

A Study on Financial Performance of Coal India Limited (CIL)

Sakina Bano

(Research Scholar, SOC, DAVV,
Indore, M.P.)
bsakina90@gmail.com

Dr. Sapana Soni

(Professor, Shaheed Bheema Nayak
Govt. P.G. College, Barwani, M.P)

Abstract

This study focused to know the financial position (short-term and long-term) of Coal India Limited (CIL). For the year 2015-16 to 2020-21. To know the financial position of the company researcher used ratio analysis technique of financial accounting. CIL produced Average raw coal 577.583MT during the study period. And Average dispatch of raw coal is 569.98MT and Average sales of coal is 539.93MT. The researcher has been trying to know the impact of Liquidity ratio, Efficiency ratio and Capital Structure ratio on ROCE by using Multiple Regression analysis in Excel.

Keywords: Financial performance, Liquidity ratio, Efficiency ratio, Profitability ratio, solvency ratio, CIL, Percentage change, multiple regressions.

Introduction

Coal India Limited (CIL) is a ‘maharatna’ company in India. It is a privileged status conferred by government of India to select state owned enterprises to empower them to expand their operations and emerge as global giants. CIL, as a state-owned coal mining corporate, came into existence from 1st November 1975 with the Government taking over private coal mines. CIL is a single largest coal producer in the whole world today. CIL alone produces around 83% of overall coal production in India (Annual report). CIL is an apex body with 7 wholly owned coal producing subsidiaries and 1 mine planning and consultancy company, spread over 8 provincial states of India. The main objective of CIL and its subsidiaries to produce and market the planned quantity of coal and coal products efficiently and economically in an eco-friendly manner with due regard to safety and quality.

Literature Review

(Goswami & Sarkar, 2011) The present study an attempt has been made to analyze the operating risk, financial risk, and total risk by way computing

leverage ratios (Degree of Financial ratio, Degree of Operating ratio, Degree of Total ratio) of the selected company i.e., Tata Steel. For the period from 2000-01 to 2009-10. (Akbarpour, 2011) The present paper investigated the relationship between financial structure and accounting measurement for evaluating performance (ROA, ROE) in listed firms of Tehran exchange. For the period of 2005 to 2010. In this study 101 firms have been chosen as a research sample. And data collected from Rahavard Novin software and calculation has done for examined three financial structures and two accounting measurement for evaluating performance. (Gowri, 2016) The present paper examined liquidity and profitability position of SAIL. This study used the ratios like CR, QR, ROTA, RONW, GPR, NPR, OPR and EPS. The study revealed there is a positive correlation between liquidity and profitability ratios except ROTA. And the calculated Z score values indicate company is in healthy zone. (Maji & Sur, 2015) The present study analyzed the financial performance of ONGC for the period between 1999-2000 to 2013-2014. The result of the study reflected prominent financial performance of ONGC throughout the study period. (Vijayalakshmi et al., 2017) The present study has tried to know the short-term and long-term financial position of the Bharti Airtel Limited.

Objectives of the Study

- To know the short-term and long-term financial position of CIL.
- To know the Growth of CIL during the study period.

Research methodology of the Study

- This study relates CIL, it covers the period from 2015-16 to 2020-21.
- The data has been collected from secondary sources i.e., annual report of CIL.
- The statistical tool like average and trend analysis has been applied for the study. And profitability, liquidity, efficiency, and solvency ratios have been used to know the financial position of CIL.

Hypothesis of the Study

H₀₁: There is no significant impact of Liquidity Ratios on ROCE.

H₀₂: There is no significant impact of Efficiency ratios on ROCE.

H₀₃: There is no significant impact of Capital Structure ratios on ROCE.

Gap of the Study

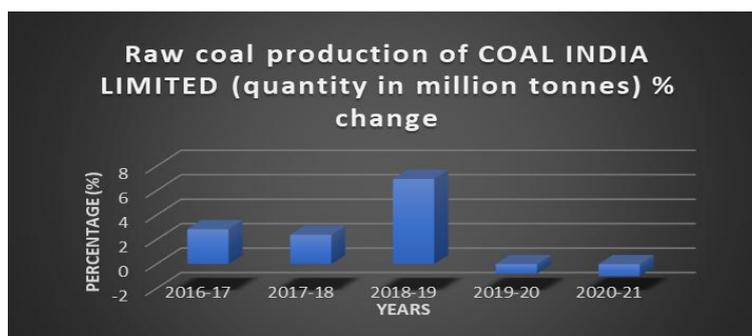
- This study is based on the secondary data and data may be window dressed.
- This study covers only six years from 2015-16 to 2020-21.
- This study covers only one company i.e., Coal India Limited (CIL).

Data Analysis and Interpretation

Table No. 1: Raw Coal Production of Coal India Limited (Quantity in Million Tonnes)		
Years	CIL (in Million Tonnes)	% Change
2015-16	538.75	-
2016-17	554.14	2.856612529
2017-18	567.37	2.387483307
2018-19	606.89	6.965472267
2019-20	602.13	-0.784326649
2020-21	596.22	-0.98151562
Average	577.5833333	

Source: Annual Report

% Change (Growth) in Raw Coal Production of CIL is presenting Through Graph.



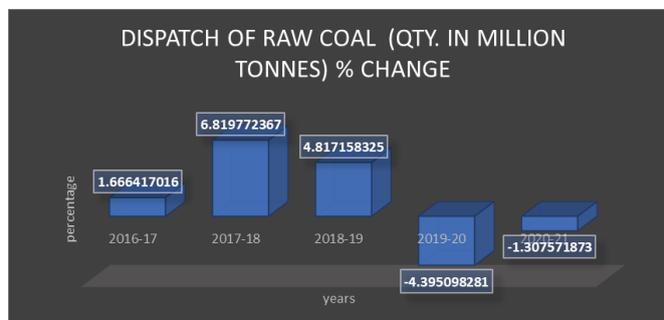
Interpretation

The table and graph illustrate the production trends of Coal India Limited (CIL) from 2015-16 to 2020-21. Raw coal production increased from 2016-17 to 2018-19 (538.75 MT to 606.89 MT) but declined in 2019-20 and 2020-21 (606.89 MT to 596.22 MT), as evident from the % change column. The average raw coal production over the study period is 577.58 MT.

Table No. 2: Dispatch of Raw Coal (qty. in Million Tonnes)		
Years	Dispatch of Raw Coal	% Change
2015-16	534.08	-
2016-17	542.98	1.666417016
2017-18	580.01	6.819772367
2018-19	607.95	4.817158325
2019-20	581.23	-4.395098281
2020-21	573.63	-1.307571873
Average	569.98	

Source: Annual Report

% Change (Growth) in dispatch of raw coal of CIL presenting through graph.



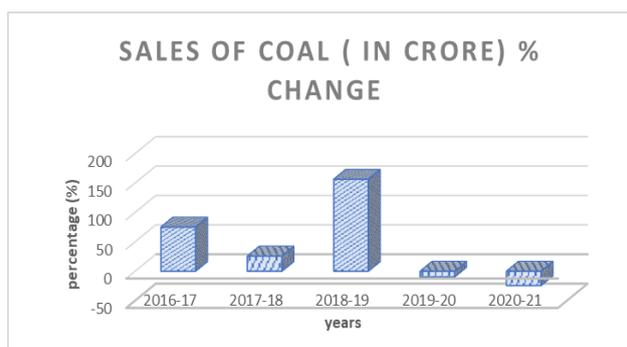
Interpretation

The table and graph display the dispatch of raw coal by CIL from 2015-16 to 2020-21. Dispatch increased from 2016-17 to 2018-19 (534.08 MT to 607.95 MT) but declined after 2018-19, dropping to 573.63 MT in 2019-20 and 2020-21. The % change column in table 2 illustrates the fluctuations. The average raw coal dispatch during the study period is 569.98 MT.

years	Sales	% Change
2015-16	165.53	-
2016-17	289.88	75.12233
2017-18	364.5	25.74169
2018-19	934.3	156.3237
2019-20	845.16	-9.54083
2020-21	640.25	-24.2451
Average	539.9366667	

Source: Annual Report

% Change (Growth) in Sales of Coal of CIL Is Presenting Through Graph.



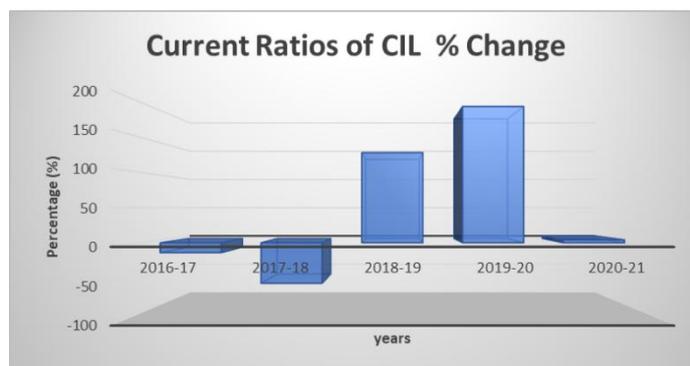
Interpretation

Table 3 and the accompanying graph illustrate the sales of coal by CIL over the study period. Sales increased from 2016-17 to 2018-19 (165.53 MT to 934.3 MT) but declined in 2019-20 and 2020-21 (934.3 MT to 640.25 MT), as indicated in the % change column of table 3. The average sales of CIL during the study period are 539.936 MT.

Table No. 4: Current Ratio (C.R) of CIL		
Years	C.R	% Change
2015-16	3.225691905	-
2016-17	2.773706022	-14.0120599
2017-18	1.174617206	-57.6517051
2018-19	2.681263578	128.2670102
2019-20	7.878332786	193.8291055
2020-21	8.208501748	4.190848123

Source: Annual Report

% Change (Growth) in Current Ratio of CIL is presenting Through Graph.



Interpretation: - Table 4 and accompanying graphs display the Current Ratio (C.R) of CIL from 2015-16 to 2020-21, reflecting its short-term liquidity position. The highest C.R was 8.29 in 2020-21, followed by 7.88 in 2019-20, and 3.23 in 2015-16, with the lowest at 1.17 in 2017-18. Except for 2017-18, C.R remains above the standard norm of 2:1 throughout the years.

Table No. 5: Quick Ratio (Q.R) of CIL		
Years	Q.R.	% Change
2015-16	3.14881694	-
2016-17	2.721280458	-13.5777
2017-18	1.162945137	-57.2648
2018-19	2.639358374	126.9547
2019-20	7.855969904	197.647
2020-21	8.206549118	4.462583

Source: Annual Report

% Change (Growth) in Quick Ratio of CIL Presenting Through Graph



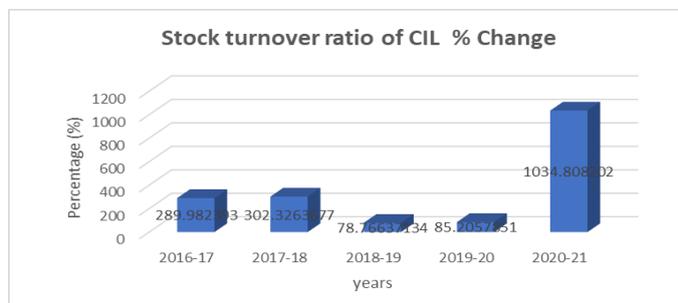
Interpretation

Above table 5 and graph shows the short-term liquidity position of CIL during the study period. The Q.R of CIL are above the standard norms 1:1 in all the years from 2015-16 to 2020-21. It reveals the company has very sound to pay the short-term commitment. So, it can be said that Q.R. ratio is satisfactory during the study period.

Years	S.T. R	% Change
2015-16	1.08608359	-
2016-17	4.235534775	289.982393
2017-18	17.04067321	302.3263677
2018-19	30.46299315	78.76637134
2019-20	56.41922563	85.2057851
2020-21	640.25	1034.808202

Source: Annual Report

% Change (Growth) in Stock turnover ratio of CIL is presenting through graph.



Interpretation

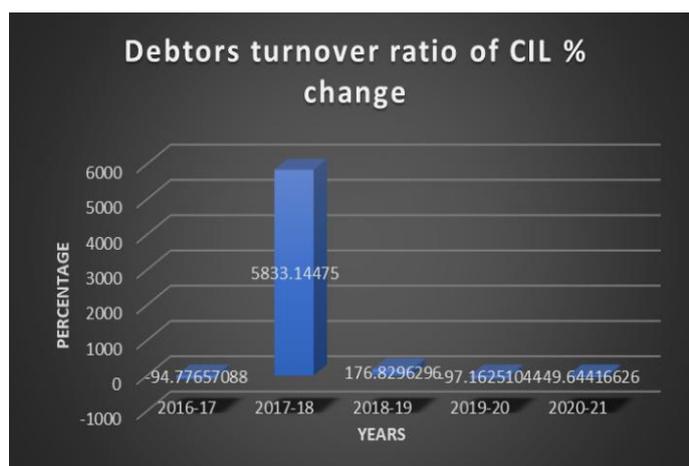
Short-Term Solvency Ratio (S.T.R.) reflects a company's ability to meet its short-term liabilities using its most liquid assets. From 2015-16 to 2019-20,

S.T.R. levels were satisfactory. However, in 2020-21, S.T.R. surged to 640.26 times, indicating inefficiency due to excessively high inventory levels compared to sales.

Years	D.T. R	% Change
2015-16	435.6052632	-
2016-17	22.75353218	-94.7766
2017-18	1350	5833.145
2018-19	3737.2	176.8296
2019-20	106.04266	-97.1625
2020-21	53.39866555	-49.6442

Source: Annual Report

% Change (Growth) in D.T.R of CIL is presenting Through Graph.



Interpretation

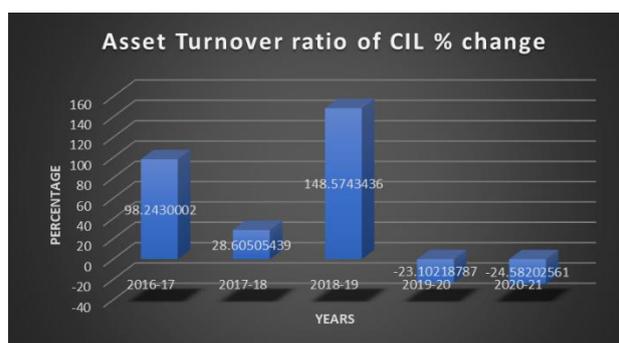
Debtors Turnover Ratio (D.T.R.) reflects how efficiently a company manages its receivables, with higher turnover indicating better liquidity and management efficiency. In 2018-19, CIL's D.T.R. spiked to 3737.2 times, followed by 1350 times in 2017-18. However, D.T.R. levels were relatively lower in other years (2015-16, 2019-20, 2020-21, and 2016-17).

years	A.T. R	% Change
2015-16	0.774273157	-
2016-17	1.534942336	98.2430002
2017-18	1.974013427	28.60505439
2018-19	4.906890918	148.5743436

2019-20	3.773291759	-23.1021879
2020-21	2.845740212	-24.5820256

Source: Annual Report

% Change (Growth) in Asset turnover ratio of CIL presenting through graph



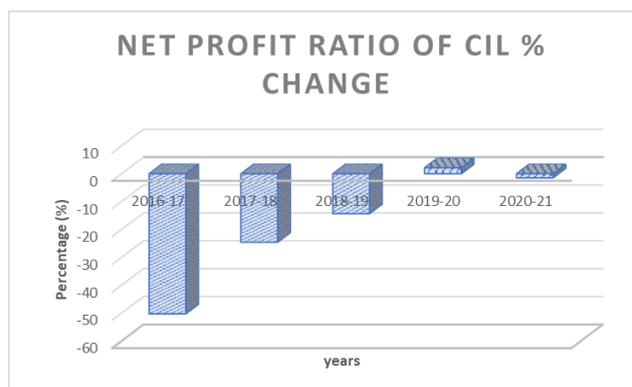
Interpretation

It is also known as sales to Asset ratio. This ratio measures the efficiency as well as profit earning capacity of the firms or company. Higher the ratio means better utilization of asset. In the above table shows the A.T.R of CIL from the year 2015-16 to 2020-21. And the highest A.T.R is 4.91 in the year 2018-19 and the lowest is 0.77 in the year 2015-16.

years	Net Profit Ratio	% Change
2015-16	10024.1648	-
2016-17	5001.755899	-50.2241
2017-18	2549.635117	-24.5212
2018-19	1120.589746	-14.2905
2019-20	1334.762648	2.141729
2020-21	1193.299492	-1.41463

Source: Annual Report

% Change (Growth) in Net profit ratio of CIL is presenting through Graph.



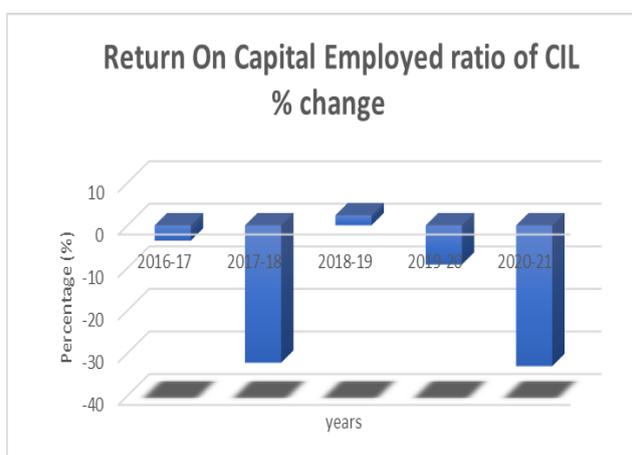
Interpretation

Above table 9 represents the Net Profit ratio of CIL from the year 2015-16 to 2020-21. The highest net profit ratio is 10,0024.1648 in 2015-16 and the lowest net profit ratio is 1120.59 in 2018-19. It reveals the net profit ratio of CIL during the study period is satisfactory as percentage but in decline mode except 2019-20.

Years	ROCE	% Change
2015-16	85.5477287	-
2016-17	82.47524308	-3.591545532
2017-18	55.87560139	-32.25166813
2018-19	57.18418805	2.341964337
2019-20	51.9171489	-9.210656517
2020-21	34.7491928	-33.06798711

Source: Annual Report

% Change (Growth) in Return on Capital employed ratio of CIL is presenting through graph



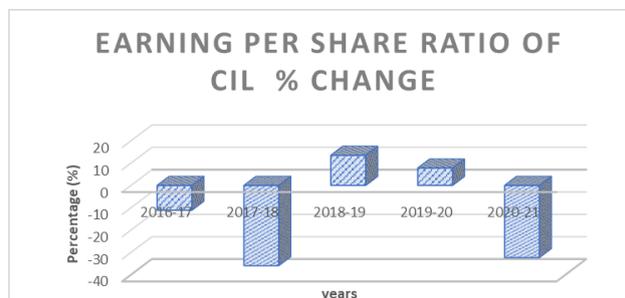
Interpretation

The Return on Capital Employed measures the efficiency of a business. ROCE established the relationship between the profits and the capital employed. Above table 10 depicts the ROCE of CIL during the year 2015-16 to 2020-21. The ROCE is satisfactory during the study period as a percentage (%) but it is in decline mode except 2018-19.

Table 11: Earnings Per Share ratio of CIL		
years	EPS	% Change
2015-16	26.26987695	-
2016-17	23.3577128	-11.0856
2017-18	14.97149375	-35.9034
2018-19	16.98868845	13.47357
2019-20	18.30500444	7.748191
2020-21	12.3972655	-32.2739

Source: Annual Report

% Change (Growth) in Earning per Share Ratio of CIL is presenting Through Graph.



Interpretation

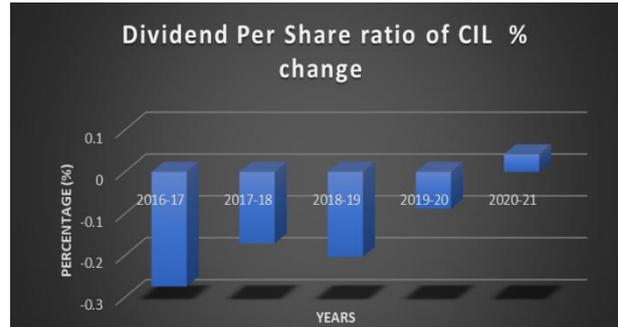
Above table 11 shows the Earning per share ratio of CIL during the study period of 2015-16 to 2020-21. It indicates the company's capacity to pay dividend to its equity shareholders. The highest EPS of CIL is 26.27 in 2015-16 & lowest EPS is 12.397 in 2020-21.

Table 12: Dividend Per Share Ratio of CIL		
Years	DPS	% Change
2015-16	27.40002153	-
2016-17	19.90002271	-0.27372237
2017-18	16.50002175	-0.17085412

2018-19	13.15258011	-0.20287498
2019-20	11.99999026	-0.08763222
2020-21	12.5000284	0.041669878

Source: Annual Report

% Change (Growth) in Dividend per Share Ratio of CIL is presenting through graph.



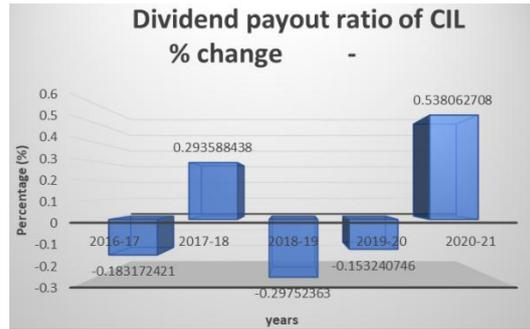
Interpretation

Above table 12 shows the dividend per share ratio of CIL during the study period of 2015-16 to 2020-21. It indicates that net profit after taxes belong to the shareholders. The income which they really receive is the amount of earnings distributed as dividends. The highest DPS is 27.40 in 2015-16 and lowest DPS is 11.999 in 2019-20.

years	Dividend payout ratio	% Change
2015-16	104.3020551	-
2016-17	85.19679511	-0.18317
2017-18	110.2095892	0.293588
2018-19	77.41963214	-0.29752
2019-20	65.55578997	-0.15324
2020-21	100.8289159	0.538063

Source: Annual Report

% Change (Growth) in Dividend payout ratio of CIL is presenting through graph.



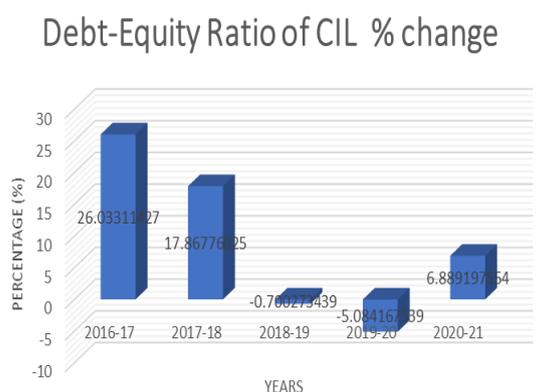
Interpretation

The above table 13 shows the dividend payout ratio of CIL during the study period from 2015-16 to 2020-21. It indicates that part of earnings which is distributed to the shareholders. The highest dividend payout in the year 2015-16 is 104.302 and the lowest dividend paid in the year 2019-20 is 65.55.

Years	Debt-Equity Ratio	% Change
2015-16	0.208800927	-
2016-17	0.263158311	26.03311427
2017-18	0.310178807	17.86776025
2018-19	0.308006707	-0.700273439
2019-20	0.29234713	-5.084167539
2020-21	0.312487501	6.889197554

Source: Annual Source

% Change (Growth) in Debt-Equity ratio of CIL is presenting through graph.



Interpretation

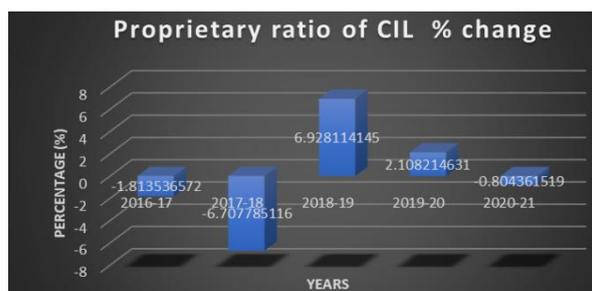
Table 14 displays the debt-equity ratio of CIL from 2015-16 to 2020-21, reflecting the company's long-term financial position. This ratio compares debt

to shareholders' funds, with a ratio of 1:1 typically considered satisfactory. However, the table indicates that CIL's debt-equity ratio was unsatisfactory throughout the study period.

Years	Proprietary Ratio	% Change
2015-16	0.750565644	-
2016-17	0.736953861	-1.81354
2017-18	0.68752058	-6.70779
2018-19	0.735152791	6.928114
2019-20	0.750651389	2.108215
2020-21	0.744613438	-0.80436

Source: Annual Report

% Change (Growth) in Proprietary ratio of CIL is presenting through Graph.



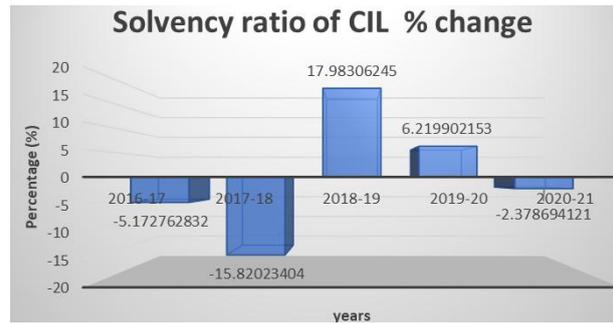
Interpretation

This ratio establishes the relationship between shareholders' funds and total tangible assets. If the P.R is higher, the long-term solvency position of the company will be better. The table 15 reveals the highest P.R of CIL is 0.75 in the year 2015-16 and 2019-20 and the lowest P.R is in the year 2017-18 i.e., 0.687.

years	Solvency Ratio	% Change
2015-16	4.008805633	-
2016-17	3.801439625	-5.17276283
2017-18	3.200042979	-15.820234
2018-19	3.775508707	17.98306245
2019-20	4.010341654	6.219902153
2020-21	3.914947893	-2.37869412

Source: Annual Report

% Change (Growth) in solvency ratio of CIL is presenting through graph.



Interpretation

Table 16 presents the solvency ratio of CIL from 2015-16 to 2020-21. A solvency ratio exceeding 1 indicates the company's solvency. Throughout the study period, CIL maintained a solvency ratio greater than 1, with the highest ratio of 4.0 in 2015-16 and 2019-20, and the lowest of 3.20 in 2017-18.

Hypothesis Testing

H₀₁: There is no significant impact of Liquidity Ratios on ROCE.

Table 17: Summary Output

Regression Statistics	
Multiple R	0.941091996
R Square	0.885654146
Adjusted R Square	0.809423576
Standard Error	8.45532154
Observations	6

ANOVA Table 18

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	1661.212714	830.606357	11.61809693	0.038666124
Residual	3	214.477387	71.49246234		
Total	5	1875.690101			

Coefficients Table 19

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	48.6419 1462	10.2804 5739	4.73149 3235	0.01789 3755	15.9249 1097	81.3589 1827	15.9249 1097	81.3589 1827
C.R	560.266 5626	151.825 1246	3.69020 9801	0.03451 1518	77.0912 5594	1043.44 1869	77.0912 5594	1043.44 1869

Q.R.	- 561.828 0934	151.186 219	- 3.71613 2972	0.03389 7533	- 1042.97 0118	- 80.6860 6924	- 1042.97 0118	- 80.6860 6924
------	----------------------	----------------	----------------------	-----------------	----------------------	----------------------	----------------------	----------------------

Results

Table 17 displays an R2 value of 0.8856, indicating that 88.56% of the variation in ROCE is explained by C.R. and Q.R. This R2 value is significant, supported by the p-value of the F statistic (0.0386) in ANOVA Table 18. Furthermore, the p-value of CR and QR in Table 19 is less than 0.05, rejecting the null hypothesis and confirming a significant impact of Liquidity ratios on ROCE.

H₀₂: There is no Significant Impact of Efficiency ratios on ROCE

Table 20: Summary Output

Regression Statistics	
Multiple R	0.891325537
R Square	0.794461212
Adjusted R Square	0.48615303
Standard Error	13.88393082
Observations	6

ANOVA Table 21

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	1490.163031	496.7210104	2.576841157	0.291876434
Residual	2	385.5270699	192.763535		
Total	5	1875.690101			

Coefficients Table 22

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	85.7340 4653	12.5942 8319	6.80737 8019	0.02090 5145	31.5452 196	139.922 8735	31.5452 196	139.922 8735
S.T.R	- 0.04722 5868	0.02816 0206	- 1.67704 2721	0.23553	- 0.16838 9456	0.07393 7719	- 0.16838 9456	0.07393 7719
D.T.R	0.00114 2771	0.00621 4653	0.18388 3371	0.87106 0216	- 0.02559 6724	0.02788 2267	- 0.02559 6724	0.02788 2267
A.T.R	- 7.45006 1811	5.72177 68	- 1.30205 3902	0.32266 8138	- 32.0688 8038	17.1687 5676	- 32.0688 8038	17.1687 5676

Results

Table 20 indicates that 79.4% of ROCE variation is explained by S.T.R, D.T.R, and A.T.R, but this R2 value is insignificant ($p = 0.2918$). The null hypothesis is accepted, suggesting no significant impact of Efficiency ratios on ROCE.

H₀₃: There is no significant impact of Capital Structure ratios on ROCE.

Table 23: Summary Output

<i>Regression Statistics</i>	
Multiple R	0.957008625
R Square	0.915865508
Adjusted R Square	0.78966377
Standard Error	8.882855228
Observations	6

ANOVA Table 24

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	1717.879867	572.6266223	7.257154468	0.12350881
Residual	2	157.810234	78.90511699		
Total	5	1875.690101			

Coefficients Table 25

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1936.980342	1375.332105	-1.40837281	0.294357939	-7854.556779	3980.596095	-7854.556779	3980.596095
Debt-Equity ratio	530.3860578	114.638011	4.626616017	0.04367878	1023.633609	37.13850684	1023.633609	37.13850684
Proprietary ratio	5114.158272	3178.226519	1.609123277	0.248866473	8560.646735	18788.96328	8560.646735	18788.96328
solvency ratio	-424.5320177	251.5053601	-1.687964096	0.233473567	-1506.672242	657.6082064	-1506.672242	657.6082064

Results

Table 23 indicates that 91.58% of ROCE variation is explained by D.E.R, Proprietary Ratio, and Solvency Ratio, but this R² value is insignificant ($p = 0.1235$). The null hypothesis is not accepted for D.E.R ($p < 0.05$), suggesting a significant impact on ROCE. However, the null hypothesis is accepted for Proprietary Ratio and Solvency Ratio ($p > 0.05$), indicating no significant impact on ROCE.

Conclusion

This study concluded that raw coal production of CIL is increased in the year 2016-17 to 2018-19 and then declined in the year 2019-20 to 2020-21. Dispatch of raw coal are also increased in the year 2016-17 to 2018-19 and then declined. The result of Growth of sales is also same as production and dispatch of coal during the study period. The C.R and Q.R of CIL are during the study period can be found satisfactory, because almost in all the year C.R and Q.R is above the standard norms 2:1 and 1:1 respectively. And Growth of CIL in respect of C.R and Q.R is declined in the beginning two years and then increased during the study period. So, short-term financial position of the CIL can be said satisfactory. Now, Stock Turnover ratio, Debtors Turnover ratio, and Asset turnover ratio indicates the efficiency of CIL during the study period of 2015-16 to 2020-21. And then Net profit ratio, ROCE, EPS, DPS, and Dividend Payout ratios indicates the profitability position of CIL during the study period. The Growth of Net profit ratio and ROCE is negative during the study period except 2018-19 is 2.341. And now, Debt- Equity ratio, proprietary ratio, and solvency ratio indicates the long-term financial position of CIL. The Debt-Equity ratio and proprietary ratio of CIL is not satisfactory during the study period. But the solvency ratio of CIL is greater than 1 during the study period so, it can be said that CIL is solvent.

References

- [1] Akbarpour, M. (2011). Reviewing Relationship between Financial Structure and Firms Performance in Firms Traded on the Tehran Stock Exchange. *International Journal of Business Administration*, 2(4), 175–180. <https://doi.org/10.5430/ijba.v2n4p175>
- [2] Goswami, S., & Sarkar, A. (2011). Analysis of Financial Performance of Tata Steel – a Case Study. *International Journal of Multidisciplinary Research*, 1(5), 161–174. http://www.zenithresearch.org.in/images/stories/pdf/2011/Sep/11.Vol_01_Issue_05_Suvarun_Goswami_Full_Article.pdf
- [3] Gowri, M. (2016). A Study on Financial Health of Steel Authority of India Ltd. *Africa*, 2(2), 151–161.
- [4] Maji, S. K., & Sur, D. (2015). Financial Performance of ONGC during the Post-Liberalization Period: A Case Study. *Journal of Institute of Public Enterprise*, 38(3/4),

12–27.

<http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=115450735&site=ehost-live>

- [5] Vijayalakshmi, S., Sowndarya K, & Sowndharya K. (2017). A Study on Financial Performance Analysis of Bharti Airtel Limited. *Www.Ijbmm.Com International Journal of Business Marketing and Management*, 2(3), 2456–4559. www.ijbmm.com
- [6] BOOK: financial management & management accounting by prof. Nirmal Jain.