



Leverage²–An Analysis and its Impact on Profitability with Reference to Selected Oil and Gas Companies in India

Priyanka Dineshgiri Meghanathi¹, Alok Kumar Chakrawal²

¹Ph.D. Research Scholar, Department of Commerce and Business Administration, Saurashtra University Rajkot – 360005

²Professor, Department of Commerce, Saurashtra University, Rajkot – 360005 (On lien as Vice Chancellor at GGV, Bilaspur)

*Corresponding Author: Priyanka Dineshgiri Meghanathi



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Abstract

Oil and gas sector is among the eight core industries in India and plays a key role in influencing decision making for all the other important sectors of the economy. The main objective of the study is to examine and evaluate the impact of leverage on profitability with reference to oil and gas companies in India. For that researcher has been selected top five companies like Reliance Industries Ltd (RIL), Oil and Natural Gas Corporation (ONGC), Indian Oil Corporation Ltd (IOCL), Bharat Petroleum Corporation Ltd (BPCL), and Gas Authority of India Ltd (GAIL) based on market capitalisation. Secondary data have been used during the study period 2016-17 to 2020-21. For analyzing the leverage and profitability position the researcher have been taken financial leverage as independent variable and earning per share as dependent variable. For testing hypothesis some statistical tools and techniques like one way ANOVA, correlation and regression have been used by researcher. The major findings of ANOVA indicated that there is significant difference in financial leverage and earning per share of selected oil and gas companies during the study period. Correlation results showed that there is positive correlation between financial leverage with eps in reliance but in all other company's financial leverage is negatively related with eps. Regression analysis found that there is no significant impact of financial leverage on eps in RIL, ONGC and IOCL but in BPCL and GAIL financial leverage has significant impact on EPS.

Introduction

The oil and gas industry are among the eight core industries of India (crude oil, natural gas, petroleum refinery products, coal, electricity, cement and finished steel, fertilizers) and has a significant role to make for the growth of all other industry segments in India. This sector meets more than two third of the total primary energy needs of the country. The oil and gas industries has been actively involved in putting India on the world map. India has become a major consumer of energy resources; India is fourth largest consumer of oil in the world. The Indian oil and gas industry is growing rapidly and playing a significant role for development of Indian economy. In India the demand of energy resources increases gradually but India has limited supplies of oil. Hence, the demand-supply gap is very high. The Indian government has taken progressive steps towards oil and gas sector through creation of conducive policy and regulatory framework to encourage Exploration & Production, Refining and Retaining of oil and gas for healthy growth of the industry and county as a whole. In July 2021, the Department

for Promotion of Industry and Internal Trade (DPIIT) approved an order allowing 100% foreign direct investments (FDIs) under automatic route for oil and gas PSUs.

Leverage

Financial decision is one of the fundamental and important parts of financial management in any kind of business concern. A sound financial decision must reflect the board coverage of the financial mix (Capital Structure), total amount of capital (capitalization) and cost of capital (Ko). Capital structure is one of the significant things for the management, since it influences the debt equity mix of the business concern, which affects the shareholder's return and risk. The debt equity mix of the company can be examined with the help of leverage.

The term leverage indicates the ability of a firm to earn higher return by employing fixed assets or debt. It shows the effects of the investment patterns or financing patterns adopted by the firm. It depends on the financial planning where it is desired that a small change in sales or EBIT will have a magnifying effect on EBIT or EPS respectively. It must however be noted that higher the degree of leverage, higher is the risk as well as well as return to the owners.

Review of Literature

(Narware, 2016) has conducted research on the topic of “Leverage – An Analysis and its Impact on Profitability with Reference to Selected Fertilizer Companies in India” The main objective of the study was to evaluate the impact of leverage on the profitability of fertilizer companies in India. In this study researcher have been taken financial leverage, Operating leverage and combined leverage as independent variable and earning per share as dependent variable. The secondary data have been collected from the period of the year 2006 to 2015. For testing the hypothesis statistical tools like ANOVA, t-test and technique like multiple regression analysis, skewness, kurtosis, and coefficient of variation have been used. The result of the study found that leverage and profitability were interrelated and leverage has a significant impact on profitability to the company.

(Ahmad Mahdi Abdulkareem, 2020) have conducted research on the title of “The Impact of Leverage on Earning Per Share: A Study of Selected Petroleum Companies in India” The main objective of the study was to examine the correlation between three types of leverage with petroleum industries in India. The researcher has been taken operating leverage, financial leverage and combined leverage as independent variable and earning per share as dependent variable. The study was based on secondary data for the period of five years from 2014-15 to 2018-19. For the purpose of testing the hypothesis ANOVA, correlation and regression have been used by researcher. The results showed that there is significant difference between all leverage and EPS during the study period.

(Md. Musfiqur RAHMAN, 2020) have studied the “The Impact of Financial Leverage on Firms Profitability: An Empirical Evidence from Listed Textile Firms of Bangladesh” The main purpose of this study was to find out the impact of financial leverage on firms’ profitability in the listed textile sector of Bangladesh. A sample of 22 DSE listed textile firms has been selected for the research work. For the testing hypothesis pooled ordinary least squares (OLS), Fixed Effect (FE) and Generalized Method of Moments (GMM) model have been used by researcher. The result founded that there is significant negative relationship between leverage and firms’ profitability.

(Nor Farizal Mohammed, 2020) have studied “Leverage, Liquidity and Profitability Ratios: Accountability of Malaysian Listed Oil and Gas Firms” The main objective of the study was to examined the impact of leverage and liquidity on the profitability among the listed oil and

gas firms in Malaysia. The researcher has been collected secondary data from 22 listed oil and gas firms for a period of ten years from 2008-2017. The results founded that leverage in terms of debt-equity ratio has significant negative relation with profitability, liquidity ratios are founded to be insignificantly related to the profitability of the oil and gas industry in Malaysia.

(Chakrawal, 2021) have studied, “Impact of financial leverage on profitability of reliance industries ltd” The main objective of the study was to analyzed financial leverage and to examined the impact of financial leverage on profitability of reliance industries ltd. The researcher has been taken financial leverage as independent variable and Net profit ratio, earning per share, Return on Assets and Return on Equity as a dependent variable. The secondary data have been collected over period of 2016-17 to 2020-21 from financial statement of company. For testing the hypothesis correlation and regression have been selected as a statistical technique. The results showed that there is no significant relationship between financial leverage with NPR and significant positive relationship between financial leverage with EPS, ROE and ROA. Regression results showed that there is no significant impact of leverage on profitability of reliance industries ltd during the study period

Methods

Research Methodology is defined as a systematic way of solving a research problem, it tells about methods to be followed during the research process starting from investigation to conclusion.

Objectives of the Study

This research paper analyzed the following objectives; (1) To understand and evaluate the leverage position of selected companies in India; (2) To analyze profitability performance of selected oil and gas companies in India; (3) To evaluate the relationship between leverage and profitability of selected units; (4) To measure the impact of leverage on profitability of selected companies.

Hypotheses for the Study

H₀ = There is no significant difference in financial leverage of selected oil and gas companies in India during the study period.

H₀ = There is no significant difference in Earning Per Share among selected oil and gas companies in India during the study period.

H₀ = There is no significant relationship between financial leverage and earning per share of selected oil and gas companies in India during the study period.

H₀ = There is no significant impact of financial leverage on earning per share of selected oil and gas companies in India during the study period.

Period of the Study: The period of the study has been considered as 2016-17 to 2020-21 which consist of 5 years' time period.

Scope of the Study: For the study scope have been divided in to two parts first one is functional scope and second one is geographical scope.

Functional Scope: Functional scope of the study has been considered as leverage and profitability analysis for selected oil and gas companies. For the identification of leverage and profitability researcher bifurcated into two segment like profitability ratios and leverage ratios based on its respective ratios have been selected.

Geographical Scope: The study has been indicated Indian origin selected companies so mainly geographic area is India territory and it's also included those area in which companies providing their goods and services.

Selection Of Samples: This study included top five oil and gas companies like Reliance, Oil and Natural Gas Corporation Ltd (ONGC), Indian Oil Corporation Ltd (IOCL), Bharat Petroleum Corporation Ltd (BPCL), and Gas Authority of India Ltd (GAIL) based on market capitalisation as on (13th January 2022). The sampling technique is non probability in which judgemental sample method has been selected. These samples provide overall picture of population of oil and gas sector in India.

Data Collection: Data is most important instrument for reaching to the objective of the study, for this study secondary source of data have collected from annual report of the company as well as respective websites of the companies.

Data Analysis and Interpretation:

Financial Leverage

Years	RELIANCE	ONGC	IOCL	BPCL	GAIL
2016-17	0.70	0.38	0.58	1.02	0.08
2017-18	0.62	0.50	0.55	1.01	0.02
2018-19	0.70	0.47	0.82	1.11	0.02
2019-20	0.65	0.51	1.32	1.53	0.12
2020-21	0.32	0.50	0.97	0.75	0.12
Avg.	0.598	0.472	0.848	1.084	0.072
Max.	0.70	0.51	1.32	1.53	0.12
Min	0.32	0.38	0.55	0.75	0.02

Source: www.moneycontrol.com

Above table indicated financial leverage of selected oil and gas companies for the period of 2016-17 to 2020-21. Financial leverage is the percentage of debt as compared to the owner's equity in capital structure of the company. In Reliance Industries Ltd. the average financial leverage is 0.598, maximum is 0.70 in the year 2016-17 and minimum is 0.32 in the year 2020-21. In the year 2018-19 the debt proportion is highest in reliance but after that period it started to decrease. In ONGC the trend of financial leverage is showed fluctuation. In IOCL maximum financial leverage is 1.32 in the year 2019-20 it shows higher the debt compared to owner's fund. In BPCL the average financial leverage is 1.084 is highest compared to all the other selected companies it showed higher debt percentage in the company. In GAIL the trend of financial leverage is not much fluctuated. The average financial leverage of GAIL is 0.072 it compared to all other firm it shows very less use of debt compare to equity.

Earnings Per Share

Years	RELIANCE	ONGC	IOCL	BPCL	GAIL
2016-17	101.14	19.03	20.94	44.34	15.53
2017-18	60.89	17.23	23.41	45.80	20.48
2018-19	66.80	23.81	18.41	39.67	26.72
2019-20	63.06	8.59	-0.97	15.53	14.68
2020-21	75.21	12.92	23.57	81.60	10.85
Avg.	73.42	16.316	17.072	45.388	17.652

Max.	101.14	23.81	23.57	81.60	26.72
Min	60.89	8.59	-0.97	15.53	10.85

Source: www.moneycontrol.com

Above table displays the earning per share of selected oil and gas companies during the study period. Earnings per share (EPS) is the portion of company's profit that is allocated to every individual share of the stock. In Reliance Industries Ltd. the average eps is 73.42 it shows highest average eps compared to other firm. Highest eps is 101.14 in the year 2016-17 and lowest in the year 2017-18. In ONGC, IOCL and BPCL lowest EPS in the 2019-20 it may because of Covid-19 pandemic. In IOCL showed the zig-zag trend of EPS and negative EPS in the 2019-20. In BPCL the EPS is continues decrease from the year 2017-18 and in the year 2019-20 it become lowest and then started to increase and become highest. In GAIL the average EPS is 17.652. The average EPS is highest in the RIL and lowest in ONGC.

One-Way Anova As Statistical Tool: For the testing of hypotheses researcher used One-ANOVA Test at 5% level of significant and test result as follows.

Ratio	F- Value	F- Crit	P-Value	H ₀ Accept / Reject
Financial Leverage	17.49967	2.866081	2.58E-06	H ₀ Rejected
Earning Per Share	15.83317	2.866081	5.45E-06	H ₀ Rejected

Source: Calculated from MS Excel

Above table shows the results of one-way ANOVA test for financial leverage and earning per share. In financial leverage calculated value (17.49967) is higher than table value (2.866081) it is indicated that null hypothesis is rejected at 5% level of significance that means that there is significant differences in financial leverage of selected oil and gas companies in India during the study period. In Earning Per Share (EPS) also the calculate value (15.83317) is higher than table value (2.866081) it shows that null hypothesis is rejected at 5% level of significant that means that there is a significant difference in Earning Per Share among selected oil and gas companies in India during the study period.

Correlation of Financial Leverage With Eps

Companies	Correlation	Results
RIL	0.080345	Positive
ONGC	-0.50317	Negative
IOCL	-0.82084	Negative
BPCL	-0.95294	Negative
GAIL	-0.89893	Negative

Source: Calculated from MS Excel

The above table shows the correlation of financial leverage with earning per share. In reliance industries ltd the result shows positive correlation between financial leverage with EPS but not much significant. It means if company increase it debt fund than it is positively effect on eps so, it also increases. In all other companies except RIL the result of correlation is negative it shows there is negative relationship between financial leverage with EPS, it means if the companies increase their debt proportion it reduces its EPS.

Regression Analysis: The Impact of Financial Leverage On Eps

COMPANIES	P-value	5 % significant level	H ₀ Accept/Reject
RIL	0.897812	0.05	Accepted
ONGC	0.387508	0.05	Accepted
IOCL	0.088544	0.05	Accepted
BPCL	0.012167	0.05	Rejected
GAIL	0.037984	0.05	Rejected

Source: Calculated from MS Excel

Above table shows the regression analysis of selected oil and gas companies during the study period. As per the above table in RIL, ONGC and IOCL the P-value is higher than 0.05 at 5% significant level so, null hypothesis is accepted. It means that there is no significant impact of financial leverage on EPS of above three companies during the study period. In the companies BPCL and GAIL the P-value is lower than 0.05 at 5% significant level so, null hypothesis is rejected. It means that there is a significant impact of financial leverage on EPS of last two companies during the study period.

Conclusion

The major findings of ANOVA test shows that there is significant differences in financial leverage and earning per share of selected oil and gas companies in India during the study period.

In Reliance Industries Ltd (RIL) the financial leverage is positively related with Earnings per share it means that if company increase its debt proportion than EPS is also increase but the impact of financial leverage is not significant on EPS. In the same way if company reduce its debt than EPS also decrease but not significant.

In ONGC there is negative relation of financial leverage with EPS. But the impact of financial leverage is not significant on EPS. It means that if company increase its debt than decrease in EPS but not significant impact on EPS.

In the same way in IOCL there is no significant impact of financial leverage on EPS. So, company can increase or decrease its debt than its relation with EPS is negative but not much more impact on EPS.

In BPCL the relation of financial leverage with EPS is negative. It means if company increase its debt ratio than it significantly impacts on EPS and EPS decrease. So, it is very risky for company to increase its debt proportion.

In GAIL If the company reduce their debt ratio than its very significantly impact on its EPS, their EPS is increase significantly. Because the financial leverage has significant negative impact on EPS in the GAIL.

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