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ORIGINAL ARTICLE

FINANCIAL PERFORMANCE OF TATA STEEL LIMITED: A DECADAL REVIEW

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ABSTRACT:

A bird's view at the financial performance of a firm is the matter of paramount importance for all stakeholders associated with it and desirous of being associated with it in future. The study of performance appraisal occupies an important place in financial management, as well as related to close and critical study of various measures observed in the operation of business organization. Analysis of financial performance of a firm is the matter of immense curiosity for everybody associated with it. A comprehensive understanding of business operations and their impact on the financial health of the firm is of immense use to managers and the prevailing as well as would-be investors. The financial performance is the ultimate outcome produced by the firm by doing its business activities on a continuous basis. All policies, strategies and decisions both financial and non-financial, collectively get reflected in the financial achievements of the firm.

Key Words: *Short-term solvency, Long-term solvency, Profitability*

1.1: INTRODUCTION

Conceptually the financial analysis is a process of identifying the financial strengths and weaknesses of a firm by establishing appropriate relationship between various financial facts and figures as given in its financial statements. In simple words, it refers to the critical examination of the financial information contained in the company's financial statements for getting correct idea of its financial health and also to make further financial decisions. Balance sheet, profit and loss account and cash flow statement are three basic financial statements of great importance to promoters, management, bankers and investors. Analysis of financial performance is effectively used to predict, compare and evaluate the firm's earning power.

Balance sheet, profit and loss account and cash flow statement in abridged form forms an integral part of the annual report of the company. It also contains the annexure to accounts arranged item-wise. Those accounts are duly audited by company's chartered accountant. In short, the financial data of a company is intertwined into the fabric of its accounting system and published quarterly as well as annually in the form of financial statements. However the information provided in such financial statements cannot be of much use unless the meaningful conclusions are drawn from those statements about the overall financial performance of the firm. However, because of this lacuna the significance of financial statements cannot be overlooked as it is the only authorized source of getting the first hand information about the financial performance of the firm, though provided in static form. The financial statements of the firm provide the ground level information about the financial exercise of the firm. However, when the figures recorded in the financial statements are rearranged, regrouped and analyzed with the help of analytical tools, they become conveniently comparable with the given standards and give the authentic idea about how the firm has performed financially.

1.2: TATA STEEL LIMITED

There are around 202 important industries in India and more than 10,000 industrial units organized in the form of public limited companies.[1] Iron and steel industry is one of them which is regarded as heavy and core industry. Tata Steel Ltd., established by Sir Jamshedji Tata in 1907, has 103 years' standing in the market. It has celebrated its 'Platinum Jubilee' in 2007.

Tata Steel, formerly known as Tata Iron & Steel Company (TISCO), is the flagship company of Tata Group of industries. The Tata Group comprises around 96 companies operating in seven important business sectors namely information systems and communications, engineering, materials, services, energy, consumer products and chemicals etc. Sir Jamshetji Tata founded the Tata group in the mid 19th century, a period when India has just set out on the road to gaining Independence from British rule. Consequently, Sir Jamsetji Tata and those who followed him aligned business opportunities with the objective of nation building. This approach remains enshrined in the group's ethos even today. The Tata Group is one of India's largest and most respected business conglomerates, with revenues the equivalent to nearly 2.8 per cent of India's GDP. Tata companies together employ some 2.3 lakh people. The group has around 28 publicly listed enterprises on Indian bourses and some even abroad, among them stand out names such as Tata Steel, Tata Consultancy Services, Tata Motors and Tata Tea -- have a combined market capitalization that is the highest among Indian business houses in the private sector, and a shareholder base of over 2 million. The Tata Group has operations in more than 54 countries across six continents, and its companies export products and services to 120countries of the world.

The Tata Group of Companies share a set of five core values namely ***integrity, understanding, excellence, unity and responsibility***. These values, which have been a vital part of the group's beliefs and convictions from its earliest days, continue to guide and drive the business decisions of Tata companies. The Group and its enterprises have been steadfast and distinctive in their adherence to business ethics and their commitment to corporate social responsibility. This is a legacy that has earned the Group the trust of many millions of stakeholders in a measure few business houses anywhere in the world can match. Tata Steel Ltd. is the ***world's 6th largest steel company*** and the ***worlds 2nd most geographically diversified steel producer***.

1:3: STATEMENT OF THE PROBLEM

Financial performance analysis constitutes the approach to judge the effectiveness of the finance function of the firm. Analysis of financial performance of an enterprise is significant from various points of views for various parties associated with it. However the managers of the enterprise and its investors and creditors have genuine interest in knowing how the company is performing and what financial results it is producing. The financial statements, though certified by the qualified authorities, fail to disclose by themselves certain significant facts about the financial performance of a firm. However the financial data can be scrutinized with the help of financial ratios to know insights of its financial performance. Therefore the present study is undertaken to understand how the financial performance of an enterprise could be judged by analyzing its published financial data and it is entitled as ***"Financial Analysis of Tata Steel Ltd."*** The study scrutinized the financial data of Tata Steel Ltd. for the period of ten years from 2000-2001 to 2009-2010.

1.4: SCOPE OF THE STUDY

The topical scope of the study is restricted to the financial analysis of Tata Steel Ltd. with special reference to its long-term and short-term solvency and profitability. The historical scope of the study is kept limited to a period of ten years ranging from 2001 to 2010. Analytical scope covered the fulfillment of the stated objectives of the study. The functional scope is confined to offering suggestions based on the inferences drawn after financial analysis of Tata Steel Ltd.

1.5: HYPOTHESIS

The study aimed at testing the following null hypotheses.

1) Long-term solvency does not significantly affect the profitability of Tata Steel Ltd.
2) Short-term solvency does not significantly affect the profitability of Tata Steel Ltd.

1.6: OBJECTIVES OF THE STUDY

In the light of the statement of problem and the hypothesis, the following objectives are set for the study.

1) To analyze the financial performance of Tata Steel Ltd. with special reference to its short-term and long-term solvency and profitability
2) To trace the consistency in the long-term and short-term solvency and profitability of Tata Steel Ltd.
3) To examine the impact of short-term and long-term solvency on profitability of Tata Steel Ltd.

1.7: DATA COLLECTION

The relevant financial data is collected from the financial statements of Tata Steel Ltd. as published in its annual reports from financial year 2000-01 to 2009-10. It is verified against the financial statements uploaded on web pages of the firm. The “Hand-Book of 4000 Indian Companies", which is made available by Kolhapur Investors' Association, is used for collecting the supplementary information relating to firm. In addition to the above, books on financial management, management accounting, various journals and periodicals are referred.

1.8: METHODOLOGY OF THE STUDY

In the present study, the financial data of Tata Steel Ltd. for ten consecutive financial years from 2000-2001 to 2009-2010 are analyzed and interpreted by applying widely used tools of ratio analysis. The study is principally based on secondary data. For analyzing the financial performance of the unit under study, the specific ratios are grouped and put to test its different financial aspects namely long-term solvency , short-term solvency and profitability. The results are expressed in terms of a quotient, a percentage and times depending upon the nature of analysis. Various selected financial data from balance sheet and the profit and loss account of the study unit are tabulated, computed and compared with one another over a period of ten years to get exact meaning. The ratios are computed for ten years to trace the trend of change and also the solvency, overall profitability, and operating efficiency of the unit are tested which is helpful in arriving at certain conclusions and to establish the direction of change; whether progressive, declining or static. In other words, the attempt is made to interpret the financial and operational aspects of Tata Steel Ltd.

1.8.1: FRAMEWORK OF FINANCIAL ANALYSIS

For convenience of the study, the computation and presentation of relevant financial data are grouped under four major parts as follows:

Part-I: Analysis of Long-Term Solvency of Tata Steel Ltd.

To understand the long-term solvency of Tata Steel Ltd., the following seven ratios are applied.

a) Debt-Equity Ratio b) Dividend Cover Ratio c) Interest Cover Ratio d) Fixed Assets to Long-Term Funds Ratio e) Shareholders’ Equity Ratio f) Debt to Net Worth Ratio g) Solvency Ratio

Part-II: Analysis of Short-Term Solvency of Tata Steel Ltd.

The following eight ratios are adopted to analyze the short-term solvency of Tata Steel Ltd.

a) Working Capital to Sales Ratio b) Inventory Turnover Ratio c) Current Assets Turnover Ratio d) Current Ratio e) Quick/ Liquid Ratio f) Current Assets to Total Net Assets g) Debtors' Turnover Ratio h) Average Collection Period

Part-III: Analysis of Profitability Analysis of Tata Steel Ltd.

To analyze the profitability of the firm, the following 8 ratios are employed.

a) Return on Capital Employed (ROCE) b) Earning Per Share (EPS) c) Cash Earning Per Share (CEPS) d) Operating Profit Margin (OPM) e) Gross Profit Margin (GPM) f) Net profit margin (GPM) g) Return on Net Worth (RONW) h) Return on Total Assets (ROTA)

1.8.2: STATISTICAL ANALYSIS AND TESTING OF HYPOTHESIS

Truly speaking, the different ratios calculated by using the approved formulae just formed the basis for further statistical analysis Therefore, with a view to make the study more meaningful the following statistical tools are used for correct interpretation.

(a) Simple Arithmetic Mean:

It is used to know the average ratios under different heads.

(b) Standard Deviation (S.D.):

Standard deviation is used to understand the dispersion of frequency from mean values under different heads.

(c) Coefficient of Variance (C.V.):

It is employed to know the degree of variability of data.

(d) Karl Pearson's Correlation Coefficient (*r*):

It is administered to understand the correlation between various financial ratios (i.e. variables) under different categories. Karl Pearson's Coefficient of Correlation is used to test the correlation each one of the ***independent variables*** with that of the ***dependent variable*** in the group. For that purpose, in case of long-term solvency, the 'Debt Equity Ratio' ***(DER)*** is taken as ***'independent variable'*** and all other ratios as ***'dependent variables'*** Likewise, in respect of short-term solvency, 'Working Capital to Sales Ratio' ***(WCSR)*** is taken as ***'independent variable'*** Under the third part of the analysis namely '**Analysis of Profitability'**, the 'Return on Capital Employed' ***(ROCE)*** is taken as ***'independent variable'*** and all other ratios are taken as ***'dependent variables'***

(e) Correlation Matrix:

The Correlation Matrix for long-term solvency, for short term solvency and for profitability of Tata Steel Ltd. is prepared to understand the significant relationship in between various variables under each part.

(f) Chi-square test (χ^2):

This statistical tool is used to determine whether hypothesized results are verified by an experiment. In other words, χ^2 is applied to know the 'goodness of fit' and the degree of independence of variables.

1.9: DATA ANALYSIS

The financial data of Tata Steel Ltd. have been analyzed and presented in the following tables, grouped under three parts.

Part-I: Analysis of Long-Term Solvency

The long-term financial stability of the firm may be considered as dependent upon its ability to meet all its liabilities, including those not currently payable. Long-term solvency is instrumental in survival, growth and expansion of the firm, which is tested by applying selected ratios. It throws more light on how Tata Steel Ltd. manages its long-term assets.

Table: 1.9.1

The Position of Long Solvency of Tata Steel Ltd.

Year	Debt Equity Ratio	Dividend Cover Ratio (Times)	Interest Cover Ratio (Times)	Fixed Assets to Long Term Fund Ratio	Share Holders Equity Ratio	Debt to Net Worth Ratio	Solvency Ratio
2001	0.96	2.54	2.60	0.79	0.51	1.35	0.58
2002	1.37	1.37	1.68	0.93	0.36	1.65	0.74
2003	1.33	3.04	5.14	1.02	0.33	1.15	0.67
2004	0.75	4.20	22.82	0.97	0.45	0.69	0.57
2005	0.39	4.23	29.36	0.93	0.59	0.36	0.43
2006	0.26	4.27	45.24	0.83	0.68	0.23	0.34
2007	0.68	3.82	37.01	0.47	0.56	0.27	0.45
2008	0.66	3.36	9.04	0.28	0.58	0.13	0.42
2009	0.89	3.49	7.35	0.25	0.51	0.13	0.49
2010	0.68	5.75	5.78	0.26	0.58	0.06	0.42
Mean	**0.80**	**3.61**	**16.60**	**0.67**	**0.52**	**0.60**	**0.51**
S.D.	***0.3675***	***1.1717***	***15.8045***	***0.3204***	***0.1084***	***0.5785***	***0.1258***
C.V. (%)	***45.94***	***27.70***	***95.21***	***47.82***	***20.85***	***96.42***	***24.67***

Source: Secondary Data

Part-II: Analysis of Short-Term Solvency

The short term solvency ratios measure the liquidity of the firm and its ability to meet its maturing short-term obligations. This second part investigates how Tata Steel Ltd. manages its short-term funds. This part mainly focuses on working capital management of the firm, which is the crux of short-term funds management. This part presents the relevant data into three sub-components namely a) Efficiency b) Liquidity and c) Structural health of Tata Steel Ltd.

Table: 1.9.2

Position of Short-Term Solvency Tata Steel Ltd.

Year	Efficiency Ratios			Liquidity Ratios		Structural Ratios		
	Working Capital to Sales	Inventory Turnover	Current Asset Turnover	Current Ratio	Liquid Ratio	Current Assets to Total Net Assets	Debtor Turnover (Days)	Average Collection Period (Days)
2001	6.82	11.60	3.18	1.55	1.22	0.34	6.07	60.18
2002	6.99	11.19	3.29	1.54	1.20	0.32	7.09	51.51
2003	9.11	11.54	3.51	1.36	1.05	0.38	9.10	40.11
2004	12.71	12.19	4.97	1.02	0.79	0.40	16.43	22.21
2005	37.80	11.85	5.37	1.10	0.69	0.34	24.92	14.65
2006	35.30	9.30	5.04	1.11	0.66	0.30	28.07	13.00
2007	2.13	9.86	1.65	2.51	2.18	0.54	27.79	13.13
2008	0.65	10.16	5.45	5.46	5.16	0.79	36.24	10.07

2009	18.55	9.89	4.26	1.15	0.83	0.18	38.23	9.55
2010	7.71	9.40	3.71	1.36	1.09	0.19	57.54	6.34
Mean	**13.78**	**10.70**	**4.04**	**1.82**	**1.49**	**0.38**	**25.15**	**24.08**
S.D.	**13.02**	**1.09**	**1.20**	**1.35**	**1.36**	**0.18**	**16.27**	**19.35**
C.V. (%)	**94.49**	**10.19**	**29.95**	**74.18**	**91.27**	**47.36**	**64.69**	**80.36**

Source: Secondary Data

Part-III: Analysis of Profitability of Tata Steel Ltd.

The profitability of the firm is regarded as the net result of a large number of financial policies and decisions. The analysis of profitability shows the combined effects of liquidity, asset management and debt management on operating results of the firm. Therefore this third part of the chapter deals with profitability of Tata Steel Ltd. For testing its profitability, select ratios have been adopted.

Table: 1.9.3

Analysis of Profitability of Tata Steel Ltd.

Year	ROCE	GPM	OPM	NPM	EPS	CEPS	RONW	ROTA
2001	12.09	12.62	7.76	2.77	13.97	28.41	0.14	5.81
2002	9.53	8.16	3.30	2.84	5.51	19.82	0.08	2.15
2003	22.87	17.97	14.48	3.53	27.43	42.47	0.32	10.44
2004	37.83	26.05	24.91	0.06	47.30	64.23	0.40	17.23
2005	58.88	37.82	36.54	12.35	62.75	73.92	0.51	29.14
2006	45.82	35.39	34.61	19.66	63.30	77.32	0.37	23.91
2007	36.46	36.67	35.67	26.17	72.71	86.82	0.30	16.63
2008	25.91	40.34	35.88	32.43	63.83	75.56	0.17	9.99
2009	24.92	34.83	30.09	39.06	69.68	84.50	0.17	8.87
2010	22.24	34.86	28.83	51.05	56.35	69.08	0.14	7.86
Mean	**29.66**	**28.47**	**25.21**	**18.99**	**48.28**	**62.21**	**0.26**	**13.20**
S.D	**15.20**	**12.04**	**12.37**	**17.72**	**24.13**	**23.63**	**0.14**	**8.71**
C.V. (%)	**51.25**	**42.29**	**49.07**	**93.31**	**49.98**	**37.98**	**53.85**	**65.98**

Source: Secondary Data

Part-IV: Consistency in Financial Performance of Tata Steel Ltd.

Statistical analysis of the financial performance of Tata Steel is done with a specific objective to understand the consistency in the performance throughout the study period and to know the degree of variability between various variables of the firm's financial performance.

(A) Test of Consistency

Table: 1.9.4

Descriptive Statistics of Financial Performance of Tata Steel Ltd.

Sr. No.	Ratio	Mean Value	S.D.	C. V.
		Long-Term Solvency		
1	*DER*	0.80	*0.3675*	*45.94*
2	*DCR*	3.61	*1.1717*	*27.70*
3	*ICR*	16.60	*15.8045*	*95.21*
4	*FLTFR*	0.67	*0.3204*	*47.82*
5	*SHER*	0.52	*0.1084*	*20.85**
6	*DNWR*	0.60	*0.5785*	*96.42***
7	*SR*	0.51	*0.1258*	*24.67*
		Short-Term Solvency		
8	*WCS*	13.78	13.02	94.49**

9	*ITR*	10.70	1.09	10.19*
10	*CATR*	4.04	1.20	29.95
11	*CR*	1.82	1.35	74.18
12	*LR*	1.49	1.36	91.27
13	*CATNAR*	0.38	0.18	47.36
14	*DTR*	25.15	16.27	64.69
15	*ACP*	24.08	19.35	80.36
Profitability				
16	*ROCE*	29.66	15.20	51.25
17	*GPM*	28.47	12.04	42.29
18	*OPM*	25.21	12.37	49.07
19	*NPM*	18.99	17.72	93.31**
20	*EPS*	48.28	24.13	49.98
21	*CEPS*	62.21	23.63	37.98*
22	*RONW*	0.26	0.14	53.85
23	*ROTA*	13.20	8.71	65.98

Source: *Values computed by researcher* ** Consistent* *** Volatile*

(B) Correlation Matrix of Financial Performance of Tata Steel Ltd.

The financial manager must understand as to how the change in one ratio affects the change in another ratio. The correlation matrix plays vital role in this regard. It is, therefore, in order to focus on the correlation between different financial ratios under three dimensions namely short term and long term solvency and profitability the correlation matrix have been presented hereunder.

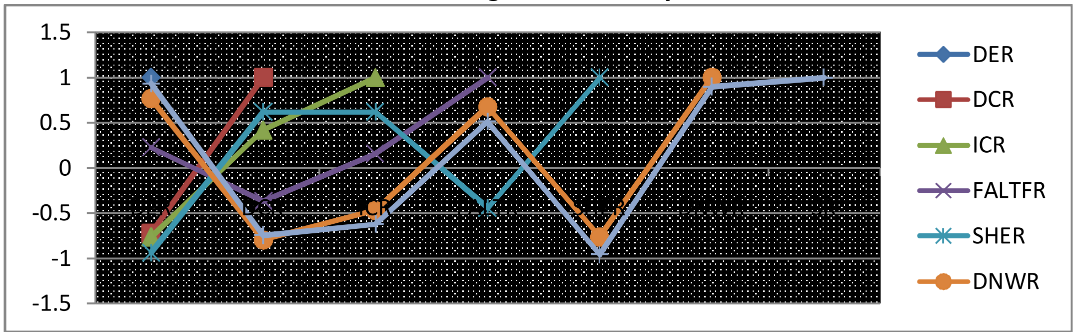
Table: 1.9.5 (a)
Correlation Matrix of Long-Term Solvency of Tata Steel Ltd.

	DER	*DCR*	*ICR*	*FALTR*	*SHER*	*DNWR*	*SR*
DER	***1***						
DCR	***-0.7225 (.0003)***	*1*					
ICR	***-0.7621 (.0001)***	*+0.4173 (.0674)*	*1*				
FALTFR	*+0.2279 (.3358)*	*-0.3663 (.1125)*	*+0.1620 (.4950)*	*1*			
SHER	***-0.9360 (.0000)***	***+0.6190 (.0036)***	***+0.6192 (.0036)***	*-0.4420 (.0510)*	*1*		
DNWR	***+0.7692 (.0005)***	***-0.7964 (.0059)***	***-0.4686 (.0371)***	***+0.6766 (.0011)***	***-0.7638 (.0001)***	*1*	
SR	***+0.9326 (.0000)***	***-0.7446 (.0002)***	***-0.6228 (.0034)***	***+0.5141 (.0204)***	***-0.9596 (.0000)***	***+0.8999 (.0000)***	***1***

Source: *Values computed by researcher*
Figures in paranthesis show p-value at 5% level of significance
Note: *Shaded cell denotes significant correlation between two different ratios of long-term solvenscy*

Graph: 1.9.5 (a)

Correlation Matrix of Long-Term Solvency of Tata Steel Ltd.



Short Forms used:

DER: *Debt Equity Ratio,* ***DCR:*** *Dividend Cover Ratio,****ICR:*** *Interest Cover Ratio,****FALTR:*** *Fixed Assets to Long Term Fund Ratio,* ***SHER:*** *Shareholders' Equity Ratio,* ***DNWR:*** *Debt to Net Worth Ratio,****SR:*** *Solvency Ratio*

Table: 1.9.5 (b)

Correlation Matrix of Short Term Solvency of Tata Steel Ltd.

	WCSR	*ITR*	*CATR*	*CR*	*LR*	*CATNAR*	*DTR*	*ACPR*
WCSR	*1*							
ITR	***+0.4675 (.0379)***	*1*						
CATR	***+0.4464 (.0487)***	*+0.1211 (.6113)*	*1*					
CR	*-0.3739 (.1052)*	*-0.2424 (.3039)*	*+0.1203 (.6143)*	*1*				
LR	*-0.3577 (.1223)*	*-0.2301 (.3293)*	*+0.1117 (.6413)*	***+0.9990 (.0000)***	*1*			
CATNAR	*-0.1077 (.6748)*	*+0.0482 (.8407)*	*+0.0931 (.6965)*	***+0.8910 (.0000)***	***+0.8895 (.0000)***	*1*		
DTR	*-0.1632 (.4923)*	***-0.7409 (.0001)***	*+0.1954 (.4100)*	*+0.2083 (.3789)*	*+0.2117 (.3719)*	*-0.0906 (.7059)*	*1*	
ACPR	*-0.1264 (.5966)*	***+0.5972 (.0054)***	*-0.3640 (.1146)*	*-0.2097 (.3765)*	*-0.2065 (.3836)*	*-0.0998 (.6779)*	***-0.8485 (.0000)***	*1*

Source: *Values computed by researcher*

Figures in paranthesis show p-value at 5% level of significance

Note: *Shaded cell denotes significant correlation between two different ratios of short-term solvenscy*

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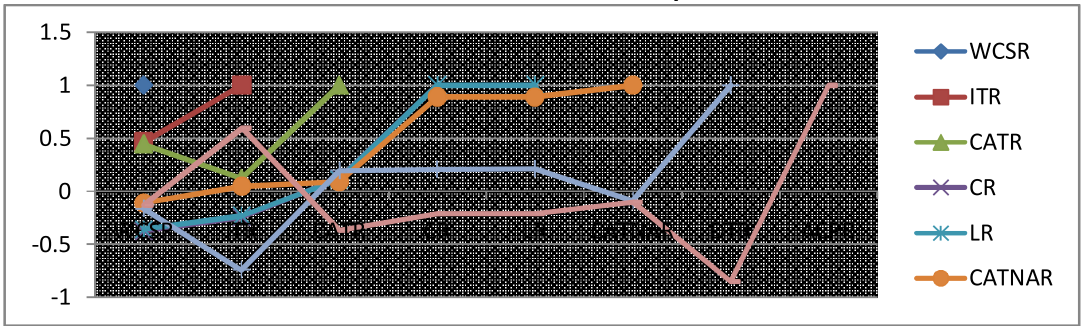
Graph: 1.9.5 (b)

Correlation Matrix of Short Term Solvency of Tata steel Ltd.



Short forms used:

WCSR: *Working Capital to Sales,* **ITR:** *Inventory Turnover Ratio,* **CATR:** *Current Asset Turnover Ratio,* **CR:** *Current Ratio,* **LR:** *Liquid Ratio,* **CATNAR:** *Current Assets to Total Net Assets,* **DTR:** *Debtor Turnover Ratio (Days),* **ACPR:** *Average Collection Period Ratio (Days)*

Table: 1.9.5 (c)

Correlation Matrix of Profitability of Tata Steel Ltd.

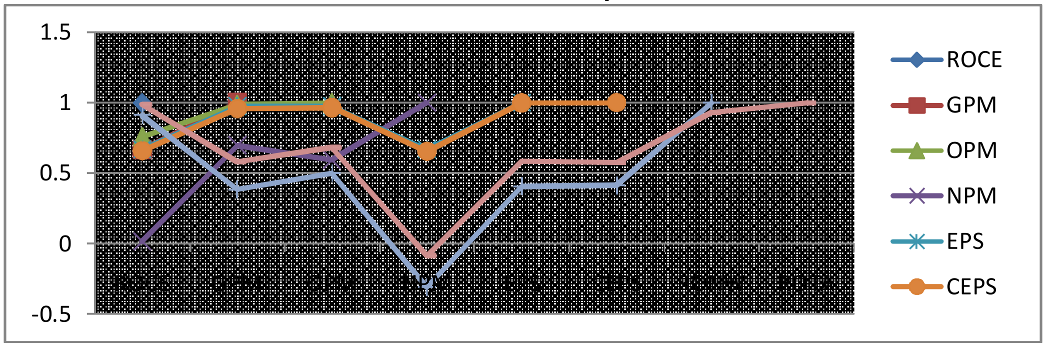
	ROCE	GPM	OPM	NPM	EPS	CEPS	RONW	ROTA
ROCE	1							
GPM	+0.6682 (.0013)	1						
OPM	+0.7578 (.0001)	+0.9882 (.0000)	1					
NPM	+0.0176 (.3433)	+0.6971 (.0006)	+0.5939 (.0059)	1				
EPS	+0.6694 (.0013)	+0.9735 (.0000)	+0.9756 (.0000)	+0.6688 (.0013)	1			
CEPS	+0.6591 (.0016)	+0.9591 (.0000)	+0.9643 (.0000)	+0.6548 (.0018)	+0.9979 (.0000)	1		
RONW	+0.9115 (.0001)	+0.3843 (.0946)	+0.5002 (.0247)	-0.3079 (.1880)	+0.4068 (.0757)	+0.4135 (.0703)	1	
ROTA	+0.9877 (.0000)	+0.5841 (.0069)	+0.6845 (.0008)	-0.0823 (.7311)	+0.5846 (.0069)	+0.5791 (.0075)	+0.9311 (.0000)	1

Source: *Values computed by researcher*

Figures in paranthesis show p-value at 5% level of significance

Note: *Shaded cell denotes significant correlation between two different ratios of profitability*

Graph: 1.9.5 (c)
Correlation Matrix of Profitability of Tata Steel Ltd.



Short forms used:
ROCE: *Return on Capital Employed,* ***GPM:*** *Gross Profit Margin,* ***OPM:*** *Operating Profit Margin,* ***NPM:*** *Net Profit Margin,* ***EPS:*** *Earning Per Share ,* ***CEPS:*** *Cash Earning Per Share,* ***RONW:*** *Return on Net Worth,* ***ROTA:*** *Return on Total Assets*

(C) Testing of Hypothesis

For testing the hypothesis, correlation ('r) and p-value for 'r' have been applied. To present the correct picture, one indicator from each of the three groups is selected Accordingly, Debt-Equity Ratio (DER) is taken as an indicator of Long Term Solvency and Liquid Ratio (LR) is taken as an indicator of Short-Term Solvency and Return on Capital Employed (ROCE) is taken as an indicator of Profitability, and they are denoted by the notations *x, y* and *z* respectively. These three ratios are regarded as the most sensitive variables of liquidity and profitability, which encompass almost all the movements in liquidity and profitability.

Table: 1.9.6
Impact of Long-Term and Short-Term Solvency and Profitability of Tata Steel Ltd.

Year	Solvency Indicators		Profitability Indicator
	Long-Term	Short-Term	
	Debt-Equity Ratio	Liquidity Ratio	Return on the Capital Employed
	x	*y*	*z*
2001	0.96	1.22	12.09
2002	1.37	1.20	9.53
2003	1.33	1.05	22.87
2004	0.75	0.79	37.83
2005	0.39	0.69	58.88
2006	0.26	0.66	45.82
2007	0.68	2.18	36.46
2008	0.66	5.16	25.91
2009	0.89	0.83	24.92
2010	0.68	1.09	22.24
		'r' (x,z)	***-0.05443***
		P-value	***.8197***
		Significance	***Not Significant***
		'r' (y,z)	***-0.79395***
		P-value	***.0001***
		Significance	***Extremely Significant***

In the light of the above results the first null hypothesis that *'long-term solvency doesn't significantly affect the profitability of Tata Steel Ltd.'* is accepted whereas the second hypothesis that *'short-term solvency doesn't significantly affect the profitability of Tata Steel Ltd.'* is rejected, which leads to conclude that the short term solvency position affects the profitability in short-run.

1.10: FINDINGS AND CONCLUSIONS

The findings and conclusions have been presented in the first part of this chapter and the suggestions in the second part.

1.10.1: Regarding Long-Term Solvency of Tata Steel Ltd.

Attainment of maximum returns of capital employed is one of the important objectives of financial management. Seven significant ratios are computed over the ten years period to understand long-term solvency of Tata Steel Ltd., the findings and conclusions whereof are as follows.

- It can be inferred that Tata Steel's debt-equity position is satisfactory signifying the financial stability of the company. 'Higher the interests of the proprietor as compared with that of the creditors, the stronger the financial structure' has been well achieved by the firm.
- To keep the shareholders contented and confident, Tata Steel has increased the rate of dividend payment almost every year. However, that has not resulted in the erosion of capital, only because of the firm's profitability to sustain such hikes in dividends.
- Tata Steel's net profit position is sound enough to sustain increased payment of dividend to its shareholders and also to build sound reserves.
- The firm has undoubtedly maintained very strong position of *ICR* throughout the study period. However, too high a ratio implied unused debt capacity. Considering the mean value of *ICR* it may further be concluded that Tata's profit are sufficiently large to cover the interest on its debentures and loans, which is a good assurance to debenture holders and bankers/financial institutions. But the fact that the firm on the whole has unused debt capacity.
- Tata Steel's funds are safe in case of liquidation. Further it may also be inferred that Tata is in a sound position to realize the sufficient funds by disposing off its assets to pay off its debts, in the time of liquidation. Truly speaking, Tata Steel has achieved nice parity between investment in fixed assets and current assets as regards deployment of its long-term funds.
- Shareholders' equity ratio position of Tata Steel Ltd. is quite satisfactory, which is indeed indicative of Tata Steel's sound position of realizing substantial funds by disposing off its tangible assets in the event of liquidation and the standing assurance to its unsecured creditors about repayment.
- Net worth position of Tata Steel Ltd. has, on an average, remained good though it has deteriorated in the latest half of the study period. On the whole, *DNWR* position of the firm indicated enough ability to pay off its long-term liabilities.
- Shareholders' claim over Tata Steel's total assets has increased, which is a good sign of efficient long-term funds management. It may further be concluded that creditors are fully secured as total assets position of Tata Steel is found to be very sound.
- The all inclusive view of the important ratios computed to understand the long term solvency of Tata Steel has remained satisfactory and snowballing during the period of study.

1.10.2: Regarding Short-Term Solvency of Tata Steel Ltd.

The short-term solvency ratios measure *the corporate liquidity* which is the critical factor in the business. Excess liquidity, though a guarantor of solvency would reflect lower profitability, deterioration in managerial efficiency, increased speculation and unjustified expansion and too little liquidity may lead to frustration of business objectives, reduced rate of return and marching on the path of bankruptcy.

- Tata Steel has required very high amount of working capital for an amount of sales.

- The overall analysis of Tata's *ITR* led to conclude that the company has very effectively and efficiently converted its inventory into Bills Receivables. It is indeed appreciable. It is indicative of efficiency of Tata Steel in keeping the stock level as low as possible on one hand and avoidance of overtrading on the other.
- The firm has efficiently turned its current assets into sales. In other words the firm has made more efficient use of its short-term funds.
- It is important for every firm to hold current assets to be exchanged for cash to meet its immediate financial obligations or dues. The liquidity position of Tata Steel is studied with the help of two widely used and most reliable ratios namely ***current ratio*** and ***liquid ratio***, and its major findings are recorded hereunder.
- Short-term solvency position of Tata Steel throughout the decade has been deteriorating, with the exception of some years. It may be understood as danger signal to its short-term solvency. However, as the firm is in heavy industry like iron and steel, the prevailing position of *CR is* acceptable. On the contrary, having high *CR* meant having idle current assets in the firm.
- Short-term liquidity position of Tata Steel has been good though it has faced problem of liquid assets falling short of its standard requirement of being equal to its liquid liabilities.
- Tata Steel has been expanding as its business operations. The focus of the company on earning assets (current assets) than on block assets (fixed assets) is a good attempt towards growing its core business activities. However, in recent two years its *CATNAR* has reduced dramatically.
- Tata Steel has efficiency in conversion of its debtors into cash during fiscal years.
- Taking into account the decreasing trend in average collection period, it may be concluded that on the whole Tata Steel has very efficient collection management. But the year-by-year good improvement in collection period is worth appreciating.
- The overall short term solvency position of Tata Steel Ltd. is found to be good and appreciable though its current liquid ratios need some cautious improvement.

1.10.3: Regarding Analysis of Profitability of Tata Steel Ltd.

Profit is sine qua non for every business on which its survival, growth and expansion is based. Capacity to generate substantial profit i.e. profitability of a firm can be tested from various dimensions. The profitability analysis reflects the final result of business operations of the firm.

- Growth in ROCE is quite encouraging, as it indicated the growing of profit margin for the firm.
- Tata Steel's GPM is satisfactory and further its management of production and trading operations is quite appreciable.
- The overall *OPM* position of Tata Steel is satisfactory and encouraging. It can be well understood from those findings that the firm's control over its operating expenses is appreciable.
- The decadal average *NPM* of the firm is found at 19 percent which is quite comfortable.
- *CEPS* of Tata Steel Ltd. has remained very satisfactory. The firm has a very good ability to earn substantial cash profits behind its every equity share.
- Tata Steel's rate of return as a percentage of the book value of shareholders' equity has been reaching to the level of satisfaction. The increasing *RONW* would motivate the investors to invest their funds in Tata Steel's scrip traded on Indian bourses and abroad as well.
- Tata Steel's ability to utilize its total assets in generating revenue has remained satisfactory.
- Considering the important variables of Tata Steel's profitability, it may be well understood that the firm has very good ability to generate profit by using its assets and other resources efficiently.

1.11: SUGGESTIONS

Unlike the outside parties which are interested in one aspect of financial position of a firm, the management is constantly concerned about overall profitability of the enterprise. In other words, they are concerned about the ability of the firm to meet its short-term as well as long-term obligations to its creditors, to ensure a reasonable return to its owners and secure optimum utilization of the assets of the firm. Therefore, an integrated view of all ratios is taken together and based on that the following suggestions are offered.

1) As very wide fluctuations are observed in the most of the key areas of financial management such as debt-equity ratio *(DER)*, interest cover ratio *(ICR)*, fixed assets to long-term funds ratio *(FALTFR)*, debt to net worth ratio *(DNWR),* current ratio *(CR),* liquid ratio *(LR),* return on capital employed *(ROCE),* return on net worth *(RONW),* return on total assets *(ROTA),* it is suggested that Tata Steel Ltd. should steps to maintain consistency in these ratios.

2) Debt-equity ratio, which reflects the capital structure of the firm, is entirely the outcome of the financial and business policy of the enterprise. From this point of view, the importance of the ratio lies in highlighting the seemingly irreconcilable view-points of the owners and creditors regarding the method of financing the business -the former having always the temptation of doing business with other people's funds and the latter insisting on that the owners should at least have as large an investment as creditors. Therefore, on the average, debt to equity ratio 1:1 is acceptable. Theoretically, higher the interests of the proprietor as compared with that of the creditors, the sounder would be the financial structure; but, this should not be treated as a generalization.

Debt-equity ratio *(DER)* at 1:1 level is normally desirable. However, the financially very sound companies having a long standing in the market may have the debt-equity at low level than hypothetical norm. In other words, the firm can trade on equity which is ultimately beneficial to the equity shareholders. However, it is noticed that Tata Steel has debt-equity of as low as 0.26 and its average is also 0.80. It is quite a risky affair. Hence it is suggested that the firm may possibly use this opportunity but should do away the risk involved in it.

3) The interest cover ratio (ICR) of Tata Steel exhibited that its profits are sufficiently large to cover the interest on its debentures and loans, which is a good assurance to debenture holders and bankers/financial institutions. However, it is also a corresponding fact that the firm has unused debt capacity. It is therefore suggested that the firm should emphasize on optimum use of its debt-capacity.

4) The short-term liquidity position of Tata Steel as reflected by its current and liquid ratios is worrisome. It is therefore suggested that the firm should take immediate steps to strengthen its immediate payment position. The firm should understand the relative importance of different components of current asset.

5) Tata Steel has faced the problem of liquid assets falling short of its standard requirement of being equal to its liquid liabilities. Maintaining liquid ratio position at the edge may not only be sufficient as it revealed just required margin of safety at current price level at current situation. In view of this, it is essential to have current ratio position to 2:1 level. It is indeed based on the logic that in the worst situation, even if, the value of current assets becomes half, the firm would be able to meet its obligations. This would leave the greater margin of safety and help the company to maintain comfortable short-term liquidity.

The interpretation that can be placed on the low current ratio and acid-test is that a large part of the current assets of the firm is tied up in slow moving and unsalable inventories and slow paying debts. If it is less than one, liquid assets no longer cover the payments due; if the value is much greater than one, scarce resources are wasted by being kept idle in a needless liquid condition. As it is delicate area to handle, proper care should be taken about managing these two ratios.

6) Increasing divided cover help in building good image of the company. However, higher dividend leads to less reserves and further reduces the capacity of internal financing. It is therefore suggested that Tata Steel should evolve the balanced dividend policy. This would increase the chances for the firm of emerging as a bonus candidate on one hand and help avoid the prospective difficulties in expanding its business.

7) Tata Steel's debtor's turnover ratio *(DTR)* has abruptly and swiftly increased during the study period. It seemed that the firm has made abrupt changes in its credit-collection policy. It is reflected in

highly speeded-up debtor's turnover and shortened age of average debtors. Unquestionably, it has supported strengthening short-term liquidity of the firm, however hampered the sales. It is, therefore, suggested that the management should alter the conservative policy as regards allowing credit to its customers. Otherwise it might lead to loosing the potential business.

8) Gross profit is the result of the relationship between prices, sales volume and costs. A change in the gross margin can be brought about by changes in any of these factors. The gross margin represents the limit beyond which fall in sales prices are outside the tolerance limit. Further, the gross profit ratio/margin can also be used in determining the extent of loss caused by theft, spoilage, damage, and so on in the case of those firms which follow the policy of fixed gross profit margin in pricing their products. A high ratio of gross profit to sales is a sign of good management as it implies that the cost of production of the firm is relatively low. It may also be indicative of a higher sales price without a corresponding increase in the cost of goods sold. It is also likely that cost of sales might have declined without a corresponding decline in sales price. Nevertheless, a very high and rising gross margin may also be the result of unsatisfactory basis of valuation of stock, that is, overvaluation of closing stock and/or undervaluation of opening stock.

As Tata Steel's gross profit margin *(GPM)* has performed multifold during the study period from its lowest value, the firm should get assured that the nothing unfair as mentioned in above paragraph has taken place.

9) Tata Steel's EPS has shown the rising trend. It is good. However, it should be borne in the mind that even if EPS of the firm has increased over the years, it does not necessarily follow that the firm's profitability has improved because the increased profits to the owners may be the effect of an enlarged equity capital as a result of profit retentions, though the number of ordinary shares outstanding still remains constant.

10) It seems that Tata Steel has gradually increased the investment in fixed assets compared to current assets. Though this ensures safety in the event of liquidation it hampers growth of business and thereby its profitability. It is, therefore, suggested that the company should invest a substantially in the current assets, which are really earning assets.

11) It is further suggested that the care should be taken not to finance its current assets through external sources. It would take away the major portion of company's profits to external channels.

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