions in all other spheres of the economy. The annual growth has been commendable and will accelerate in future consequently encouraging all round growth and development. This has necessitated the need for a wider intensified search for new fields, evolving better methods of extraction, refining and distribution, the constitution of a national price mechanism - keeping in mind the alarming price fluctuation in the recent past and evolving a spirit of equitable global cooperation.

Accounting for nearly 40% of the country's energy demand, the petroleum and natural gas sector forms a major source of energy in India. The share of oil and gas in India's energy mix is projected to increase in the near to medium term. Further, for both these sources, the dependence on imports is also projected to rise. Even though the two products are used differently, their exploration processes are similar and this has often led to them to being addressed in the same category, particularly in legislations.

Given this dependence on the sector and the linkages of energy with economic development, it is essential to examine and identify key issues that affect the development of the sector. This background paper on the oil and gas sector of India provides an understanding of key governance-related issues that affect the sector. It lays out the key laws and regulations that have shaped the development of the sector in the country. Subsequently, the paper discusses various organizations within the sector and examines the roles that each of these perform. Finally, key issues related to regulation, competition, Centre-State relations, financial health of utilities, and community participation are discussed in detail.

REVIEW OF LITERATURE

Brian Carver, Christy He, Jonah Hister (2004), has made an attempt study of historical aspect of Oil and Petroleum industry. They analyzed that Oil and Petroleums have historically formed an important component of India's exports. There is archaeological evidence from Mohenjo-Daro, which establishes that the complex technology of mordant dyeing was being used in the subcontinent from at least the second millennium B.C. It is believed that the use of printing blocks in India started in 3000 B.C., and some historians have concluded that India may have given birth to Oil and Petroleum printing. Marco Polo's records show that Indian Oil and Petroleums used to be exported to China and South East Asia from Andhra and Tamil ports in the "largest ships" then known. Buddhist era scripts reveal that woollen carpets were known in India as early as 500 B.C. and the technical skill that went into Indian carpets of the Mughal period is still hailed today.

Maurice Landes, Stephen MacDonald, Santosh K. Singh, and Thomas Vollrat (2005) emphasized that growth of Oil and Petroleum industry in india is depend upon execution of reforms to policies, including taxes that discriminate against the use of manmade fibers and regulations affecting the scale, technology use, and export competitiveness of the Oil and Petroleum and apparel industries. Imports of raw cotton have increased in concert with rising demand in recent years, but future growth will depend on the extent to which India can boost chronically low cotton yields and improve cotton quality.

Dr Pratibha Jain & Prof. Megha Mehta (2013) In their study on financial performance of automobile companies finds that Hero Honda company performed well because of its usage of latest technology and Tata motors weak performance due to increased manufacturing overheads and company's inability to face competition.

UNIQUENESS OF PETROLEUM INDUSTRY

The petroleum industry is such an industry which has the largest earning capacity. The various petroleum products are diversified in a very wide range. The main functional areas of this industry are extraction of crude, refining of crude, processing and transporting. The main problem faced by the entire petroleum industry is the pollution problem. The refining of crude oil creates huge pollution by producing various harmful gases. Another problem is of drilling mud. When the drilling work is done a huge amount of crude, water, soil mixture gets wasted. Here innovative and upgraded technology is required to minimize the wastage of petroleum. The leakage and drainage problems are also one of the major barriers in case of refinery work. Good piping technology and proper drainage system is also very essential in this industry. One thing we must appreciate that India has very limited production of petroleum in comparison with demand scenario. In this condition the wastage is a critical issue which must be addressed properly.

PERFORMANCE OF INDIAN OIL INDUSTRY

The petroleum industry in India stands out as an example of the strides made by the country in its march towards economic self-reliance. At the time of Independence in 1947, the industry was controlled by international companies. Indigenous expertise was scarce, if not non-existent. Today, a little over 65 years later, the industry is largely in the public domain with skills and technical know-how comparable to the highest international standards. The testimony of its vigour and success during the past five decades is the significant increase in crude oil production from 0.25 to 33 million tonnes per annum and refining capacity from 0.3 to 103 million metric tonnes per annum (MMTPa). The consumption of petroleum products has grown 30 times in the last 50 years from 3 million tonnes during 1948-49 to about 91 million tonnes in 1998-99. A vast network of over 29,000 dealerships and distributorships has been developed backed by over 400 storage points over the years to serve the people even in the remote and once-inaccessible areas.

COMPANY PROFILE

Oil and Natural Gas Corporation - With a market cap of Rs. 235,000 crores ONGC ranks 3rd in Oil & Gas Exploration & Production (E&P) Industry globally. It cumulatively produced 803 Million Metric Tonnes of crude and 485 Billion Cubic Meters of Natural Gas from 111 fields. ONGC's wholly-owned subsidiary ONGC Videsh Ltd. (OVL) is the biggest Indian multinational, with 40 Oil & Gas projects in 15 countries. The company earned revenue of approx Rs. 20,000 crores with net profit margin of 34% in Dec'10. It holds largest share of hydrocarbon acreages in India & contributes over 79 per cent of Indian's oil and gas production. It created a record of sorts by turning Mangalore Refinery and Petrochemicals Limited (MRPL) around from being a stretcher case at BIFR to the BSE Top 30, within a year.

OBJECTIVES OF THE STUDY

- To analyse the financial soundness of the Oil and Natural Gas Corporation.
- To examine the financial health of the Oil and Natural Gas Corporation.

HYPOTHESIS

H0: There is no significant difference in the financial soundness of Oil and Natural Gas Corporation.

H1: There is a significant difference in the financial soundness of Oil and Natural Gas Corporation.

METHODOLOGY

The researcher, being an external analyst, had to depend mainly upon secondary data for the purpose of studying the financing performance of Oil and Petroleum Industries in India from the top selected companies in India which is highly performed in overall growth in terms of finance. The exploratory research techniques have been used for this study and also the study is restricted only to Indian based oil and petroleum organizations.

SOURCES OF DATA

The financial data for the study are drawn purely from the secondary data and the data have been collected from money control.com and annual reports of the company.

PERIOD OF THE STUDY

The period 2012-2013 to 2016-2017 is selected for this study. This 5 year period was chosen in order to have a fairly long, cyclically well balanced period, for which reasonably homogeneous, reliable and up-to-date financial data would be available.

TOOLS USED FOR ANALYSIS

The present study has analyzed the financial performance of three Oil and Petroleum companies. In order to evaluate and compare the financial performance of selected industries. Altman's Z-score to verify the financial health of petroleum industry.

ALTMAN'S FINANCIAL HEALTH PREDICTION MODEL

Actually, the Altman Z-Score exists in three forms. The original version developed by Edward Altman in 1968 was for predicting bankruptcy potential in publicly held Manufacturing businesses. The Z-Score formulation successfully predicted bankruptcy with 90% accuracy within one year of filing and 80% accuracy two years in advance. While this was an impressive accomplishment, there was criticism that the original Z-Score did not work very well with privately held companies. Dr. Altman then created two new forms of the bankruptcy prediction formula. These were identified as Z' (Z prime) and Z'' (Z double prime) although they are also referred to as Z (A) and Z (B). Z' was developed for privately-held industrial companies and Z'' developed for non-manufacturing and service companies.

Dr. Altman developed a fourth bankruptcy predictor, ZETA®, in 1977 that modifies and incorporates additional factors into the formula. ZETA® is said to predict the potential for bankruptcy with a high degree of accuracy up to five years in advance. However, the formula is proprietary and of limited availability to business management and owners.

Many have criticized the Z-Scores as being inadequate. Some critics claim different and purportedly better ways to predict bankruptcy. However, the Altman Z-Score has

withstood the test of time and some 45 years after its first use is still relevant and widely used as a bankruptcy predictor.

We are concerned with business survivability and growth using tools that anticipate potential problems.

The Altman Z-Score expressions are as follow:

$$Z\text{-Score} = (X1*1.2) + (X2*1.4) + (X3*3.3) + (X4*0.6) + (X5*0.999)\text{for public manufacturing businesses}$$

X1 = Working capital / Total assets

It is the measure of net liquid assets of a concern to the total capitalization

X2 = Retained earnings / Total assets

It is a measure for re-investment earnings of a concern to the total assets

X3 = Earnings before interest and taxes / Total assets

It is a measure of profitability of the concern to the total assets

X4 = Market value of equity / book value of total debts

It is a measure of leverage of a concern

X5 = Sales / Total assets

It indicates the efficiency of management in manufacturing, sales, administration and other activities

ALTMAN'S GUIDELINES FOR HEALTHY ZONE

Situation	Z score	Zones
I	Below 1.8	Bankruptcy Zone (Certain to fall)
II	1.8 to 2.99	Healthy zone (Uncertain to predict)
III	2.99 and above	Too healthy zone (not to fall)

Table 1: Ratio of Working Capital and Total Assets of ONGC

Year	Working Capital	Total Assets	Ratio
2012-13	7447.03	253,457.34	0.0294
2013-14	-4197.04	324,910.80	-0.0129
2014-15	3120.67	337,682.68	0.0092
2015-16	-5102.33	356,211.25	-0.0143
2016-17	4197.44	370,205.62	0.0113

The table 1 reveals the ratio of working capital and total assets during the year 2012-13 to 2016-17. The ratio is considered as an indicator of the liquid assets of the company to the capitalization. The maximum level of ratio was 0.0113 during the year 2016-17 and minimum of -0.0143 was found in the year 2015-16.

Table 2: Ratio of Retained Earnings and Total Assets of ONGC

Year	Retained Earnings	Total Assets	Ratio
2012-13	148,250.25	253,457.34	0.5849
2013-14	167,873.23	324,910.80	0.5167

Table 6: Altman Z score Value

YEAR	X1*1.2	X2*1.4	X3*3.3	X4*0.6	X5*0.999	Z Score
2012-13	0.0294	0.5849	0.1450	0.00081	0.6371	1.9694
2013-14	-0.0129	0.5167	0.1206	0.00066	0.5332	1.6388
2014-15	0.0092	0.5217	0.0820	0.00060	0.4711	1.4830
2015-16	-0.0143	0.5066	0.0619	0.00041	0.3629	1.2590
2016-17	0.0113	0.5801	0.0810	0.00050	0.3821	1.4750

2014-15	176,176.64	337,682.68	0.5217
2015-16	180,466.57	356,211.25	0.5066
2016-17	214,772.86	370,205.62	0.5801

The table 2 reveals the ratio of retained earnings and total assets during the year 2012-13 to 2016-17. It is a measure for re-investment earnings of a concern to the total assets, the maximum level of ratio was 0.5849 during the year 2012-13 and the minimum level of ratio was 0.5066 during the year 2015-16.

Table 3: Ratio of EBIT and Total Assets of ONGC

Year	EBIT	Total Assets	Ratio
2012-13	36,742.05	253,457.34	0.1450
2013-14	39,171.07	324,910.80	0.1206
2014-15	27,683.86	337,682.68	0.0820
2015-16	22,035.97	356,211.25	0.0619
2016-17	29,969.91	370,205.62	0.0810

The table 3 reveals the ratio of EBIT and total assets during the year 2012-13 to 2016-17. The ratio is considered as an indicator of how efficiently the company is using its assets to generate the return. The maximum ROTA of 0.1450 was found in the year 2012-13 and the minimum ROTA of 0.0619 was found in the year 2015-16.

Table 4: Ratio of Market value of equity and Total debts of ONGC

Year	Market Value Of Equity	Total Debts	Ratio
2012-13	206	253,457.34	0.00081
2013-14	216	324,910.80	0.00066
2014-15	204	337,682.68	0.00060
2015-16	145	356,211.25	0.00041
2016-17	185	370,205.62	0.00050

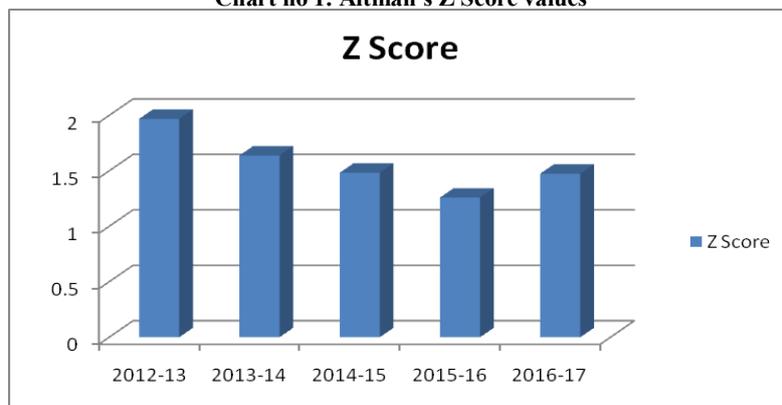
The table 4 reveals the ratio of the market value of equity and total liability during the year 2012-13 to 2016-17. It is a measure of leverage of a concern and also shows the market reaction regarding total liability of companies during the financial year. The maximum ratio 0.00081 was noticed during the year 2012-13 and the minimum ratio of 0.00041 was found in the year 2015-16.

Table 5: Ratio of Net Sales and Total Assets of ONGC

Year	Net Sales	Total Assets	Ratio
2012-13	161,465.99	253,457.34	0.6371
2013-14	173,244.98	324,910.80	0.5332
2014-15	159,069.69	337,682.68	0.4711
2015-16	129,278.00	356,211.25	0.3629
2016-17	141,470.91	370,205.62	0.3821

The table 5 reveals the ratio of net sales and total assets during the year 2012-13 to 2016-17. It indicates the efficiency of management in manufacturing, sales, administration and other activities to generate revenue. The maximum ratio of 0.6371 was found in the year 2012-13 and the minimum of 0.3629 was found in the year 2015-16.

Chart no 1: Altman's Z Score values



The chart no 01 reveals the Z score values of ONGC Company during the year 2012-13 to 2016-17. The maximum score of 1.9694 can be seen in the year 2012-13 and the minimum score of 1.2590 can be seen in the year 2015-16. The study reveals the ONGC Company is enjoying the healthy zone to down and fluctuating over the entire study period but the trend of Z score value is fluctuating during the study period.

FINDINGS AND CONCLUSION

The calculated z-score values during the study period are fluctuating. Z score of the year 2015-2016 was lowest among all i.e.1.2590 while 1.9694 was highest in the year 2012-13. The average Z score of ONGC is 1.57 which is less than 1.80. But among all the company should try to increase the ratio of x4 which indicates Market value of equity / book value of total

debts. It is a measure of leverage of a concern. Ratio between up to 1.80 indicates indeterminate probability of bankruptcy. So, we can say that there is chance of insolvency of a company in a future as studied by past data. The company must take steps to increase the financial performance by using corrective measures.

- H0: is accepted. ONGC sound (Z-score Based)
- H0: There is no significant difference in financial soundness of ONGC.

The calculated Z score values are near healthy to the company but it is in fluctuating trend. The company must take proper measures to increase the financial performance using the available resources.

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