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Financial Health Analysis of Large Scale Oil and Natural Gas Companies in India – With Special Reference to Select Oil and Natural Gas Companies

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ABSTRACT   *In India, oil and natural gas sector has tremendous growth potential. It plays a vital role in Industries like manufacturing, commercial services, utilities and infrastructure. Financial health of a firm should be evaluated to predict the financial performance in terms of liquidity, profitability and viability. Financial soundness of an industry cannot be ascertained by single ratio. Altman combined a number of accounting ratios to form an index of profitability it is regarded as an effective indication of corporate performance in predicting financial health of a firm. This paper has made an attempt to analyse and forecast the financial health of GAIL, ONGC, IOC, BPCL, HPCL and OIL by the way of applying Altman's Z-Score model over a period of 10 years. This investigation is based upon the secondary data available from reliable database Capitaline, Prowess and annual report of each company. From the study it is ascertained that GAIL, ONGC, and OIL have registered decreasing trend over the period of analysis. OIC, BPCL and HPCL have increasing trend and also excellent financial viability position throughout the study.*

KEYWORDS : Z- score model, financial health, Oil and Natural Gas, Bankruptcy Zone

Introduction

Oil and gas sectors play a vital role in the political and economic scenario of the globe. Oil and natural gas contribute 60% of the world's energy needs. World's primary energy demand is met by crude oil, coal, natural gas, nuclear energy and hydro electricity contributing 38%, 29%, 25%, 2% and 6% respectively and 1% is coming from solar, wind, wood, wave, tidal and geothermal sources (Ibid.,). India stands fourth place in oil and petroleum consumption and import after United Sates, China and Japan. India is taking effective and efficient steps to develop its various renewable energy sources (EIA June 2014). It is estimated that oil and natural gas occupy the first and second positions respectively and it will be the world's top two energy resource by 2040. Global demand for natural gas will be more that 60 percent of percent level and it will be the fastest growing major fuel source over this period. The incremental demand for oil and natural gas is expected from developing countries like India and China where oil consumption is expected to grow at the rate of 3.8 percent and 2.4 percent respectively. Hence an attempt has been made to study the financial health of selected oil and natural gas companies in India.

Statement of problem

Financial soundness of emerging and established companies should be analysed, to convey its financial position to bankers, stock exchanges, bondholders, stockholders suppliers and governmental regulatory. If financial performances of selected companies are not evaluated they may go sick tomorrow. Hence an attempt has been made to study the financial health of selected oil and natural gas companies in India. Financial strength of each organization is studied based on the Dr. Edward I.Altman's Multiple Discriminant Analysis model. The present study is made to analyse and predict the financial conditions of the selected oil and natural gas companies in India.

Significance of the study

The efficiency and effectiveness of financial performance should be carefully monitored to prevent industrial distress and to ensure consistent growth. It is essential to analyse the financial health of the selected companies and to identify the cause for deteriorating financial performance of the firm to avert sickness. Therefore, it is important to evaluate the financial health and financial performance of the selected oil and natural gas companies in India.

Objectives of the study

The following are the main objectives of the study:

➢ To evaluate the financial health of the selected oil and natural gas companies in India.

➢ To analyse the financial performance of the selected oil and natural gas companies in India.

➢ To ascertain working capital and leverage position of the selected oil and natural gas companies in India.

➢ To offer valuable suggestion to improvement of financial soundness of selected oil and natural gas companies in the competitive business world.

Scope of the study

The study aims to measure the financial health of large scale oil and natural gas companies in India. The study has used the facts of the selected companies from 2005-06 to 2013-14. The scope of financial position is very wide and the study is based on accounting information taken from the database capitaline and the annual reports of selected companies.

Methodology

The present study is based on secondary data, collected from the compilation made by the database capitaline, annual reports of selected companies, annual report of ministry of oil and natural gas for a period of 10 years starting from 2005-06 to 2013-14. The most popular model, Dr. Edward I. Altman's Multiple Discriminate Analysis has been used as tool to analyze the collected data.

The formula used to evaluate the 'Z' Score analysis is:

$$Z = 1.2X_1 + 1.4X_2 + 3.33X_3 + 0.64X_4 + 1.0X_5$$

Where,

Z = Discriminate Score

X_1 = Net working capital / Total Assets

X_2 = Net operating profit / Net sales

X_3 = EBIT / Total Assets

X_4 = Market Value of Equity/ Book value of Debt

X_5 = Sales / Total Assets

Guidelines

Situation	Z- Scores	Zones	Remarks
I	Below 1.8	Bankruptcy Zone	Certain to fall
II	1.8 – 2.99	Healthy Zone	Uncertain to predict
III	3 and above	Too Healthy Zone	Not to fall

Sampling Design

The oil and natural gas companies have been selected on the basis of size. Those companies which have invested more than 30,500 crore in total assets during the year 2005-06 to 2013-14 have been selected.

Sample Companies

S.No.	Company Name	Total Assets as on 31.03.2014
1	GAIL (India) Limited	51,321.36
2	Oil and Natural Gas Corporation Limited	2,20,651.67
3	Indian Oil Corporation	1,58,016.09
4	Bharat Petroleum Corporation Limited	53,385.12
5	Hindustan Petroleum Corporation Limited	61,309.46
6	Oil India Limited	30,628.13

Analysis and Interpretation of Data

Table – 1						
Z' score value of GAIL						
YEAR	X1	X2	X3	X4	X5	Z SCORE
2014	0.084	0.196	0.594	0.018	1.49	2.382
2013	0.036	0.21	0.594	0.024	1.38	2.244
2012	-0.024	0.21	0.66	0.03	1.47	2.346
2011	0.048	0.252	0.792	0.036	1.49	2.618
2010	0.216	0.294	0.825	0.042	1.37	2.747
2009	0.312	0.28	0.891	0.048	1.5	3.031
2008	0.36	0.35	0.924	0.036	1.26	2.93
2007	0.3	0.308	0.759	0.042	1.26	2.669
2006	0.36	0.378	0.957	0.042	1.22	2.957
2005	0.336	0.406	0.924	0.048	1.28	2.994
Mean						2.6918

Source: Computed

The above table reveals the Z-Score value of GAIL. Mean value of GAIL is 2.69. During the year 2009 it has been in the too healthy Zone, rest of the years it has been in the Healthy Zone. From the result it is clear that the financial health of GAIL was satisfactory during the study period.

Table – 2						
Z' score value of ONGC						
YEAR	X1	X2	X3	X4	X5	Z SCORE
2014	0.084	0.728	0.66	0.018	0.51	2
2013	0.108	0.658	0.693	0.018	0.56	2.037
2012	0.12	0.812	0.858	0.018	0.55	2.358
2011	0.072	0.616	0.759	0.024	0.57	2.041
2010	0.396	0.616	0.792	0.012	0.58	2.396
2009	0.42	0.56	0.8085	0.012	0.67	2.4705
2008	0.468	0.63	0.99	0.018	0.72	2.826
2007	0.48	0.63	1.023	0.018	0.74	2.891
2006	0.48	0.7	1.089	0.012	0.72	3.001
2005	0.48	0.616	1.155	0.018	0.82	3.089
MEAN						2.51095

Source: Computed

The table shows that the Z-Score value of the ONGC. The mean value is 2.5 which show that it is in the Healthy Zone. ONGC has been in too healthy zone for 2 years for 2005 and 2006, remaining years it is in Healthy Zone. From this it can be concluded that the financial health of ONGC is satisfactory.

Table – 3						
Z' score value of OIL						
YEAR	X1	X2	X3	X4	X5	Z SCORE
2014	0.492	0.826	0.462	0.012	0.31	2.102
2013	0.732	0.87	0.86	0.02	0.48	2.96
2012	0.708	0.85	0.92	0.01	0.54	3.03
2011	0.804	0.616	0.858	0.006	0.69	2.974
2010	0.78	0.616	0.924	0.012	0.69	3.022
2009	0.672	0.69	1.19	0.01	0.77	3.33
2008	0.66	0.658	1.122	0.018	0.75	3.208
2007	0.696	0.67	1.09	0.02	0.70	3.18
2006	0.66	0.71	1.45	0.02	0.90	3.74
2005	0.624	0.602	1.056	0.024	0.77	3.076
MEAN						3.0617

Source: Computed

From the above table Z – Score value of OIL has been presented and its mean value is 3.06, which shows it has satisfactory financial position during the study period. During the years 2005 to 2010 and 2012 it has been in too Healthy Zone for 7 years and the next 3 years it has been in Healthy Zone. From the study it is clear that it has satisfactory financial health during the study period.

Table – 4						
Z ' score value of BPCL						
YEAR	X1	X2	X3	X4	X5	Z SCORE
2014	0.144	0.056	0.594	0.012	6.34	7.146
2013	0.276	0.042	0.462	0.012	5.77	6.562
2012	0.24	0.042	0.33	0.006	5.52	6.138
2011	0.096	0.042	0.33	0.006	4.49	4.964
2010	0.216	0.056	0.33	0.006	3.45	4.058
2009	0.084	0.042	0.33	0.006	4.03	4.492
2008	0.228	0.056	0.396	0.006	4.13	4.816
2007	0.132	0.056	0.528	0.012	4.58	5.308
2006	0.264	0.028	0.132	0.012	4.31	4.746
2005	0.144	0.056	0.495	0.018	5.64	6.353
MEAN						5.4583

Source: Computed

The above table exhibits the Z-Score value of BPCL its mean value is 5.45 which show that its financial viability is extremely high and good. There is no risk to fall sick. During the study period all the 10 years it has extremely high and good financial health. From this it can be concluded that it has excellent financial position during the study period.

Table – 5						
Z' score value of HPCL						
YEAR	X1	X2	X3	X4	X5	Z SCORE
2014	0.348	0.042	0.231	0.006	4.09	4.717
2013	0.384	0.028	0.165	0.006	3.84	4.423
2012	0.36	0.042	0.231	0.006	3.67	4.309
2011	0.3	0.042	0.264	0.006	3.18	3.792
2010	0.144	0.056	0.297	0.006	3.31	3.813
2009	0.156	0.042	0.264	0.006	3.75	4.218
2008	0.3	0.042	0.231	0.006	3.85	4.429
2007	0.084	0.042	0.396	0.012	4.46	4.994
2006	0.24	0.028	0.099	0.012	4.63	5.009
2005	0.288	0.056	0.528	0.018	5.68	6.57
Mean						4.6274

Source: Computed

The table shows the Z-Score value of HPCL. Its mean value is 4.62. Financial viability of HPCL is good and satisfactory for all the 10 years from 2005 to 2014. The firm registered a high working capital ratio and retained earnings ratio. Profitability ratio is excellent and it has high asset turnover ratio during the study period. It can be concluded from the table that the financial health of HPCL was high and good throughout the study.

Table – 6						
Z' score value of IOC						
YEAR	X1	X2	X3	X4	X5	Z SCORE
2014	0.384	0.056	0.297	0.006	2.89	3.585
2013	0.384	0.056	0.264	0.012	2.94	3.656
2012	0.384	0.056	0.231	0.012	2.81	3.493
2011	0.252	0.07	0.363	0.012	3.06	3.757
2010	0.18	0.098	0.528	0.018	2.83	3.654
2009	0.12	0.056	0.297	0.006	3.45	3.929
2008	0.288	0.084	0.495	0.012	3.22	4.099
2007	0.18	0.098	0.627	0.012	3.49	4.407
2006	0.24	0.084	0.462	0.012	3.13	3.928
2005	0.276	0.084	0.495	0.018	3.22	4.093
MEAN						3.8601

Source: Computed

Z-Score value of IOC has been presented in the above table. Its mean value has been registered as 3.86. It shows that IOC has satisfactory financial position. From 2005 to 2014 throughout the study period its financial viability stood in strong position. During 2005, 2007 and 2008 it has extremely good and high financial health. From the study it can be concluded financial health of IOC was satisfactory during the study period.

Findings
• Variable wise analysis reveals that GAIL has good financial health. During the year 2009 it has been in the too healthy zone, rest of the years it has been in the healthy zone.

• ONGC has been in too healthy zone for 2 years for 2005 and 2006, remaining years it registered in healthy zone.

• During the years 2005 to 2010 and 2012 OIL has been in too healthy zone for 7 years and the next 3 years it has been in healthy zone.

• BPCL has extremely high and good financial health during the study period and there is no risk to fall sick for all the 10 years.

• The financial health of HPCL was high and good throughout the study.

• During 2005, 2007 and 2008 IOC has extremely good and high financial health. Financial health of IOC was satisfactory during the study period.

Suggestion
GAIL, ONGC, and OIL are in the healthy zone. They have to work to reach the too healthy zone. They have to concentrate to improve their working capital ratio, retained earnings ratio, Profitability ratio and Asset turnover ratio. It is suggested that the GAIL, ONGC, and OIL should take adequate measure to reach and retain too healthy zone.

Limitation of the study
The study is subject to the following limitations:
• The study period is restricted to 2005-06 to 2013-14 only.
• This study is based on secondary data taken mainly from annual reports and capitaline.
• The present study is mainly based on Dr. Edward I. Altman's Multiple Discriminate Analysis model which has its own limitations.
• This study has focused only to large scale companies. So, it could not be generalized to small and medium size companies in India.

Conclusion
The present study has been undertaken to analysis the financial viability of selected large scale oil and natural gas companies in India. The study highlights the financial health of selected companies for a period of 10 years from 2004-2014. GAIL, ONGC, and OIL have registered decreasing trend over the period of analysis. OIC, BPCL and HPCL have increasing trend and also excellent financial viability position throughout the study. Despite this government policies OIL, ONGC and GAIL have grown and performed admirably. Necessary suggestions are provided. These findings and suggestions are useful for further growth and development of companies selected for the present study.

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