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A Measure of Judging the Short-Term Solvency: An Empirical Study of Ten Steel Companies in India

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Introduction

Liquidity is a prerequisite for the very survival of a business unit. Liquidity represents theability of the business concern to meet the short-term obligations when they fall due for payment Liquidity is concerned with short-term financial strengthof a company. The term 'liquidity' implies conversion of assets into cash without much loss. The creditors of the firm are interested in short-term solvency orliquidity of a firm. The short-term debt paying capacity of thefirm would be satisfactory, if it is in a position to meet its short-term debts when they fall due.

Ratio analysis is an important and widely used technique of financial management. As a tool of financial analysis, ratios are of crucial significance. The importance of ratio analysis lies inthe fact that it enables in drawing inferences regarding performance of a company as it showsfacts logically on a comparative basis. Ratio analysis is quite relevant in evaluating theperformance of a company in respect of different aspects such as liquidity position, long-termsolvency, profitability, operating efficiency, etc. Thus, it is usedto interpret the financial statements in order to ascertain the strengths and weaknesses of afirm.

The present study analyzes the short-term debt paying capacity aspect of financial performance of ten leading steel companies in India. The study is an attempt toportray some objective conclusions on the diverse aspects of liquidity of the selected Steel companies in India.

Short-Term Solvency and Turnover Ratios

Liquidity Ratios: Short-Term Solvency

Current Ratio

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

The current ratio is a commonly used measure of short-run solvency – the ability of a firm to meet its short-term debt requirements as they come due. The available cash resources to satisfy these obligations must come primarily from cash or the conversion to cash of other current assets such as accounts receivable and inventories. Accounts receivable and inventory may not be truly liquid. A firm could have a relatively high current ratio but not be able to meet demands for cash because the accounts receivable are of inferior quality or the inventory is salable only at discounted prices.

Quick Ratio

$$\frac{\text{Current assets} - \text{inventory}}{\text{Current liabilities}}$$

The quick ratio is a more rigorous test of short-run solvency that the current ratio because the numerator eliminates inventory, considered the least liquid current asset and the most likely source of losses.

Cash Flow Liquidity Ratio

$$\frac{\text{Cash} + \text{Mkt. Securities} + \text{CFO}^{a}}{\text{Current liabilities}}$$

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[a]*Cash flow from operating activities* Another approach to measuring short-term solvency is the cash-flow liquidity ratio, which considers cash flow from operating activities (from the statement of cash flows). The cash flow liquidity ratio uses in the numerator (as an approximation of cash resources) cash and marketable securities, which are truly liquid current assets; and cash flow from operating activities, which represents the amount of cash generated from the firm's operations, such as the ability to sell inventory and collect the cash. It is helpful to compare this ratio to the current and quick ratios. Contradictory pictures between this ratio and other liquidity ratios should be investigated thoroughly because, ultimately, companies need cash to pay high bills. High current and quick ratios combined with low or negative cash flow liquidity ratios could signal problems.

Cash Flow from Operation

One of the most important numbers in all of the financial statements is Cash Flow From Operations. It is important to evaluate a firm's success over time by identifying the underlying causes for the trends and the fluctuations of a firm's cash from operations.

The relative comparisons of cash provided from operations and the net income over time will frequently give an indication if the company is managing earnings. One of the best indications of earnings management is when the growth of net income is up and smooth and the trend of cash from operations is not. Over time these numbers should track in the same manner. The cash flow from operations are taken directly from the cash flow statement.

Accounts Receivable Turnover

$$\frac{\text{Net sales}}{\text{Accounts receivable}}$$

Inventory Turnover

$$\frac{\text{Cost of goods sold}}{\text{Inventory}}$$

Payables Turnover

$$\frac{\text{Cost of goods sold}}{\text{Accounts payable}}$$

The accounts receivable, inventory, and payables turnover ratios measure how many times, on average, accounts receivable are collected in cash, inventory is sold, and payables are paid during the year. These three measures are mathematical complements to the ratios that make up the net trade cycle, and therefore, measure exactly what the average collection period, days inventory held, and days payable outstanding measure for a firm; they provide an alternative way to look at the same information.

Average Collection Period

$$\frac{\text{Accounts receivable}}{\text{Average daily sales}}$$

The average collection period for accounts receivable is the average number of days required to convert receivables into cash. This ratio helps gauge the liquidity of accounts receivable – the ability of the firm to collect from customers. It may also provide information about a company's credit policies. For example, if the average collection period is increasing over time of is higher than the industry average, the firm's credit policies could be too lenient and accounts receivable not sufficiently liquid. The loosening of credit could be necessary at times to boost sales, but at an increasing cost to the firm. On the other hand, if credit policies are too restrictive, as reflected

in an average collection period that is shortening and less than industry competitors, the firm may be losing qualified customers.

Days Inventory Held

Inventory
Average daily cost of sales

The days inventory held is the average number of days it takes to sell inventory to customers. This ratio measures the efficiency of the firm in managing its inventory. Generally, a low number of days inventory held is a sign of efficient management; the faster inventory sells, the fewer funds are tied up in inventory. However, too low a number could indicate understocking and lost orders, a decrease in prices, a shortage of materials, or more sales than planned. A high number of days inventory held could be the result of carrying too much inventory or stocking inventory that is obsolete, slow-moving, or inferior, such as increased demand, expansion, or an expected strike.

Days Payable Outstanding

Accounts payable
Average daily cost sales

The days payable outstanding is the average number of days the firm takes to pay accounts payable in cash. This ratio offers insight into a firm's pattern of payments to suppliers. An optimal strategy is to delay payment of payables as long as possible but still make payment by the due date in order to avoid finance charges.

Net Trade Cycle

Average collection period
+ days inventory held
- days payable outstanding

The net trade cycle measures the normal cash conversion cycle of a firm – which consists of buying or manufacturing inventory, with some purchases on credit (creation of accounts payable); selling inventory, with some sales on credit (creation of accounts receivable)' and collecting cash from accounts receivable. Changes in the net trade cycle help explain why cash flow generation has improved or deteriorated by analyzing the key working capital accounts – accounts receivable, inventory, and accounts payable. The shorterthe net trade cycle, the more efficient the firm is in managing its cash.

Activity Ratios:

Asset Liquidity and Asset Management Efficiency

Fixed Asset Turnover

Net sales
Net property, plant, and equipment

Total Asset Turnover

Net sales
Total assets

The fixed asset turnover and total asset turnover ratios are two approaches to assessing management's effectiveness in generating sales from investments in assets. The fixed asset turnover considers only the firm's investment in property, plant, and equipment, and is extremely important for a capital-intensive firm, such as a manufacturer with heavy investments in long-lived assets. Generally, the higher these ratios, the smaller the investment required to generate

sales and thus the more profitable the firm. When the asset turnover ratios are low relative to the industry or the firm's historical record, either the investment in assets is too heavy and/or sales are sluggish. There may, however, be plausible explanations; for example, the firm may have undertaken and extensive plant modernization or placed assets in service at year-end, which will generate positive results in the long-term.

Steel Industry in India

India has emerged as the fourth largest steel producing nation in the world, as per the recent figures release by World Steel Association in April 2011. In 2010, India was the 5th largest producer, after China, Japan, USA and Russia had recorded a growth of 11.3% in steel production as compared to 2009. Overall domestic crude steel production grew at a compounded annual growth rate of 8.4% during 2005-06 to 2009-10. The Indian steel industry accounted for around 5% of the world's total productionin 2010.

Total crude steel production in India for 2010-11 was around 69 million tonnes and it's expected that the crude steel production in capacity in the country will increase to nearly 110 million tonne by 2012-13. Further, if the proposed expansion plans are implemented as per schedule, India may become the second largest crude steel producer in the world by 2015-16.

The demand for steel in the country is currently growing at the rate of over 8% and it is expected that the demand would grow over by 10% in the next five years. However, the steel intensity in the country remains well below the world levels. Our per capita consumption of steel is around 110 pounds as compared to 330 Pounds for the global average. This indicates that there is a lot of potential for increasing the steel consumption in India.

Immense growth potential in Indian Steel Sector

- Domestic crude steel production grew at a compounded annual growth rate of 8.4% in the last few years.
- Crude steel production capacity of the country is projected to be around 110 million tonne by 2012-13.
- 222 Memorandum of Understandings (MOU) have been signed with various states for planned capacity of around 276 million tonnes by 2019-20.
- Investments at stake are to the tune of $187 billion in the Steel sector.
- Increase in the demand of steel in India is expected to be 14% against the global average of 5-6% due to its strong domestic economy, massive infrastructure needs and expansion of industrial production.
- Demand of steel in the major industries like infrastructure, construction, housing, automotive, steel tubes and pipes, consumer durables, packaging and ground transportation.
- Target for $ 1 trillion of investments in infrastructure during the 12th Five Year Plan.

- Infrastructure projects (like Golden Quadrilateral and Dedicated Freight Corridor) will give boost to the demand in the steel sector in near future.
- Projected New Greenfield & up-gradation of existing Airport shall keep the momentum up.
- Increased demand of specialized steel in hi-tech engineering industries such as power generation, automotive petrochemicals, fertilizers etc.

Objectives of the Study

This study has the following broad objectives:

- ❖ To work out the overall quantum of liquidity maintained by the selected ten steel companies in India and to compare the liquidity position of all the companies.
- ❖ To evaluate the short-term solvency of the ten steel companies in India selected for this study.
- ❖ To determine the relative position (rank) of the sample companies in order of liquidity maintained by them.
- ❖ To find out how quickly different current assets are converted into cash by the selected ten steel companies in India by using relevant turnover ratios.
- ❖ To offer necessary suggestions to improve the efficiency of liquidity management of the selected companies.

Research Sample Design

The current study has been carried out by taking a sample of tenleading steel and alliedcompanies in India, viz. ADHUNIK METALIKS, AJMERA REALTY, BHUSHAN STEEL, SAIL, KALYANI STEEL LTD, ISMT LTD, ISPAT INDS, JINDAL STEEL, JSW STEEL, TATA STEEL. These companies are selected on random basis. The relevant datahave been mainly gathered from the published annual reports and accounts of the selectedsteel and allied companies. The other sources which have been used are technical and tradejournals, newspapers and other published information. The study covers a period of eightyears, from 2006 to 2010.

Research Methodology

The study is based on the secondary data. The study is broadly devoted in the analysis of liquidity position of ten pharmaceutical companies in India. The technique of ratio analysis has also been used to draw inferences regarding the liquidity position of the companies under study. Liquidity ratios, viz., Current Ratio (CR) and Quick Ratio (QR) have been calculated to evaluate the short-term financial strength of the companies. It is not appropriate to use only liquidity ratios to evaluate the short-term financial strength of any company. It is equally important to examine the speed with which the total and individual current assets are converted into cash. Thus, the relevant turnover ratios, viz., Debtors Turnover Ratio (DTR), Stock Turnover Ratio (STR), Current Assets Turnover Ratio (CATR), and Net Working Capital Turnover Ratio (NWCTR) have further been calculated to analyze the liquidity position of the selected Ten companies, comprehensively. In addition, statistical tools like mean have been applied to draw inferences in respect of short-term solvency of the selected companies.

Data Analysis

Liquidity Ratios and Turnover Ratios

Ratio analysis is an important technique of financial analysis. It is the process of determining and interpreting numerical relationship between figures of the financial statements (Guthman and Dougall, 1995). Although current and quick ratios are the main tools for examining the liquidity position of a firm as a whole, another aspect of evaluating the liquidity is to see how quickly different current assets are converted into cash. The ratios which measure this aspect are referred to as turnover ratios. As a matter of fact, liquidity ratios are not independent of the relevant turnover ratios. In the present study, liquidity

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ratios have been calculated along with the relevant turnover ratios to assess the short-term financial position of selected companies.

Table 1: Mean Liquidity and Turnover Ratios

Sr No	Companies	CR	QR	STR	DTR	CATR	NWCTR
1	ADHUNIK METALIKS	0.95	1.01	4.01	7.47	1.53	3.87
2	AJMERA REALTY	2.38[H]	2.03[H]	2.47[L]	5.86	0.98[L]	2.48
3	BHUSHAN STEEL	0.94	1.00	4.70	7.85	1.91	4.26
4	SAIL	1.52	1.15	6.11	14.61	1.36	4.11
5	Kalyani Steels Ltd.	1.08	1.09	8.46	5.60	1.83	5.90
6	ISMT LTD	1.06	1.39	6.57	4.68[L]	1.53	2.91
7	ISPAT INDS.	0.95	0.56	6.87	12.37	2.12	19.22[H]
8	JINDAL STEEL	1.00	0.90	7.74	15.40	1.61	8.99
9	JSW STEEL	0.59[L]	0.36[L]	8.52	36.84[H]	3.04[H]	-6.77
10	TATA STEEL	1.65	1.30	9.17[H]	35.62	1.74	-13.18[L]

Note: [H] refers to the highest ratio and [L] refers to the lowest ratio.

Source: Calculated from the Annual Reports of all the selected Companies, from 2006-2010.

It is clear from Table 1 that the current ratio in AJMERA REALTY is highest, followed by those of Tata Steel, SAIL, kalyani steels Ltd. And so on during the period of study. It is more than 2:1 (rule of thumb) in only one steel company selected for this study. Out of ten selected companies only AJMERA REALTY maintains satisfactory liquidity whereas JSW STEEL has the lowest liquidity followed by ISPAT LTD, Jindal Steel and so on. Thus, it can be concluded that the liquidity condition of all the sample companies is not quite satisfactory only one company maintains its liquidity position.

It is also evident from Table 1 that the quick ratio in AJMERA REALTY was once again highest, followed by those of TATA STEEL, SAIL, ADHUNIK METAIKS and BHUSHAN STEEL during the study period. It is more than 1:1 (rule of thumb) in seven companies out of ten companies selected for the study .Quick ratio of JSW STEEL is once again the lowest, followed by ISPAT INDS and JINDAL STEEL. It is thus, quite clear that the short-term financial strength of seven sample companies is very good and the companies are not satisfactory.

It is, however, important to note here that very high liquidity ratios (current and quick) may be considered to be good from the point of view of the creditors, but it may be indicative of slack management practices of a company, as it signals excessive inventories, poor credit standards and lenient collection policies pursued by the company and the company may not be making full use of its borrowing capacities (Spiller, 1977). Thus, a company should always maintain reasonable level of current/liquid assets in respect to its current liabilities.

Table 1 also presents four important turnover ratios—STR, DTR, CATR and NWCTR—to examine the liquidity position of the selected pharmaceutical companies with respect to the speed with which current assets and its components are convertedinto cash.

It is evident from the Table 1 that JSW STEEL has highest DTR, CATR and STR is also quite good but NWCTR is negative, where as TATA STEEL has highest STR ratio and its DTR and NWCTR is also quite satisfactory but its NWCTR is negative . ISPAT INDS has highest NWCTR and other three ratios are also positive and quite satisfactory.It is thus clear that inventory management, receivables

management and overall current assets management of TATA STEEL, JSW STEEL and ISPAT IND are quite effective and help the company in maintaining a good quantum of liquidity.

Table 1 also reveals that AJMERA REALTY is inefficient in converting current assets into cash as out four turnover ratios of this company two are lower than the corresponding turnover ratios of the other 10 steel companies. Even ISMT has one turnover ratio lowest and other are also not satisfactory. It is therefore concluded that the inventory management, credit management, collection policy and overall current assets management of AJMERA REALTY and ISMT LTD are quite sloppy and as a result the speed with which the current assets and its components are rotated is slow.

It can also be observed from Table 1 that the performance of TATA STEEL, JSW STEEL, JINDAL STEEL, ISPAT STEEL, Kalyani steel and SAIL in respect of ability to convert current assets into cash is reasonably good, as is clear from the four turnover ratios used for this purpose.

Ranking of the selected companies

In the paper an attempt has been made to evaluate the relative short financial position of the selected ten steel companies. For this purpose, ranks have been provided on the basis of mean liquidity and turnover ratios in descending order. Then, all the ranks given to each company are added and final ranks have been worked out on the basis of total ranks indicating the relative liquidity positions of the selected sample companies. It is evident from Table 2 that TATA STEEL occupies the first position, followed by Kalyani steel, ISPAT INDS., JINDAL STEEL, SAIL, JSW STEEL, BHUSHAN STEEL, AJMERA REALITY, ISMT LTD and ADHUNIK METALIKS in maintaining their short-term solvency position during the period under reference.

Table 2: Overall Ranking of Selected Companies on the Basis of the Calculated Mean Ratios.

Sr No	Companies	CR	QR	STR	DTR	CATR	NWCTR	Total Ranks	Ranks
1	ADHUNIK METALIKS	7	6	9	7	7	6	42	X
2	AJMERA REALTY	1	1	10	8	10	8	38	VIII
3	BHUSHAN STEEL	9	7	8	6	3	4	37	VII
4	SAIL	3	4	7	4	9	5	32	V
5	Kalyani Steels Ltd.	4	5	3	9	4	3	28	II
6	ISMT LTD	5	2	6	10	8	7	38	VIII
7	ISPAT INDS.	7	9	5	5	2	1	29	III
8	JINDAL STEEL	6	8	4	3	6	2	29	III
9	JSW STEEL	10	10	2	1	1	9	33	VI
10	TATA STEEL	2	3	1	2	5	10	23	I

Source : Calculated from the Annual Reports of all the selected Companies, from 2006-2010

Conclusion & Suggestions

- The mean current and quick ratios obtained are above the ideal ratio of 2:1 and 1:1 respectively, which reveals good liquidity position of all the companies selected for the study. However, it may be a signal of excessive inventories, poor credit standards and lax collection policies followed by the companies. It also indicates that the selected companies did not make good use of their borrowing capacities. It is,therefore, suggested that the sample companies should always keep reasonable level of current/liquid assets in respect to their current liabilities.

- All the mean turnover ratios of JSW STEEL, TATA STEEL and ISPATare highest among the selected companies, which exhibits the ability of Novartis to efficiently employ its different current assets in order to generate larger amount of sales and also to convert them into cash speedily. The mean turnover ratios of AJMERA REALTY and ISMT LTDare lowest among the selected company, which proves that the company failed in using its current assets in anefficient manner. It is, therefore, suggested the company should immediately review its inventory policy, credit standards and collection policy to improve its short-term financial strength. The remaining companies are managing their investments in different current assets satisfactorily.

- It is further clear from the ranking of the selected companies, where TATA STEEL occupies the first position in maintaining short-term solvency, followed by Kalyani steel, ISPAT INDS., JINDAL STEEL, SAIL, JSW STEEL, BHUSHAN STEEL, AJMERA REALITY, ISMT LTD and ADHUNIK METALIKS

Bibliography

1. Agarwal N K (1983), Management of Working Capital, Sterling Publishers (P) Ltd.,New Delhi.
2. Bardia S C (1988), Working Capital Management, Pointer Publishers, Jaipur.
3. Bhattacharya Hrishikesh (2003), Working Capital Management: Strategies and Techniques,Prentice Hall of India (P) Ltd., New Delhi.
4. George E Pinches (1990), Element of Financial Management, 3rd Edition, Harper CollinsPublishers, New York.
5. Gupta S P (2008), Statistical Methods, p. 1019, Sultan Chand & Sons, New Delhi..
6. Hampton John J (2003), Financial Decision Making, 4th Edition, Prentice Hall of India (P)Ltd., New Delhi.
7. John D Finnerty (1986), Corporate Financial Analysis, pp. 21-29, McGraw-Hill, Inc.,USA.
8. Khan M Y and Jain P K (2007), Management Accounting: Text, Problems and Cases,pp. 6.2-6.3, Tata McGraw-Hill Publishing Company Limited.
9. McMeanmin Jim (2000), Financial Management – An Introduction, Oxford UniversityPress, New Delhi.
10. Pandey I M (2007), Financial Management, Vikas Publishing House (P) Ltd., New Delhi.
11. Prashar S P (1996), Liquidity Management: Principles and Practices of Managing CashFlow, p. 910, Vision Book (P) Ltd., New Delhi.
12. Ravi M Kishore (2001), Financial Management, 2nd Edition, Taxman Allied Services (P)Ltd., New Delhi, India.
13. Richard I Levin and David S Rubin (1995), Statistics for Management, p. 738,Prentice-Hall of India (P) Ltd., New Delhi.
14. Sancheti D C and Kapoor V K (2007), Statistics: Theory, Methods and Applications,Sultan Chand & Sons.
15. Spiller E A (1977), Financial Accounting, p. 644, Richard D Irwin, Homewood, Ill.
16. VarshneySatish Chandra (2001), "Trade Credit and Company Liquidity", The ManagementAccount, Vol. 36, No. 10, pp. 738-756.
17. http://indiasteelexpo.in/IndustryOverview.php
18.http://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&ved=0CEcQFjAE&url=http%3A%2F%2Fssbea.mercer.edu%2Fbradley%2FBAA510%2Farticles%2Fratio%2520summary%2520Meonske%2520Exercises.doc&ei=bzfIUPrhIYTyrQfikoHQBA&usg=AFQjCNFVOBDeaEuhWnLGHm6q76Z5YheqSQ&bvm=bv.1354675689,d.bmk