Impact of Return Ratios on Market Price per Share: A Comprehensive Analysis Using a Sample of Indian Steel Firms

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ABSTRACT :

Return ratios are crucial metrics for just about any company since they have an influence on a wide range of things, including stock prices, investment strategies, market borrowing, future growth and broadening, and much more. The influence of return ratios on share market prices has been investigated in this specific article. Fifteen steel firms are selected based on the priority of their market capitalization. Regression analysis, in particular, was conducted subsequently to determine the impact of Indian steel businesses. After conducting all of the tests, it was ultimately determined that there was a positive connection but that it did not significantly affect the share price. Regression analysis also revealed that only 18% of the fluctuations in the MPS could be explained by return ratios, with the remaining portion coming from residual terms.

Key words: Market Price Per Share, Return on Capital Employed, Return on Assets, Return on Equity

INTRODUCTION:

An rising economy's core is said to be the iron and steel sector. The amount of steel consumed per person is one indicator of growth. The steel sector has a favorable overall impact on other industries, including coal, railroads, infrastructure necessities etc.

Bengal Iron Works, now known as Indian Iron and Steel Company, founded the first trendy steel plant in Kulty in 1874. With the establishment of the Tata Steel Plant in Jamshedpur in 1907, large-scale steel manufacturing got underway. Large-scale steel manufacturing became state-run following deregulation in 1991, and significant foreign capital participation was seen. Even though the steel industry is growing, the government has taken action to make it ecologically sound. The engineering industry has been delicensed and is now open to 100% FDI. Without a doubt, the lack of capital investment to modernize in a timely manner and the emphasis placed on significant investment in its assets, technologies, and R&D activities have hampered the growth of the steel sector in our nation. It necessitates a substantial financial base of varying kinds that shifts periodically. Compared to other basic metal industries like wood goods, rubber, and jute textile, steel is always thought to require a large amount of capital. Industries classified as capital intensive must make significant investments in the acquisition, upkeep, and amortization of capital during their operational life. For a capital-intensive sector to survive over time, a high return on investment is necessary. Although there isn't an accurate acronym for capital intensiveness, one of the key indications is the labor cost to capital expenditure ratio. The industry is more capital intensive the greater the ratio. However, capital gigs per unit of production (K/Y, where K is the capital and Y is the output) is another way to assess how successful capital investment is.

As a result, the capital's morality attracts attention while examining its efficacy. The constituents of capital culminate in a distinct category of policies of the organization. The preference for debt, domestic or foreign, over a stake in equity has shortened the time it takes to pay returns, which has an impact on industries that require a lot of capital, like steel and iron.

The company's profitability is determined by its return on capital, which is crucial for its success and turnover in heavy industry investments. The choice of capital, whether stock or debt, is regulated by projected return.

REVIEW OF RELATED LITERATURE:

Bourne. M, (2008), investigates performance measurements and found three dilemmas, firstly how do we create both ownership and direction, secondly how do we manage today while preparing for tomorrow and finally, is performance measurements reaching the end of its life.

Arefin and Pervin (2016), examined the financial ratios and its impact on market price per share on Bangledesh based pharmaceuticals and chemical companies and found insignificant linear relationship between MPS and other earning potential ratios. Hence the MPS of a company does not react with the changing of most important earning potential variables.

Das (2017) examined the impact of ROCE on fifteen sensex listed companies performance and it reveals that companies have not been able to increase revenue as well as returns and they are not also compatible in comparison with the global capital market.

Yuli Anwar and Lia Rahamalia (2019), examined the effect of ROE, EPS and PER on stock prices by the help of linear regression with the preceding test of classical assumption deviations. Based on the result it can be concluded that there independent variables mentioned above are simultaneously influence the stock price on the Indonesian stock exchange. Partially the return on equity (ROE) has a significant effect but the EPS and PER do not affect at all.

Vora (2022), attempted to examine the financial performance metrics that have superior association with MPS across various industries applying univariate analysis. The accounting ratio EPS stood at first position having significant association with MPS however profitability ratios collectively have the highest association and explanatory power over MPS across all sector.

RESEARCH QUESTIONS:

1) Do return ratios influence share market prices in any way?
2) Are return ratios such as ROCE, ROE, and ROA correlated with stock prices?

OBJECTIVES:

1) To determine if the Market Prices of Shares (MPS) of particular Indian steel businesses would be impacted by Return on Capital Employed (ROCE).
2) To determine if the Market Prices of Shares (MPS) of particular Indian steel businesses would be impacted by Return on Equity (ROE).
3) To ascertain if the Market Prices of Shares (MPS) of particular Indian steel businesses would be impacted by Return on Assets (ROA).

METHODOLOGY:

The secondary data used in this study was gathered from moneycontrol.com and the annual reports of the top fifteen steel firms ranked by market capitalization. The first portion of the study is based on the predicted variable's correlation with the regressors variables, and the second part is based on the predicted variable's regression analysis with the regressors variables.

VARIABLES:

Table – 1 : **List of Variables :**

SL.No	VARIABLES	NATURE	FORMULA
1.	Return on Capital Employed (ROCE)	Independent Variable	Earnings before Interest and Tax / Capital Employed
2.	Return on Equity (ROE)	Independent Variable	Earnings Available to Equity Shareholders /

			Equity Shareholders Fund
3.	Return On Assets (ROA)	Independent Variable	Net Income /Total Assets
4.	Market Price per Share (MPS)	Dependent Variable	Market value of a company divided / the total number of equity shares

ANALYSIS AND FINDINGS :

Table – 2 : RESULTS OF CORRELATION ANALYSIS:

CORRELATIONS	
ROCE	0.327356
ROE	0.230514
ROA	0.374754

Inferences:

1) Correlation with MPS (Market Price of Share) and ROCE (Return on Capital Employed) : from the above table it shows that there is a positive correlation between MPS and ROCE but not strongly associated with MPS as the value is less than .5.
2) Correlation with MPS (Market Price of Share) and ROE (Return on Equity) :from the above table it also shows that there is a positive correlation between MPS and ROE but not strongly associated with MPS as the value is less than .5.
3) Correlation with MPS (Market Price of Share) and ROA (Return on Assets) : from the above table it shows that there is a positive correlation between MPS and ROA but not strongly associated with MPS as the value is less than .5.

Table – 3 : **RESULTS OF REGRESSION ANALYSIS:**

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.424323							
R Square	0.18005							
Adjusted R Square	0.145404							
Standard Error	197.6009							
Observations	75							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regression	3	608753.9	202918	5.196879	0.002656			
Residual	71	2772274	39046.12					
Total	74	3381028						
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	104.8574	39.86189	2.630517	0.010448	25.37503	184.3397	25.37503	184.3397
ROCE	3.641217	2.38587	1.5261	0.1314	-1.11607	8.3985	-	8.3985

		1	58	13		09	1.11607	09
ROE	-2.23687	1.891548	-1.18256	0.240929	-6.00851	1.534772	-6.00851	1.534772
ROA	11.93513	5.027233	2.374096	0.020299	1.911114	21.95915	1.911114	21.95915

INFERENCES:

Multiple R denotes the correlation coefficient between the four variables namely MPS, ROCE, ROE, ROA. The value of R= 0.4243, which signifies positive correlation between MPS with ROCE, ROE and ROA, which implies to some extent there is a relation with MPS with all other independent variables.

R^2 has a value 0.18005. $R^2$is called coefficient of determination. Closer the value of R^2 to 1greater is the trueness of the model. In this analysis R^2 is 0.18005. The interpretation is 18.005% of the variations in the MPS are explained by ROCE, ROE, and ROA and about 81.995% is explained by the error or residual term.

If we look the calculated F-value it is 5.196879 and is greater than the critical value F (2.733647) reject null hypothesis. At the same time significance F value (p-value) is given to be 0.002655 it is less than the level of significance 0.05. reject null hypothesis. The conclusion is that MPS is linearly related to ROCE, ROE and ROA.

Coefficient of Y intercept is 104.8574 and slope of the variables of ROCE, ROE and ROA are 3.641, -2.2368 and 11.9351 respectively. It implies that there is a downward and negative relation with MPS and ROE. On the other side there is a positive relation with MPS and other two independent variables which are ROCE and ROA.

P value of our calculation, ROCE and ROE more than 0.05 and on the other side ROA's, P value is less than 0.05 which signifies that ROA has an effect on MPS.

SUMMARY:

This study's main goal is to observe the relationship between return ratios and stock prices. The study's research topic is whether or not return ratios affect stock prices. Examining the correlation between return ratios and share prices as well as accepting or rejecting the academic justification for return ratios are the study's main goals. To obtain specific analysis findings, basic regression analysis is employed along with simultaneous variable correlation. The findings indicate a somewhat substantial positive association, although not a highly significant one, between MPS and ROCE, ROE, and ROA. Conversely, regression analysis reveals that MPS changes are less than or equal to twenty-eighteen percent.

CONCLUSION:

The purpose of the study is to determine how return ratios affect stock price. The correlation's outcome indicates that while ROCE, ROE, and ROA are positively connected with MPS, they are not highly positively correlated. Regression study based on R2 findings indicates that error or residual term accounts for 81.95% of the changes in MPS caused by ROCE, ROE, and ROA, leaving 18.05 percent to be explained by other factors. Therefore, based on the data from the last five years, we can infer from the above research that the return ratios of Indian steel companies—ROCE, ROE, and ROA—do not significantly affect MPS. Additionally, we conclude that return ratios are not a strong criterion for change in MPS.

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Table1:

com code	year code	MPS	ROCE	ROE	ROA
1	1	288.15	18.35	22.19	6.75
1	2	293.05	20.73	21.95	6.64
1	3	142.4	9.27	11.01	3.05
1	4	468.45	15.28	16.91	5.33
1	5	732.65	24.85	30.7	10.51
2	1	57.11	10.92	22.92	6.4
2	2	52.1	13.59	15.33	4.37
2	3	26.96	5.79	2.18	0.62
2	4	81.19	12.69	10.19	3.05
2	5	130.72	28.31	35.08	14.06
3	1	219.1	3.71	-4.64	-1.57
3	2	179.7	4.31	-5.08	-1.83
3	3	82.2	6.03	-0.33	-0.12
3	4	343.6	19.68	11.42	4.66
3	5	532.85	24.96	18.99	8.82
4	1	70.2	2.75	-0.76	-0.24
4	2	53.75	9	5.92	1.99
4	3	23.05	8.98	5.1	1.67
4	4	78.8	13.05	9.13	3.47
4	5	98.55	22.19	22.58	10.19
5	1	187.15	30.92	18.87	7.24
5	2	144.19	25.84	15.37	5.34
5	3	124.67	19.77	17.54	7.78
5	4	700.43	27.55	21.25	10.59
5	5	914.6	29	24.61	12.51
6	1	220.5	3.73	3.79	3.18
6	2	138.75	8.84	5.6	4.81

6	3	59.2	3.47	2.26	1.82
6	4	136.6	19.42	15.16	12.13
6	5	208.7	17.99	14.62	11.77
7	1	78.55	16.39	13.91	3.16
7	2	39.2	13.49	5.49	1.32
7	3	24.1	12.4	2.62	0.66
7	4	67.6	15.9	13.07	3.9
7	5	202.55	36.24	36.27	12.6
8	1	158	27.47	39.2	8.54
8	2	93.75	21.42	20.58	5.87
8	3	39.65	18.4	17.29	5.96
8	4	125.05	21.92	23.34	9.84
8	5	389.35	32.67	39.56	19.66
9	1	423.5	8.15	7.19	5.21
9	2	480	15.68	7.62	4.88
9	3	193.6	11.75	2.65	1.6
9	4	275.3	10.01	2.97	1.83
9	5	551.55	12.86	10.28	7.05
10	1	107.76	6.99	22.48	6.01
10	2	57.88	22.13	21.56	7.18
10	3	26.16	16.25	12.58	4.79
10	4	179.71	35.71	31.36	18.37
10	5	386.45	48.94	44.27	29.99
11	1	187.05	14.46	10.81	6.61
11	2	154.55	11.67	8.15	4.93
11	3	75.85	12.91	12.49	7.93
11	4	160.55	14.33	11.6	7.23
11	5	401.3	36.65	30.13	17.81
12	1	422.7	14.55	12.87	5.94
12	2	312.7	14	11.42	5.54

12	3	117.5	7.52	6.76	3.08
12	4	418.6	15.03	16.87	8.29
12	5	1132.65	28.23	26.77	15.17
13	1	118.75	8.69	3.24	1.31
13	2	86.4	13.06	13.53	5.6
13	3	45.8	12.44	8.2	3.58
13	4	74.15	10.04	4.56	1.96
13	5	90.1	11.13	5.59	2.44
14	1	7.3	1.57	-43.31	-7.26
14	2	5.7	8.71	-63.44	-6.6
14	3	1.95	-5.15	0	-26.1
14	4	10.6	66.93	0	-9.46
14	5	22.45	19.57	122.57	35.54
15	1	133.7	4.4	-0.16	-0.1
15	2	115.55	6.62	-10.45	-6.33
15	3	50.5	4.51	3.14	2.07
15	4	84.65	9.92	8	5.94
15	5	109.3	4.05	3.62	3.43

Table: 2

STEEL COMPANIES	YEARS
1) JSW STEEL	1) 2017-18
2) TATA STEEL	2)2018-19
3) JINDAL STEEL	3)2019-20
4) SAIL	4)2020-21
5) APL APPOLLO	5) 2021-22
6) KIOCL	
7) JINDAL STAINLESS	
8) JINDAL HISAR	
9) MAHARASHTRA SEAM.	
10) GODAWARI POWER	
11)TINPLATE LTD	
12) SARDA ENERGY	
13) JINDAL SAW	
14) JAISWAL NECO	
15) JAI CORP. LTD.	