



Profitability Analysis In Maharathna Companies

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ABSTRACT

Profit is one of the primary objectives of any business concern irrespective of level of size, type of business, ownership, nature of business, sector, investment, etc. As business organisations use various resources to carry out its activities to generate income, incur expenses so as to earn profit. The profit earned by the concern only element which decide the efficiency of the concern, though other elements are also important. More profit indicates greater efficiency in utilization of the organizational resources, which are belongs to the society. Hence, all the business organisations are expected to earn more profits or at least reasonable profits to prove its efficiency over other non-profitable business concerns. Analysis of profitability of the business organization is essential as it highlight the efficiency of the organisations so that the society identify the best concerns in utilizing the social resources so as to allocate more economic resources. Present study is undertaken to study the profitability in relation to Net Sales in Five important Central Public Sector Maharathna Companies namely, Coal India, ONGC, IOC, SAIL, NTPC during 2012-13 to 2021-22. Various tools such as Trend Analysis and Ratios such as, Gross Profit Ratio, Operating Profit Ratio, Cash Profit Ratio and Net Profit Ratio were calculated and analysed to study the Profitability in relation to Sales of the Selected Companies.

Key Words

Trend Analysis, Gross Profit, Operating Profit, Cash Profit, Net Profit.

Profit is one of the primary objectives of any business concern irrespective of level of size, type of business, ownership, nature of business, sector, investment, etc. As business organisations use various resources to carry out its activities to generate income, incur expenses so as to earn profit. The profit earned by the concern only element which decide the efficiency of the concern, though other elements are also important. It motivates to conduct its activities more efficiently in future as it attracts more investment from the investors. More profit indicates greater efficiency in utilization of the organizational resources, which are belongs to the society. Hence, all the business organisations are expected to earn more profits or at least reasonable profits to prove its efficiency over other non-profitable business concerns. The society will allocate its resources to the efficient concerns as they only add more value to the economy. Moreover, economic development of the State will take place only if it has more profitable business organisations in the society. A profitable business organization contributes a lot to the economy in the form of taxes, employment, entrepreneurship development. Therefore, business organisations have responsibility to generate more profits by efficiently utilizing the resources, especially Public Sector Enterprises. Analysis of profitability of the business organization is essential as it highlight the efficiency of the organisations so that the society identify the best concerns in utilizing the social resources so as to allocate more economic resources. If the social resources are not allocated to the efficient organisations in the society, economic development of the State will be in miserable condition. Since Public Sector Enterprises are financed by the public money, they have more responsibility in generating more social advantages. Present study is undertaken to study the profitability of Five important Central Public Sector Maharathna Companies namely, Coal India, ONGC, IOC, SAIL, NTPC.

Review of Literature:

Several studies were conducted by various Research Scholars in the area of profitability analysis in various industries during various study periods. Some of the studies were worth mention here;

Bhanupriya and Venkadesh (2018) have evaluated the profitability performance of the selected two-wheeler companies in India during 2007-08 and 2016-17. They have selected 7 two-wheeler companies such as Bajaj Auto Ltd, Eicher Motors Ltd, Hero Motocorp Ltd, LML Ltd, Mahindra Two-Wheeler Ltd, Suzuki India, TVS Motor Co. and analysed their net profit margin, cash profit margin, RONW and NOP ratio and concluded that there is significant difference between the profitability ratios of sample units during the study period. Chellasamy and Selvakumar (2019) analysed the profitability of 15 selected steel companies quoted in BSE in India during 2006-07 to 2015-16. They have used the corporate database of the CMIE, moneycontrol.com, journals, magazines, reports and websites. They have studied gross profit ratio, operating profit ratio, net profit ratio, return on investment ratio, EPS ratio, ROCE ratio and used several statistical techniques to draw meaningful conclusions. They have concluded that the profitability of the Steel Companies is to be improved a lot so as to withstand in the competition. Gandhi (2017) has made a profitability study on two automobile companies, namely, Tata Motors and Mahindra and Mahindra during 2005-06 to 2014-15 with the help of NP ratio, Operating profit ratio, Return on Assets, Return on investment and EPS. He found that net profit of the Tata Motors decreased against increase in Mahindra and Mahindra and the profitability ratios were also good in Mahindra and Mahindra than in Tata Motors during the study period. Dr. Madhusudana (2023) has analysed in his study made an attempt to analyse various aspects of income, cost and profit during 2010-11 and 2021-22 in RINL and SAIL. He has concluded that there was significant difference between two companies in trend and growth in income, cost element ratios and profitability ratios during the study period. Madhusudana and Phaniswara Raju (2013) were made study on liquidity and profitability in Cotton Textile Industry and Man-Made Textile Industry which are major industry components of Textile Industry. They have studied liquidity position, efficiency in utilization of working capital and profitability of these industries and compared with All Industries averages during 1999-00 to 2010-11 and concluded their performance was poor. Manjunatha et. al (2020) have studied profitability of 25 Infrastructure Companies which are listed in BSE during 2009 to 2018. They have analysed profitability with the help of ROE, ROS, ROA, ATO and adopted DuPont Analysis Model. They have concluded there is a significant relationship between ROE and ROA and Indian Infrastructure companies are able to generated positive return on equity for their shareholders. Krishna Murthi and Ramesh (2012) have evaluated the profitability in related to sales and invested in five selected steel companies namely, SAIL, TSL, Bhushan Steels, Visa Steel and JSW Steel during 2005-06 to 2010-11. They have analysed Gross Profit Ratio, Net Profit Ratio, Operating Profit Ratio, Operating Expenses Ratio, Operating Ratio, Return on Assets Ratio, Return on Investment Ratio, EPS Ratio, Earning Yield, Dividend Yield, Dividend Payout Ratio, Price Earnings Ratio etc. They have also applied several statistical techniques for drawing meaningful conclusions. They found that there is no similarities in the performance of various profitability ratios of selected steel companies during the study period. Nikul (2020) has made a study to evaluate profitability of selected five Indian Automobile Companies namely, Ashok Layland, Bajaj Auto, Eicher Motors, Force Motors, and Hero Motors during 2014-15 to 2018-19. He analysed the profit before interest and tax margin, net profit margin, return on capital employed and return on assets among the selected companies and concluded some of the selected companies were lagging behind in profitability during the study period. Pandey and Kumar (2011) have conducted study on one public sector company (SAIL) and one private sector company (TSL) during 2001-02 to 2010-11 by using various profitability ratios such as ROI, GP ratio, NP ratio, EPS, P/E ratio and ROCE and concluded that the performance of private sector steel companies is better than that of public sector steel companies.

Present Study:

Though several studies have been conducted to analyse profitability in different industries and companies during different periods, still more research is required to study the situation in various industries and companies especially in Public Sector Undertakings. Hence, this study has been made to analyse the profitability in relation to net sales in selected Five Central Public Sector Maharashtra Companies namely, Coal India, ONGC, IOC, SAIL, NTPC during 2012-13 to 2021-22.

Objectives of the Present Study:

Present study was done to analyse the profitability in Selected Maharathna Companies in relation to sales in 10 financial years from 2012-13 to 2021-22. The specific objectives are;

1. To study the trend in Net Sales, Total Expenses and different Profits (PBDIT, PBIT, PBDT and PBT) in Selected Companies during the period.
2. To study the Gross Profit Ratio (PBDIT to Net Sales Ratio) among the Selected Companies during the study period.
3. To study the Operating Profit Ratio (PBIT to Net Sales Ratio) among the Selected Companies during the study period.
4. To study the Cash Profit Ratio (PBDT to Net Sales Ratio) among the Selected Companies during the study period.
5. To study the Net Profit Ratio (PBT to Net Sales Ratio) among the Selected Companies during the study period.

Data and Methodology of the Study:

For the purpose of achieving the above objectives of the study, data was collected from the Annual Reports of the Selected Maharathna Companies from their websites for the period of 10 Years, i.e., from 2012-13 to 2021-22. Various tools such as Trend Analysis and Ratios such as , Gross Profit Ratio, Operating Profit Ratio, Cash Profit Ratio and Net Profit Ratio were calculated and analysed to study the Profitability in relation to Sales of the Selected Companies. Statistical Techniques such as Mean, Correlation were used to compare performance of the individual companies with the average profitability of the selected companies so as to judge the efficiency of each selected companies. Accordingly, the study was divided into two parts. In the first part, Trends in Net Sales, Trend in Total Expenses and Trend in PBDIT, PBIT, PBDT and Net Profit Before Tax of Selected Companies during the study period were presented. Profitability Ratios such as, Gross Profit (PBDIT) Ratio, Operating (PBIT) Profit Ratio, Cash Profit Ratio and Net Profit Before Tax Ratio of the Selected Companies during the study period were analysed in Second part of the study.

Hypotheses of the Study:

1. There is no difference in the trend of net sales, total expenses and various profits among the selected companies during the study period.
2. There is no difference among selected companies in Gross Profit (PBDIT to Net Sales) Ratio during the study period.
3. There is no difference among selected companies in Operating Profit (PBIT to Net Sales) Ratio during the study period.
4. There is no difference among selected companies in Cash Profit (PBDT to Net Sales) Ratio during the study period.
5. There is no difference among selected companies in Net Profit (PBT to Net Sales) Ratio during the study period.

Results & Discussion:

PART A - TREND ANALYSIS:

The Trend Analysis is a technique of studying several financial statements over a series of years. In Trend Analysis, the trend percentages are calculated for each item by taking the figure of that item for some base year as 100. So, the trend percentage is the percentage relationship which each item of different years bears to the same item in the base year. Any year may be taken as the base year, but generally the starting initial year is taken as the base year. So, each item for base year is taken as 100 and then the same item for other years is expressed as a percentage of the base year. In the first part of the present study Trend Analysis was done by taking financial year 2012-13 as base year for all items, such as Net Sales, Other Income, Total Income, Total Expenses, PBDIT, PBIT, PBDT, PBT and compared all other years with that and observed the trend in each item of a particular company. After that the trend of every company compared with that of other company so as to get a clarity over trend in selected companies during the study period.

1. Trend in Net Sales:

A.1. Trend in Operating Income (Net Sales)

Year	Coal India (RS. IN CROR ES)	Trend (base Year 2012 -13)	ONGC (RS. IN MILLIO NS)	Trend (base Year 2012 -13)	SAIL (RS. IN CROR ES)	Trend (base Year 2012 -13)	IOC (RS. IN CRORE S)	Trend (base Year 2012 -13)	NTPC (RS. IN CRORE S)	Trend (base Year 2012 -13)
2012-13	352.25	100.00	8,30,053.33	100.00	44440.58	100.00	4,47,096.25	100.00	65,737.04	100.00
2013-14	314.25	89.21	8,38,902.71	101.07	46698.41	105.08	4,73,210.09	105.84	72,018.93	109.56
2014-15	387.12	109.90	8,28,709.61	99.84	45730.36	102.90	4,37,524.23	97.86	73,236.94	111.41
2015-16	165.53	46.99	7,77,417.53	93.66	39086.24	87.95	3,50,603.09	78.42	70,506.80	107.26
2016-17	311.18	88.34	7,79,077.30	93.86	44452.41	100.03	4,45,441.90	99.63	78,273.44	119.07
2017-18	370.37	105.14	8,50,041.00	102.41	57558.46	129.52	5,06,427.59	113.27	83,452.70	126.95
2018-19	934.3	265.24	10,96,545.50	132.11	66967.31	150.69	6,05,932.34	135.53	90,307.43	137.38
2019-20	845.16	239.93	9,62,136.09	115.91	61660.55	138.75	5,66,949.64	126.81	97,700.39	148.62
2020-21	640.25	181.76	6,81,410.90	82.09	69110.02	155.51	5,14,890.47	115.16	99,206.72	150.91
2021-22	1,131.92	321.34	11,03,453.98	132.94	103473.32	232.84	7,28,459.94	162.93	1,16,137.33	176.67
AGP Y		6.09		0.60		3.37		1.50		3.20

Source: Calculated from the Annual Reports of the selected companies.

Trend of Net sales of the selected companies during the study period was presented in table 1.1. From the above table, it could be observed that highest growth over base year (2012-13) in Net sales was recorded in Coal India Ltd. (221 per cent), followed by SAIL (132 per cent), NTPC (76 per cent), IOC (62 per cent) and ONGC (32 per cent) during the study period. A continuous base year growth in net sales was observed in NTPC during the study period, but a mixed trend was observed in all other selected companies.

2. Trend in Other Income:

A.2. Trend of Other Income

Year	Coal India (RS. IN CRORE S)	Trend (base Year 2012 -13)	ONGC (RS. IN MILLIONS)	Trend (base Year 2012 -13)	SAIL (RS. IN CRORE S)	Trend (base Year 2012 -13)	IOC (RS. IN CRORE S)	Trend (base Year 2012 -13)	NTPC (RS. IN CRORE S)	Trend (base Year 2012 -13)
2012-13	11,088.01	100.00	54,367.42	100.00	1119.12	100.00	3,514.79	100.00	3,118.77	100.00
2013-14	16,089.85	145.11	67,131.99	123.48	881.41	78.76	3,417.29	97.23	2,688.89	86.22
2014-15	14,143.40	127.56	53,665.67	98.71	1001.19	89.46	4,145.95	117.96	2,100.42	67.35
2015-16	17,127.10	154.47	70,093.53	128.93	580.6	51.88	2,246.32	63.91	1,189.27	38.13
2016-17	15,004.75	135.32	75,481.25	138.84	535.61	47.86	4,200.62	119.51	1,068.86	34.27
2017-18	9,571.03	86.32	78,835.48	145.01	484.45	43.29	3,414.62	97.15	1,755.25	56.28
2018-19	10,548.66	95.14	72,652.62	133.63	532.82	47.61	3,128.51	89.01	1,872.13	60.03
2019-20	11,566.33	104.31	61,050.26	112.29	985.22	88.04	3,571.39	101.61	2,778.02	89.07
2020-21	7,679.18	69.26	71,425.07	131.37	1011.69	90.40	4,550.72	129.47	4,345.99	139.35
2021-22	10,935.62	98.63	65,155.83	119.84	1042.03	93.11	4,324.26	123.03	3,905.10	125.21
AGP Y		1.29		2.58		-3.00		0.43		-2.27

Source: Calculated from the Annual Reports of the selected companies.

Another important component of the total income of the selected companies was other income. The table 1.2 present the trend in other income in selected companies during the study period. A mixed trend could be observed in selected units as far as trend of other income was concerned. Other income was declined when compared to base year in SAIL, Coal India, NTPC (except in latest two years), and increased in several years of IOC and ONGC during the study period.

3. Trend in Total Income:

A.3. Trend of Total Income

Year	Coal India (RS. IN CROR ES)	Trend (base Year 2012 -13)	ONGC (RS. IN MILLIONS)	Trend (base Year 2012 -13)	SAIL (RS. IN CROR ES)	Trend (base Year 2012 -13)	IOC (RS. IN CRORE S)	Trend (base Year 2012 -13)	NTPC (RS. IN CRORE S)	Trend (base Year 2012 -13)
2012-13	11,440.26	100.00	8,84,420.75	100.00	45559.7	100.00	4,50,611.04	100.00	68,855.81	100.00
2013-14	16,404.10	143.39	9,06,034.70	102.44	47579.82	104.43	4,76,627.38	105.77	74,707.82	108.50
2014-15	14,530.52	127.01	8,82,375.28	99.77	46731.55	102.57	4,41,670.18	98.02	75,337.36	109.41
2015-16	17,292.63	151.16	8,47,511.06	95.83	39666.84	87.07	3,52,849.41	78.30	71,696.07	104.12

2016-17	15,315.93	133.88	8,54,558.55	96.62	854655.2	1875.90	4,49,642.52	99.79	79,342.30	115.23
2017-18	9,941.40	86.90	9,28,876.48	105.03	928981.5	2039.04	5,09,842.21	113.14	85,207.95	123.75
2018-19	11,482.96	100.37	11,69,198.12	132.20	67500.13	148.16	6,09,060.85	135.16	92,179.56	133.87
2019-20	12,411.49	108.49	10,23,186.35	115.69	62645.77	137.50	5,70,521.03	126.61	1,00,478.41	145.93
2020-21	8,319.43	72.72	7,52,835.97	85.12	70121.71	153.91	5,19,441.19	115.27	1,03,552.71	150.39
2021-22	12,067.54	105.48	11,68,609.81	132.13	104515.35	229.40	7,32,784.20	162.62	1,20,042.43	174.34
AGP Y		1.44		0.72		44.20		1.50		2.95

Source: Calculated from the Annual Reports of the selected companies.

Trend of total income in selected companies was calculated and presented in table 1.3. Highest base year growth rate could be observed in SAIL (129 per cent), followed by NTPC (74 per cent), IOC (62 per cent), ONGC (32 per cent) and Coal India (5 per cent) during the study period. Though Net Sales base year growth rate was more in selected companies, the base year growth rate in total income was not same due low level of base year growth in other income.

4. Trend in Total Expenses:

A.4. Trend of Total Expenses

Year	Coal India (RS. IN CROR ES)	Trend (base Year 2012 -13)	ONGC (RS. IN MILLIO NS)	Trend (base Year 2012 -13)	SAIL (RS. IN CROR ES)	Trend (base Year 2012 -13)	IOC (RS. IN CRORE S)	Trend (base Year 2012 -13)	NTPC (RS. IN CRORE S)	Trend (base Year 2012 -13)
2012-13	1102.23	100.00	5,78,977.42	100.00	42131.25	100.00	4,44,969.54	100.00	53,961.29	100.00
2013-14	983.63	89.24	5,81,715.38	100.47	45464.47	107.91	4,68,352.37	105.25	60,803.17	112.68
2014-15	877.85	79.64	6,16,822.93	106.54	44284.41	105.11	4,35,335.42	97.83	64,687.00	119.88
2015-16	779.10	70.68	5,79,256.77	100.05	46849.77	111.20	3,38,397.14	76.05	61,649.49	114.25
2016-17	626.57	56.85	6,02,403.42	104.05	49622.14	117.78	4,23,321.28	95.13	66,507.19	123.25
2017-18	626.57	56.85	6,39,951.74	110.53	58828.28	139.63	4,77,277.93	107.26	72,868.49	135.04
2018-19	920.54	83.52	7,68,907.58	132.80	63772.84	151.37	5,83,933.93	131.23	79,507.04	147.34
2019-20	1,112.23	100.91	7,70,508.99	133.08	58703.35	139.33	5,62,910.50	126.51	86,012.49	159.40
2020-21	645.45	58.56	6,02,558.41	104.07	63301.11	150.25	4,89,725.54	110.06	88,274.19	163.59
2021-22	710.7	64.48	7,58,209.95	130.96	88123.22	209.16	7,01,051.13	157.55	1,00,876.68	186.94
AGP Y		-2.66		1.36		3.69		1.19		4.03

Source: Calculated from the Annual Reports of the selected companies.

From the above 1.4 table, it could be observed that the base year growth in total expenses was lower when compared to base year growth in net sales in Coal India and IOC. The base year growth in total expenses was higher than that of net sales in remaining companies during the study period.

5. Trend in Gross Profit (PBDIT):

The Gross Profit which was the profit before Depreciation, Interest and Taxes was one of the important element which is useful to study the efficiency of the companies during the study period.

A.5. Trend in Gross Profit (PBDIT)

Year	Coal India (RS. IN CRORE S)	Trend (base Year 2012 -13)	ONGC (RS. IN MILLIONS)	Trend (base Year 2012 -13)	SAIL (RS. IN CRORE S)	Trend (base Year 2012 -13)	IOC (RS. IN CRORE S)	Trend (base Year 2012 -13)	NTPC (RS. IN CRORE S)	Trend (base Year 2012 -13)
2012-13	10,718.64	100.00	3,89,455.40	100.00	5579.09	100.00	17,284.06	100.00	20,215.64	100.00
2013-14	15,685.42	146.34	4,33,581.79	111.33	4799.68	86.03	20,770.02	120.17	20,453.43	101.18
2014-15	13,902.88	129.71	3,80,163.34	97.61	5674.65	101.71	15,959.22	92.33	18,305.63	90.55
2015-16	16,638.77	155.23	3,60,228.99	92.50	-3036.64	54.43	23,692.39	137.08	18,702.26	92.51
2016-17	14,391.52	134.27	3,86,267.89	99.18	573.65	10.28	35,989.64	208.22	21,570.18	106.70
2017-18	9,075.11	84.67	4,48,711.16	115.22	5102.3	91.45	43,079.73	249.25	23,422.57	115.86
2018-19	10,606.71	98.96	5,79,772.98	148.87	10266.93	184.03	36,952.24	213.79	24,643.62	121.90
2019-20	11,358.91	105.97	4,18,092.23	107.35	11184.23	200.47	11,051.44	63.94	29,870.74	147.76
2020-21	7,695.24	71.79	3,49,447.08	89.73	13739.74	246.27	42,613.87	246.55	31,640.35	156.51
2021-22	11,379.17	106.16	6,09,455.49	156.49	22364.18	400.86	47,568.08	275.21	34,696.47	171.63
AGP Y		1.48		1.31		4.07		7.85		2.27

Source: Calculated from the Annual Reports of the selected companies.

From the above 1.5 table, it could be observed that the base year growth rate of Gross Profit (PBDIT) in selected companies was 300 per cent in SAIL, 175 per cent in IOC, 71 per cent in NTPC, 56 per cent in ONGC and 6 per cent in Coal India during the study period. More fluctuations are observed in the trend of Gross Profit of SAIL and recorded even Gross Loss in 2015-16.

6. Trend in Operating Profit (PBIT):

The analysis of trend in operating profit, which is Profit before Interest and Tax, also help in knowing the trend in efficiency of the organization. It was calculated and presented in table 1.6.

A.6. Trend of Profit Before Interest and Tax (PBIT)

Year	Coal India (RS. IN CRORE S)	Trend (base Year)	ONGC (RS. IN MILLIONS)	Trend (base Year)	SAIL (RS. IN CRORE S)	Trend (base Year)	IOC (RS. IN CRORE S)	Trend (base Year)	NTPC (RS. IN CRORE S)	Trend (base Year)
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		2012 -13)		2012 -13)		2012- 13)		2012 -13)		2012 -13)
2012-13	10,342.99	100.00	3,89,179.04	100.00	4831.43	100.00	10,848.79	100.00	18,291.28	100.00
2013-14	15,426.88	149.15	4,33,578.22	111.41	3832.04	79.31	15,685.60	144.58	18,046.84	98.66
2014-15	13,659.06	132.06	3,80,135.47	97.68	4220.42	87.35	12,523.95	115.44	15,562.01	85.08
2015-16	16,528.66	159.81	3,46,987.68	89.16	-5083.39	-105.22	20,692.29	190.73	15,471.90	84.59
2016-17	14,527.75	140.46	3,74,050.51	96.11	-1954.17	-40.45	32,544.21	299.98	17,972.98	98.26
2017-18	9,332.97	90.23	4,33,626.46	111.42	2279.55	47.18	39,631.29	365.31	19,438.32	106.27
2018-19	10,588.67	102.38	5,54,851.62	142.57	7112.01	147.20	32,641.21	300.87	19,926.88	108.94
2019-20	11,353.65	109.77	3,89,855.47	100.17	7697.47	159.32	5,071.99	46.75	23,088.77	126.23
2020-21	7,693.65	74.39	3,27,301.67	84.10	10922.6	226.07	39,519.95	364.28	24,181.32	132.20
2021-22	11,377.67	110.00	5,85,856.87	150.54	20666.3	427.75	42,738.98	393.95	27,345.56	149.50
AGP Y		1.87		0.92		1.43		14.69		1.00

Source: Calculated from the Annual Reports of the selected companies.

From the above table, it could be observed that Operating Profits was negative in 2015-16 and 2016-17 in SAIL, but on an average operating profit growth rate was considerable. A Highest base year growth rate, on an average, was recorded in IOC (14.69 per cent), followed by Coal India (1.87 per cent), SAIL (1.43 per cent), NTPC (1 per cent) and ONGC (0.92 per cent) during the study period.

7. Trend in Cash Profit (PBDT):

The trend in Profit Before Depreciation and Taxes or Cash Profit was shows the efficiency of the organization. It was calculated in selected companies and presented in table 1.7.

A.7. Trend of Profit before Depreciation and Tax (PBDT)

Year	Coal India (RS. IN CRORE S)	Trend (base Year 2012 -13)	ONGC (RS. IN MILLIONS)	Trend (base Year 2012 -13)	SAIL (RS. IN CRORE S)	Trend (base Year 2012-13)	IOC (RS. IN CRORE S)	Trend (base Year 2012 -13)	NTPC (RS. IN CRORE S)	Trend (base Year 2012 -13)
2012-13	10,713.68	100.00	3,05,719.69	100.00	4176.11	100.00	12,083.07	100.00	16,818.88	100.00
2013-14	15,679.01	146.35	3,24,322.89	106.09	3082.99	73.82	15,009.93	124.22	16,311.24	96.98
2014-15	13,895.71	129.70	2,65,580.22	86.87	3901.37	93.42	11,430.56	94.60	13,393.98	79.64
2015-16	16,623.64	155.16	2,49,229.75	81.52	-5136.18	-122.99	18,839.60	155.92	13,276.94	78.94

2016-17	14,374.00	134.16	2,64,372.51	86.48	-2106.3	-50.44	29,766.67	246.35	15,649.36	93.05
2017-18	9,056.97	84.54	3,04,009.44	99.44	2037.38	48.79	36,012.72	298.04	16,323.71	97.06
2018-19	10,580.46	98.76	4,25,211.90	139.09	6882.21	164.80	29,437.95	243.63	17,389.26	103.39
2019-20	11,304.52	105.51	2,31,923.65	75.86	7429.18	177.90	2,285.34	18.91	21,247.89	126.33
2020-21	7,675.57	71.64	1,86,173.31	60.90	9637.74	230.78	32,809.57	271.53	21,228.55	126.22
2021-22	11,358.34	106.02	4,33,998.48	141.96	18090.01	433.18	36,562.17	302.59	23,462.33	139.50
AGP Y		1.46		-0.24		1.66		9.51		0.46

Source: Calculated from the Annual Reports of the selected companies.

It was observed from the above table that though cash profit was negative in 2015-16 and 2016-17 in SAIL, but overall base year growth rate was 333 per cent. The base year growth rate of IOC was 202 per cent, 41 per cent in ONGC, 39 per cent in IOC, 6 per cent in Coal India during the study period.

8. Trend in Net Profit (PBT):

The Profit before tax is another component which gives overall profitability of the organization. In selected companies, it was calculated during the study period and presented in table 1.8.

A.8. Trend of Profit Before Tax

Year	Coal India (RS. IN CRORE S)	Trend (base Year 2012 -13)	ONGC (RS. IN MILLIO NS)	Trend (base Year 2012 -13)	SAIL (RS. IN CRORE S)	Trend (base Year 2012-13)	IOC (RS. IN CRORE S)	Trend (base Year 2012 -13)	NTPC (RS. IN CRORE S)	Trend (base Year 2012 -13)
2012-13	10,338.03	100.00	3,05,443.33	100.00	3428.45	100.00	5,647.80	100.00	14,894.52	100.00
2013-14	15,420.47	149.16	3,24,319.32	106.18	2115.35	61.70	9,925.51	175.74	13,904.65	93.35
2014-15	13,651.89	132.06	2,65,552.35	86.94	2447.14	71.38	7,995.29	141.56	10,650.36	71.51
2015-16	16,513.53	159.74	2,35,988.44	77.26	-7182.93	209.51	15,839.50	280.45	10,046.58	67.45
2016-17	14,510.23	140.36	2,52,155.13	82.55	-4634.12	135.17	26,321.24	466.04	12,052.16	80.92
2017-18	9,314.83	90.10	2,88,924.74	94.59	-785.37	22.91	32,564.28	576.58	12,339.46	82.85
2018-19	10,562.42	102.17	4,00,290.54	131.05	3727.29	108.72	25,126.92	444.90	12,672.52	85.08
2019-20	11,299.26	109.30	2,03,686.89	66.69	3942.42	114.99	-3,694.11	65.41	14,465.92	97.12
2020-21	7,673.98	74.23	1,64,027.90	53.70	6820.6	198.94	29,715.65	526.15	13,769.52	92.45
2021-22	11,356.84	109.85	4,10,399.86	134.36	16392.13	478.12	31,733.07	561.87	16,111.42	108.17

AGP							24.5		
Y		1.86		-0.74		-2.60	3		-1.35

Source: Calculated from the Annual Reports of the selected companies.

A fluctuated trend could be observed in Profit before taxes of selected companies. There were heavy fluctuations in SAIL and negative in 2015-16 and 2016-17 and 2017-18 and also in 2019-20 of IOC. There was declining trend in ONGC and NTPC during the study period.

PART B - PROFITABILITY IN RELATION TO SALES ANALYSIS:

One of the most important group of ratios to measure the financial efficiency of the organization is the Profitability Ratios. The profitability ratios measure the profitability or the operational efficiency of the firm. There are two groups of persons who may be specifically interested in the analysis of the profitability of the firm. These are (i) the management which is interested in the overall profitability and operational efficiency of the firm and (ii) the equity shareholders who are interested in the ultimate returns available to them. Both of these parties and any other party such creditors can measure the profitability of the firm in terms of the profitability ratios. Different profitability ratios have been suggested to assess the profitability of the firm from different angles. The performance of the firm from different angles. The performance of the can be evaluated in terms of its earnings with reference to a given level of assets or sales or owner interest etc. broadly, the Profitability Ratios are calculated by relating the returns with (i) sales of the firm (ii) assets of the firm and (iii) the owner's contribution. In this study first type of ratios, i.e., profitability ratios in relation to sales only was analysed to measure the profitability of the selected companies during the study period.

B.1. Gross Profit (PBDIT) to Net Sales Ratio:

The Gross Profit Ratio also called the average mark-up ratio. It is calculated by comparing the Gross Profit of the firm with the Net Sales. The Gross Profit is the Net sales minus Cost of Goods Sold by the organization. But here, Gross Profit was calculated by adding Depreciation and Interest expenses to the Profit Before Tax in selected companies, as it is very difficult to identify direct expenses of the organization. Then, the average gross profit ratios of the individual companies were compared with the average ratio of selected companies so as to measure the efficiency of the selected companies.

B.1. Gross Profit (PBDIT) to Net Sales Ratio (in %age)

Year	Coal India	ONGC	SAIL	IOC	NTPC	Mean
2012-13	3042.91	46.92	12.55	3.87	30.75	627.40
2013-14	4991.38	51.68	10.28	4.39	28.40	1017.23
2014-15	3591.36	45.87	12.41	3.65	25.00	735.66
2015-16	10051.82	46.34	-7.77	6.76	26.53	2024.73
2016-17	4624.82	49.58	1.29	8.08	27.56	942.27
2017-18	2450.28	52.79	8.86	8.51	28.07	509.70
2018-19	1135.26	52.87	15.33	6.10	27.29	247.37
2019-20	1344.00	43.45	18.14	1.95	30.57	287.62
2020-21	1201.91	51.28	19.88	8.28	31.89	262.65
2021-22	1005.30	55.23	21.61	6.53	29.88	223.71
Mean	3343.90	49.60	11.26	5.81	28.59	687.83
Min	1005.30	43.45	-7.77	1.95	25.00	223.71
Max	10051.82	55.23	21.61	8.51	31.89	2024.73
SD	2773.61	3.79	8.92	2.25	2.15	552.63
r	1.00	-0.35	-0.92	0.08	-0.52	

Source: Calculated from the Annual Reports of the selected companies.

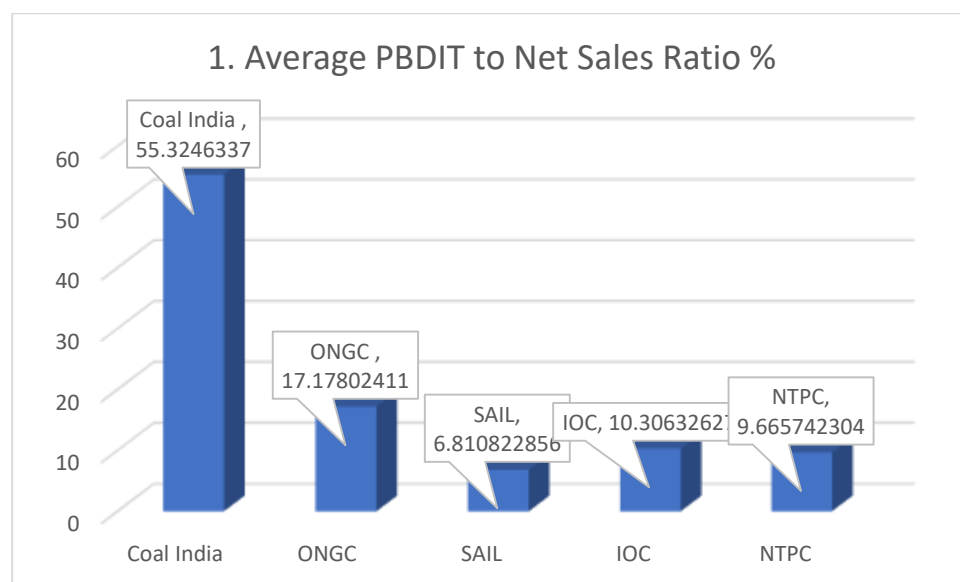


Table 2.1 shows the Gross Profit (PBDIT) to Sales Ratio in selected companies during the study period. It can be observed from the table that the average gross profit ratio of all the selected companies was 687.83 per cent and fluctuated between 223.71 and 2024.73 per cent during the study period. Among the individual companies, the gross profit ratio was highest in Coal India (3343.90 per cent on an average), followed by ONGC (49.45), NTPC (28.59), SAIL (11.26) and IOC (5.81) during the study period.

B.2. Operating Profit (PBIT) to Net Sales Ratio:

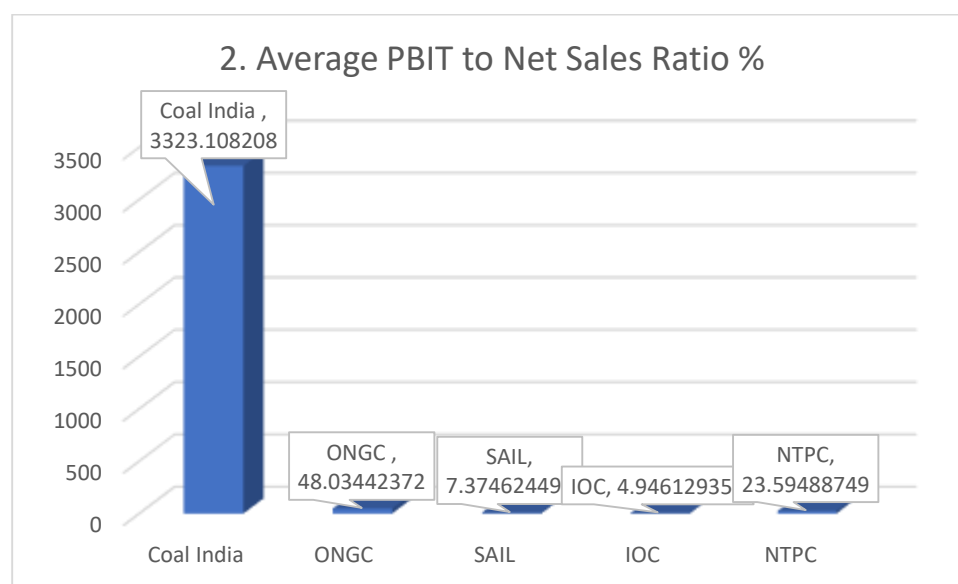
The Operating Profit refers to the pure operating profit of the firm, i.e., the profit generated by the operations of the firm and hence is calculated before considering any financial charge, non-operating income/loss and tax liability etc. The operating profit is also termed as the Profit Before Interest and Taxes (PBIT). The Operating Profit Ratio is the relation between PBIT and Net Sales. In this study PBIT was calculated by adding Financial Expenses to the Profit Before Tax value and presented in table 2.2.

B.2. PBIT to Net sales Ratio (in %age)

Year	Coal India	ONGC	SAIL	IOC	NTPC	Mean
2012-13	2936.26	46.89	10.87	2.43	27.82	604.85
2013-14	4909.11	51.68	8.21	3.31	25.06	999.47
2014-15	3528.38	45.87	9.23	2.86	21.25	721.52
2015-16	9985.30	44.63	-13.01	5.90	21.94	2008.95
2016-17	4668.60	48.01	-4.40	7.31	22.96	948.50
2017-18	2519.90	51.01	3.96	7.83	23.29	521.20
2018-19	1133.33	50.60	10.62	5.39	22.07	244.40
2019-20	1343.37	40.52	12.48	0.89	23.63	284.18

2020-21	1201.66	48.03	15.80	7.68	24.37	259.51
2021-22	1005.17	53.09	19.97	5.87	23.55	221.53
Mean	3323.11	48.03	7.37	4.95	23.59	681.41
Min	1005.17	40.52	-13.01	0.89	21.25	221.53
Max	9985.30	53.09	19.97	7.83	27.82	2008.95
SD	2751.47	3.78	9.71	2.43	1.88	548.36
r	1.00	-0.23	-0.88	0.07	-0.21	

Source: Calculated from the Annual Reports of the selected companies.



From the above table it can be observed that the average operating profit ratio of all the selected companies during the study period was 681.41 per cent and fluctuated between 221.53 and 2008.95 per cent. As far as individual companies are concerned, the average ratio Coal India was highest (3323.11 per cent), followed by ONGC (48.03), NTPC (23.59), SAIL (7.37) and IOC (4.95) during the study period.

B.3. Cash Profit (PBDT) to Net Sales Ratio:

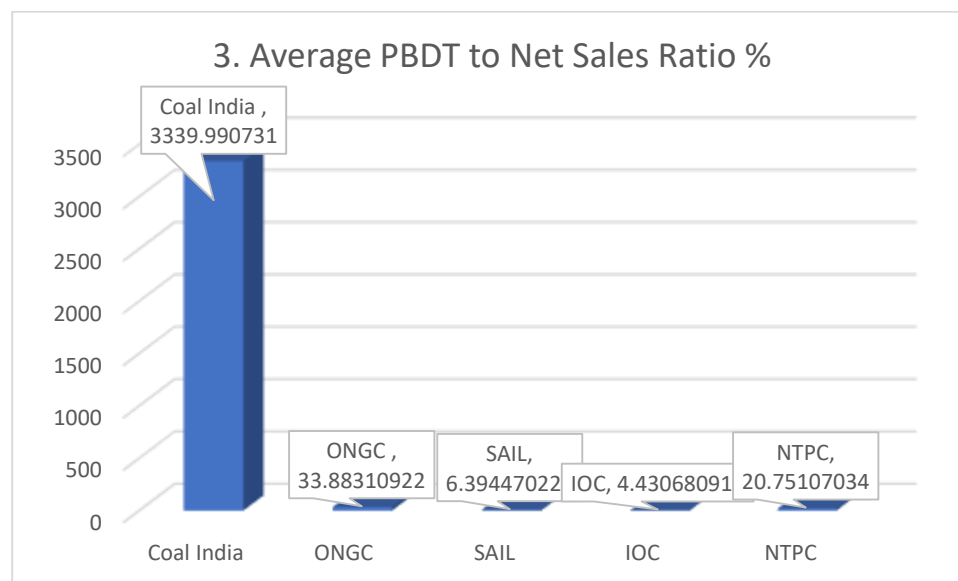
Profit Before Depreciation and Taxes, which is also known as Cash Profit, was calculated by adding back the amount of depreciation to net profit before tax. The reason for this may be nonpayment nature of depreciation.

2.3. PBDT to Net Sales Ratio (in %age)

Year	Coal India	ONGC	SAIL	IOC	NTPC	Mean
2012-13	3041.50	36.83	9.40	2.70	25.59	623.20
2013-14	4989.34	38.66	6.60	3.17	22.65	1012.09
2014-15	3589.51	32.05	8.53	2.61	18.29	730.20
2015-16	10042.68	32.06	-13.14	5.37	18.83	2017.16
2016-17	4619.19	33.93	-4.74	6.68	19.99	935.01
2017-18	2445.38	35.76	3.54	7.11	19.56	502.27
2018-19	1132.45	38.78	10.28	4.86	19.26	241.12
2019-20	1337.56	24.11	12.05	0.40	21.75	279.17
2020-21	1198.84	27.32	13.95	6.37	21.40	253.58
2021-22	1003.46	39.33	17.48	5.02	20.20	217.10
Mean	3339.99	33.88	6.39	4.43	20.75	681.09

Min	1003.46	24.11	-13.14	0.40	18.29	217.10
Max	10042.68	39.33	17.48	7.11	25.59	2017.16
SD	2772.11	5.10	9.16	2.15	2.18	552.77
r	1.00	0.02	-0.90	0.12	-0.19	

Source: Calculated from the Annual Reports of the selected companies.



The Ratio of Profit Before Depreciation and Taxes to Net Sales was calculated and presented in table 2.3. From the above table it was clear that the average ratio of all the selected companies was 681.09 per cent during the study period. The average ratio of Coal India was 3339.99 per cent which was more than the averages of all other selected companies. It could be observed that there were lot of difference in the performance of the selected companies during the study period.

B.4. Net Profit (PBT) to Net Sales Ratio:

The Ratio of Net Profit Before Tax to Net Sales was calculated by dividing the net profit with net sales to know the ultimate efficiency of the selected companies.

2.4. PBT to Sales Ratio (in %age)

Year	Coal India	ONGC	SAIL	IOC	NTPC	Mean
2012-13	2934.86	36.80	7.71	1.26	22.66	600.66
2013-14	4907.07	38.66	4.53	2.10	19.31	994.33
2014-15	3526.53	32.04	5.35	1.83	14.54	716.06
2015-16	9976.16	30.36	-18.38	4.52	14.25	2001.38
2016-17	4662.97	32.37	-10.42	5.91	15.40	941.24
2017-18	2515.01	33.99	-1.36	6.43	14.79	513.77
2018-19	1130.52	36.50	5.57	4.15	14.03	238.15
2019-20	1336.94	21.17	6.39	-0.65	14.81	275.73
2020-21	1198.59	24.07	9.87	5.77	13.88	250.44
2021-22	1003.33	37.19	15.84	4.36	13.87	214.92
Mean	3319.20	32.32	2.51	3.57	15.75	674.67
Min	1003.33	21.17	-18.38	-0.65	13.87	214.92
Max	9976.16	38.66	15.84	6.43	22.66	2001.38
SD	2749.94	5.78	10.08	2.33	2.91	548.49
r	1.00	0.09	-0.85	0.10	0.10	

Source: Calculated from the Annual Reports of the selected companies.

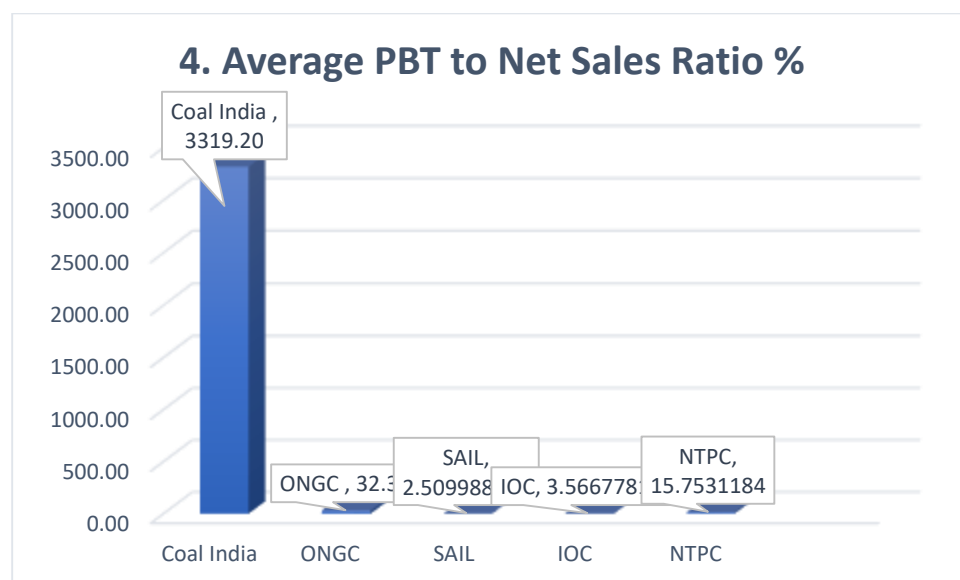


Table 2.4 presents the net profit before tax to net sales ratio during the study period. The average ratio of Coal India (3319.20 per cent) was much higher than any other selected company (32.32 per cent in ONGC, 15.75 per cent in NTPC, 3.57 per cent in IOC, 2.51 per cent in SAIL).

Conclusion:

From the above analysis, it was concluded that there was difference in trend in net sales, other income, total income, total expenses, Gross Profit, Operating Profit, Cash Profit and Net Profit of the selected Maharatna Companies during the study period. The average growth rate was very less and in some years it was negative in these companies. The Gross Profit Ratio, Operating Profit Ratio, Cash Profit Ratio and Net Profit Ratio of the selected Maharatna Companies were also very low, except in Coal India. Abnormal Profitability Ratios in Coal India was due to low level of Income from Operations in this company. The difference in different profitability ratios among the selected companies could be observed during the study period. The profitability ratios in SAIL were negative in several years during the study period. Therefore, it can be concluded that effort are to be improved to improve the efficiency of the selected companies, except Coal India. Hence, the hypotheses have been rejected and an Alternative Hypotheses were framed.

1. There is a significant difference among the selected Maharatna Companies in the trends in Net Sales, Other Income, Total Income, Total Expenses, various profits during the study period.
2. There is a significant difference among the selected Maharatna Companies in Gross Profit Ratios during the study period.
3. There is a significant difference among the selected Maharatna Companies in Operating Profit Ratios during the study period.
4. There is a significant difference among the selected Maharatna Companies in Cash Profit Ratios during the study period.
5. There is a significant difference among the selected Maharatna Companies in Net Profit Ratios during the study period.

Limitation:

The present study was the Profitability Analysis in relation to Net Sales only and was based on data available in Annual Reports of the companies. There may be differences in theoretical concepts and practical concepts. This limit the applicability of the conclusions of the study to the actual situations. However, overall situation may be understood so as to improve the situation.

References:

- Bhanupriya, R and Dr. Venkadesh, D, “Profitability Analysis of Two Wheeler Companies in India” Journal of Emerging Technologies and Innovative Research (JETIR), ISSN: 2349-5162, Vol.5, Issue 11, Nov.2018, pp.753-758.
- Chellasamy, P and R. Selvakumar, “Profitability Analysis of Select Steel Companies in India”, Shanlax International Journal of Commerce, ISSN: 2320-4168, Vol.7, No. S1, 2019, pp.1-12.
- Dr. Gandhi, K., “Profitability Analysis of Select Automobile Companies in India – With special reference to Tata Motors and Mahindra and Mahindra”, SJCC Management Research Review, ISSN-2249-4359, Vol-7(2), Dec.2017, Page No.82-90.
- Dr. Madhusudana, T, “Analysis of Income, Cost and Profits in Steel Companies in India”, JAC: A Journal of Composition Theory, ISSN:0731-6755, Vol.XVI, Issue V, May 2023, pp.112-127.
- Dr. Madhusudana, T and Dr. Phaniswara Raju, B, “Analysis of Liquidity and Profitability in Textile Industry”, International Journal of Research in Commerce, IT & Management, ISSN-2231-5756, Vol.No.3, Issue No.12, Dec. 2013, pp.35-42.
- Dr. Manjunatha, T, Vikas, K.M and Dr. Praveen Gujjar, J, “A Study on Profitability Analysis of Infrastructure Companies in India”, Pacific Business Review International, Vol.13, Issue 3, Sept. 2020, pp.57-63.
- Krishna Moorthi, M and Dr. Ramesh, M, “A Study on Profitability analysis of selected Steel Companies in India”, Asian Journal of Research in Social Sciences & Humanities, ISSN:2250-1665, Vol. II, Issue-X, Oct.2012, pp.10-21.
- Nikul, Parmar, “A Comparative Study on Profitability of Selected Indian Automobile Companies”, International Journal of Science and Research (IJSR), ISSN: 2319-7064, Vol.9, Issue 3, March 2020, pp 1592-1596.
- Pandey, Dharen Kumar and Kumar, Mukesh, “Profitability Analysis of the Steel Industry in India”, International Journal for Management Research, Vol.1, No.3, Oct.2011, pp. 92-100.
- Rustagi, R.P, “Financial Management: Theory, Concepts and Problems”, Galgotia Publishing Company, New Delhi, 1999.