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TRADE OFF BETWEEN LIQUIDITY AND PROFITABILITY

– A Study on TATA STEEL Ltd.

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ABSTRACT

Purpose of the study was to analyze the financial position of the company in terms of liquidity and profitability. In business, cash is important thing, without cash, company cannot survive and to take advantage of business opportunities, it is necessary to maintain liquidity position to overcome the difficulties. As the company desires to have more and more current assets and least current liabilities, the profitability of the organisation may be adversely affected. In this research paper, I try to evaluate the liquidity and profitability trade off in Tata Steel Limited.

Key words: Liquidity, Profitability, Rank Correlation, t distribution.

I. INTRODUCTION

Liquidity refers to the financial ability of the firm to meet the short term obligations as and when they arise. Liquidity management has been taken as an important tool to analyze the sustainability and liquidity position of any enterprise that may also help any organization to derive maximum profits at minimum cost. Liquidity and profitability are the two ends of a straight line. If you are on the line and move towards one end, automatically you move away from the other end. In other words, there is a trade – off between liquidity and profitability.

Profitability, in this reference may be the return earned on the total assets of the company. Every business firm's main aim is to maximise profits out of the capital invested. The success of the company is usually resulted from its profits earned, keeping the liquidity prospects in view. In reality, it is a difficult task to trade off between the liquidity and profitability, as the conservative policy of working capital may ensure sound liquidity but endangers the profitability. On the other hand, aggressive policy helps in making profits but the liquidity is not promised. Before deciding on an appropriate level of working capital investment, a firm's management has to evaluate the trade off between expected profitability and the risk that it may be unable to meet its financial obligations.

II. COMPANY PROFILE

Tata Iron and Steel Company was established by Dorabji Tata on 25 August 1907, as part of his father Jamsetji's Tata Group. By 1939 it operated the largest steel plant in the British Empire. The company launched a major modernization and expansion program in 1951. Later in 1958, the program was upgraded to 2 Million metric tonnes per annum (MTPA) project. By 1970, the company employed around 40,000 people at Jamshedpur, with a further 20,000 in the neighbouring coal mines. In 1971 and 1979, there were unsuccessful attempts to nationalise the company. In 1990, it started expansion plan and established its subsidiary Tata Inc. in New York. The company changed its name from TISCO to Tata Steel in 2005. Tata Steel on Thursday(12 Feb 2015) announced buying three strip product services centres in Sweden, Finland and Norway from SSAB to strengthen its offering in Nordic region.

Tata Steel Limited (formerly Tata Iron and Steel Company Limited (TISCO)) is an Indian multinational steel-making company headquartered in Mumbai, Maharashtra, India, and a subsidiary of the Tata Group. It was the 11th largest steel producing company in the world in 2013, with an annual crude steel capacity of 25.3 million tonnes, and the second largest private-sector steel company in India (measured by domestic production) with an annual capacity of 9.7 million tonnes after SAIL. Tata Steel has manufacturing operations in 26 countries, including Australia, China, India, the Netherlands, Singapore, Thailand and the United Kingdom, and employs around 80,500 people. Its largest plant is located in Jamshedpur, Jharkhand. In 2007 Tata Steel acquired the UK-based steel maker Corus which was the largest international acquisition by an Indian company till that date. It was ranked 486th in the 2014 Fortune Global 500 ranking of the world's biggest corporations. It was the seventh most valuable Indian brand of 2013 as per Brand Finance. On 16 February 2012 Tata Steel completed 100 years of steel making in India. The Tata Steel Group, with a turnover of Rs. 1, 48,614 crores in the financial year 2013- 14. The Tata Steel Group's vision is to be the world's steel industry benchmark in "Value Creation" and "Corporate Citizenship" through the excellence of its people, its innovative approach and overall conduct. Underpinning this vision is a performance culture committed to aspiration targets, safety and social responsibility, continuous improvement, openness and transparency.

In 2008, Tata Steel India became the first integrated steel plant in the world, outside Japan, to be awarded the Deming Application Prize 2008 for excellence in Total Quality Management. In 2012, Tata Steel became the first integrated steel company in the world, outside Japan, to win the Deming Grand Prize 2012 instituted by the Japanese Union of Scientists and Engineers.

A. Indian Operations

Tata Steel founded India's first industrial city, now Jamshedpur, where it established India's first integrated steel plant in 1907. The Jamshedpur Works currently comprises of a 9.7 mt pa crude steel production facility and a variety of finishing mills.Two new Greenfield steel projects are planned in the states of Jharkhand and Chhattisgarh. Kalinganagar project is underway, it is set to augment production capacity by 3 Million metric tonnes per annum (MTPA) in the first phase. Mines and collieries in India give the Company a distinct advantage in raw material sourcing. Iron Ore mines are located at Noamundi (Jharkhand) and Joda (Odisha) both located within a distance of 150 km from Jamshedpur. The Company's captive coal mines are located at Jharia and West Bokaro (Jharkhand).

B. European Operations

Tata Steel Europe (erstwhile Corus) has a crude steel production capacity of 18 Million metric tonnes per annum (MTPA). Tata Steel Europe has manufacturing operations in Western Europe, plants in UK, Netherlands, Germany, France and Belgium, backed by a sophisticated global network of sales offices and service centres.

C. South East Asian Operations

Tata Steel started its operations in SEA in 2004 with investments in NatSteel Singapore (Tata Steel Singapore) and Millennium Steel (Tata Steel Thailand).With over 40 years of Steel making experience, Tata Steel Singapore is one of the most prominent steel producers in the Asia Pacific region. It caters to the growing construction industry through its manufacturing presence in Singapore, Thailand, China, Malaysia, The Philippines and Australia. Tata Steel Thailand is the largest producer of long steel products in Thailand [16].

III. OBJECTIVES OF THE STUDY

1. To find out the relationship between liquidity and profitability.
2. To test the validity of the hypothesis.
3. To find out the impact of liquidity on profitability.

IV. REVIEW OF LITERATURE

A brief review of the literature in this field has been attempted in the following paragraphs.

Smith (1980) conducted a study on Profitability and Liquidity and suggested that working capital management directly influence risk and profitability of a firm. Hence it can be inferred that effective working capital management can increase the financial strength of a business [12].

Eljelly (2004) has investigated the relation between profitability and liquidity by using Correlation and regression analyses and found that the cash conversion cycle was of more Importance as a measure of liquidity than the current ratio that affects profitability [4].

Lazaridis and Tryfonidis (2006) investigated the relationship of corporate profitability and working capital management for firms listed at Athens Stock Exchange. They reported that there is statistically significant relationship between profitability measured by gross operating profit and the Cash Conversion Cycle. Furthermore, Managers can create profit by correctly handling the individual components of working capital to an optimal level [7].

Jain and Praveen Kumar (2006) viewed that working capital management practices assume vital importance in the smooth day-to-day functioning of business firms. While excess working capital can have an adverse impact on profitability, inadequate working capital can hold up production or sales operations of well managed business firms. Good working capital management is more crucial now than ever before in view of turbulence in the current business environment where competition is stiff and profit margins are low [6].

Afza and Nazir (2007) have examined the relationship between aggressive and conservative working capital policies for a large sample of 205 firms in 17 sectors listed on Karachi Stock Exchange during 1998-2005. They found a negative relationship between the profitability measures of firms and degree of aggressiveness of working capital investment and financing policies [1].

Dong (2010) reported that the firms" profitability and liquidity are affected by working capital management in his analysis. From his research it was found that the relationships among these variables are strongly negative. These indicate that decrease in the profitability will occur due to increase in the liquidity ratio [2].

S.Chatterjee (2010) focused on the importance of the fixed and current assets in the successful running of any organization. It poses direct impacts on the profitability liquidity. There have been a phenomenon observed in the business that most of the companies increase the margin for the profits and losses because this act shrinks the size of working capital relative to sales. But if the companies want to increase or improve its liquidity, then it has to increase its working capital. In the response of this policy the organization has to lower down its sales and hence the profitability will be affected due to this action. For this purpose 30 United Kingdom based companies were selected which were listed in the London Stock exchange .

Mahavidyalaya (2010) attempted to provide an insight into the conceptual side of working capital and to assess the impact of working capital management on liquidity, profitability and non-insurable risk of ONGC, a leading public sector enterprise in India over a 9 year period (i.e. from 1998-99 to 2006-07) [8].

Dr. Vivek Sharma (2011) has viewed that profitability and risk go hand in hand and that a firm earns good profit with moderate liquidity and at higher risk for which ten years data of Maruti Suzuki India Ltd. for a period of (2001 -2010) has been studied [3].

Sandhar, Simranjeet Kaur (2013) have attempted to say that cardinality of liquidity management in any organization cannot be over emphasized. This is because either inadequate liquidity or excess liquidity may be injurious to the smooth operations of the organization [10].

V. RESEARCH METHODOLOGY

Secondary data is used from the books, journals, reports and internet. Spearman's Rank Correlation analysis is used to find out the relationship between liquidity with profitability and further, t test has been applied to test the hypothesis and draw conclusions.. For the purpose of my study, I have taken the last five years data of Tata Steel Limited from its annual reports. With the help of the data, I made an attempt to evaluate the relationship between profitability and liquidity.

Null Hypothesis (H_0)- There is negative relationship between profitability and liquidity.

Alternative Hypothesis(H_A)- There is no negative relationship between profitability and liquidity.

TABLE 1: POSITION OF LIQUIDITY IN TATA STEEL LIMITED

(Rs.in crores)

Year	Current Assets	Current Liabilities	Current Ratio	Working Capital
2009-10	13603.46	23765.64	0.57	-10162.18
2010-11	17860.79	20755.74	0.86	-2894.95
2011-12	18483.79	19875.88	0.93	-1392.09
2012-13	25569.40	16458.91	1.55	9110.49
2013-14	13425.27	12003.02	1.12	1422.25

Source: Annual reports of Tata Steel Limited

The ideal ratio of current assets and current liabilities is said to be 2:1. But in Tata Steel Limited, the current ratio is very poor. The trends of current ratios in all the five years indicate that the company is more concerned about profitability rather than liquidity. If the situation continues further, the company has to face liquidity problems in meeting the short term obligations as and when they arise. So, the company has to maintain a trade off between liquidity and profitability.

Table 2: PROFITABILITY ANALYSIS **(Rs.In Crores)**

Year	Current Assets	Fixed assets	Total Assets	Current Liabilities	Capital Employed (CE = TA - CL)	EBIT	ROCE (EBIT/CE)
2009-10	13603.46	73671.31	87274.77	23765.64	63509.13	11534.08	18.16
2010-11	17860.79	63260.4	81121.19	20755.74	60365.45	9713.37	16.09
2011-12	18483.79	57831.39	76315.18	19875.88	56439.30	11782.77	20.88
2012-13	25569.40	47523.41	73092.81	16458.91	56633.90	11512.55	20.33
2013-14	13425.27	48982.68	62407.95	12003.02	50404.93	9063.49	17.98

Source: Annual reports of Tata Steel Limited

Table 3: RELATIONSHIP BETWEEN LIQUIDITY AND PROFITABILITY (Spearman's Rank Correlation Method used)

Year	Current Ratio	Rank	ROCE	Rank	D (Rank Difference)	D^2
2009-10	0.57	5	18.16	3	2	4
2010-11	0.86	4	16.09	5	-1	1
2011-12	0.93	3	20.88	1	2	4
2012-13	1.55	1	20.33	2	-1	1
2013-14	1.12	2	17.98	4	-2	4
					$\Sigma D^2 =$	14

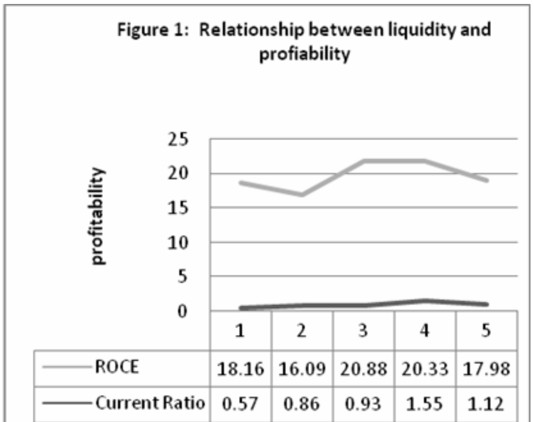

Figure 1: Relationship between liquidity and profitability

$$r = 1 - \frac{6(\Sigma D^2)}{n(n^2 - 1)} = 1 - \frac{6(14)}{5(5^2 - 1)} = 0.3$$

$$t = \frac{r}{\sqrt{(1 - r^2)}} * \sqrt{(n - 2)} = 0.\frac{3}{\sqrt{(1 - 0.3^2)}} * \sqrt{(5 - 2)} = 0.544705$$

VI. HYPOTHESIS TESTING

Tabulated value of t for 2 degree of freedom at 5% level of significance is 4.303. Since the calculated value of t is less than the tabulated value, it is not significant. Hence the null hypothesis is accepted and I concluded that there is negative relationship between profitability and liquidity.

VII. CONCLUSION

Managing trade off between liquidity and profitability is a crucial issue in today's cut throat competition in every industry. The profitability of the company would increase, if it decreases its liquidity and vice-versa. The above results indicate that there is a negative relationship between liquidity and profitability. So it is essential for the every firm to maintain equilibrium between profitability and liquidity in order to get optimum returns. It is observed that the Tata Steel has more concentrated on profitability rather than liquidity. In the initial years of the study, the current ratio was very less as compared to ideal ratio i.e., 2:1 but it has improved in the last two years of the study. The profitability has increased at good pace showing the efficiency of the company except in 2013-14. Thus, it can be concluded that the company is earning good profit with moderate liquidity and however, it has to improve its liquidity position to meet the short term requirements when they are due.

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AUTHOR'S PROFILE

Dr. B.Madhusudhan Reddy was awarded Doctorate in Accounting and Finance by Kakatiya University in 2008. He received his M.Com., M.Phil. degrees with I division in the year 1992 and 1996 respectively from KU. He served as Lecturer, Assistance Professor in DVM Degree & P.G College in Hyderabad and has been serving as an Associate Professor in DVM College of Business Management in Nalgonda affiliated to Mahatma Gandhi University since 2009. His research interests include Fundamental Analysis, Financial Management, Financial Risk Management, and Security Analysis and Portfolio Management