THE SOLVENCY ANALYSIS OF SELECTED STEEL COMPANIES IN INDIA – AN EMPIRICAL STUDY

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THE SOLVENCY ANALYSIS OF SELECTED STEEL COMPANIES IN INDIA - AN EMPIRICAL STUDY

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ABSTRACT

India is among the top producers of all forms of steel in the world. Easy availability of low cost manpower and presence of abundant reserves make India competitive in the global setup. Finance is regarded as the life blood of a business. It is for the company to find out the short term requirement in order to meet day to day activities and long term requirement to meet its long term debt obligation. Liquidity is related to working capital analysis. Leverage or long term funds indicate the proportion between owner's funds and non-owners funds. It serves as a yardstick for judging the competence and efficiency of the management. We need proper management of short term and long term requirement for making organization profitable the present study is analysis the Solvency position of selected steel companies in India, the secondary data were used for this study and analysed the data by using of Mean, SD, and correlation and Anova finally it conclude that From the correlation analysis it can conclude that there is negative relationship between Bhushan and SAIL in maintaining their current ratio position From the ANOVA result it can conclude that companies belong to the same industry follows a different debt equity position during the study period.

1. INTRODUCTION

India is among the top producers of all forms of steel in the world. Easy availability of low cost manpower and presence of abundant reserves make India competitive in the global setup. The steel industry in India has witnessed an increase in demand due to expanding oil and gas sector, huge spending on infrastructural facilities coupled with growth in housing, consumer durables and auto sectors. According to the World Steel Association (WSA), India was the fourth largest producer of crude steel during January 2010–September 2010 and produced 50.1 million tonne (MT) crude steel during this period. At present, with the Government's increased emphasis on infrastructure, it is estimated that the sector is poised for significant growth. Finance is regarded as the life blood of a business. It is one of the foundation of all kinds activities. Management is interested in evaluating every activities of the firm. It is for the company to find out the short term requirement in order to meet day to day activities and long term requirement to meet its long term debt obligation. Liquidity is related to working capital analysis. Leverage or long term funds indicate the proportion between owner's funds and non-owners funds. It serves as a yardstick for judging the competence and efficiency of the management. We need proper management of short term and long term requirement for making organization profitable. The term 'solvency' implies ability of an enterprise to meet its long term indebt ness and thus, solvency ratios convey the long term financial prospects of the company. The shareholders, debenture holders and other lenders of the long-term finance/term loans may be basically interested in the ratios falling under this group.The term 'solvency' or long term solvency refers to the ability of a concern to meet its long term obligations. The long-term liability of a firm is towards debenture holders,financial institutions providing medium and long term loans and othercreditors selling goods on credit. These ratios indicate firm's ability to meetthe fixed interest and its costs and repayment schedules associated with its Long term borrowings.

Solvency Ratios:

Short term Solvency ratios

- Current ratio
- Quick ratio/ Acid test ratio
- Cash Position Ratio

Longterm solvency ratios

- Debt equity ratio;
- Total Assets to Debt Ratio;
- Proprietary ratio;
- Interest Coverage Ratio.

2. STATEMENT OF THE PROBLEM

Finance is regarded as a life blood of a business. Every firm measures its liquidity position (short term solvency) and long term solvency position. If organization maintain high liquidity position it indicates the sound solvency position and to meet

out current obligation. If the firm is not maintain proper liquidity position, they will consequence to meet out it short term finance obligation. A lower liquidity may rise due to lack of control; liquidity is being related to working capital Analysis. long term fund indicates the proportion of owners fund and non-owners funds. This study analysis the solvency position of selected steel companies in India.

3. OBJECTIVE OF THE STUDY

- To study about the short- term financial strength of selected steel companies in india
- To study about the long- term financial strength of selected steel companies in india

4. METHODOLOGY TO STUDY

For this Empirical analysis, Data has been collected from the official website of NSE and selected Steel company's financial reports. The Steel Companies which satisfied the following criteria have been short listed for further research.

- Share holders population should be greater then 5,000
- Availability of data for at least for the period of 5 years
- Total CA, Loans & Advances more than 100 cr.
- Total debt is more than 100 cr.

Companies that meet the above conditions are
Bhushan Steel Limited
Tata steel
JSW
Visa steel
SAIL

Statistical Tools Used

- **Mean, Standard Deviation, Coefficient of Variations :** used to find out the average position of accounting ratios related to solvency analysis
- **Correlation Analysis:** used for to identify the relationship between short term solvency position of the companies
- **Anova:** To test that companies belong to the same industry wheather following adifferent level of long term solvency position during the study period.

5. REVIEW OF LITERATURE

Adrian Morar (2009) Liquidity is necessary to the bank institutions for compensating the awaited or not awaited balance sheets fluctuations and for providing the necessary assets to development. The liquidity represents the capacity of a bank institution to cope efficiently with deposit withdrawals and other payable debts and covering the extra financing necessary, for credits and investment portfolio. A bank disposes of an adequate liquidity potential when it's able to obtain the necessary funds (by raising the debts, bonding, assets selling) immediately and at a reasonable price. The price of the liquidity depends on the market conditions and on the market perception of the risk level of the debtor institution.

Angamuthu& Sivanandam (2012) In this paper we examine long-term and short-term solvency status of Cement companies between 2000-01 and 2009-10. The five cement companies, four private owned and one Government owned are considered for the study. Results of the analysis reveals that there is no risk of solvency either in fulfilling long-term commitment in most of the cement manufacturing companies under study. Regarding short-term solvency, the study indicates that all cement companies have sufficient liquic assets to cover their short-term debt but a significant decline in short-term solvency level is found for majority of the companies as well as for all selected companies when pooled together. Overall this study envisages that long term solvency position is good while short-term solvency level is better fo cement companies.

Assem & Titman This paper finds that, on average, target that terminate takeover offers significantly increase thei leverage ratios. Targets that increase their leverage ratios th most reduce capital expenditures, sell assets, reduc employment, increase focus, and realize cash flows and shar prices that outperform their benchmarks in the five year following the failed takeover. Our evidence suggests tha leverage-increasing targets act in the interests c shareholders when they terminate takeover offers and tha higher leverage helps firms remain independent not becaus it entrenches managers, but because it commits managers t making the improvements that would be made by potenti raiders.

Bhat (1980) conducts a study which is related financi leverage of Indian manufacturing company . They examir the financial leverage by employing various variables such a firm size, variability in income, growth, profitability, operatir leverage and dividend payout policy. The research concludes that firm's financial leverage is not associated wi its size. The risky firm is more likely to employ le percentage of debt by witnessing with financial leverage a EBIT. This paper funds negative co-relation between firr leverage with its growth. There is a negative related betwe dividend payout policy and leverage. They unconver th degree of operating leverage does not influence the level a usage of debt.

Bruno & Casamatta We analyze the optimal financing investment projects when managers must exert unobservat effort and can also switch to less profitable riskier venture Optimal financial contracts can be implemented by combination of debt and equity when the risk-shifti problem is the most severe while stock options are al needed when the effort problem is the most seve Worsening of the moral hazard problems leads to decreas in investment and output at the macroeconomic lev Moreover, aggregate leverage decreases with the risk-shifti problem and increases with the effort problem.

Crutchley and Hansen (1989) tested whether insi holding lead to lower agency costs by analyzing the relat

between leverage, dividend policy and insider holdings. They found that higher earnings volatility is positively related to higher insider holdings, larger dividends and lower debt. On the other hand, if manager's faces lower costs of diversification , it leads to higher insider holdings, lower dividends, and lower debt. They concluded that managers control agency costs through financial policy trade off.

Daniel & Wheatley (2002) Prior research has shown that accounting information available prior to a bankruptcy is associated with the likelihood of bankruptcy. We show that additionally, the accounting information available prior to bankruptcy is associated with whether or not a firm will *emerge* from bankruptcy. We predict that firms that exhibit low solvency risk and high liquidity risk are most likely to emerge from bankruptcy. Firms that exhibit high solvency risk and high liquidity risk are predicted to be least likely to emerge from bankruptcy. Cross–sectionally, our results support these predictions, but our findings differ across large and small firms.

Doron Nissim & Stephen H. Penman This paper presents a financial statement analysis that distinguishes leverage that arises in financing activities from leverage that arises in operations. The analysis yields two leveraging equations, one for borrowing to finance operations and one for borrowing in the course of operations. These leveraging equations describe how the two types of leverage affect book rates of return on equity. An empirical analysis shows that the financial statement analysis explains cross-sectional differences in current and future rates of return as well as price-to-book ratios, which are based on expected rates of return on equity. The paper therefore concludes that balance sheet line items for operating liabilities are priced differently than those dealing with financing liabilities. Accordingly, financial statement analysis that distinguishes the two types of liabilities informs on future profitability and aids in the

Loan and Batrancea (2008) The management of bank liquidity is one of the problems that American banks currently encountered, while the crisis of real estate credits emerged at the end of the previous year in The United States tends to spread over Europe, Japan and other parts of the world, leading to a global crisis that will be greater then the global crisis from the '30s. That is why we believe that is imperiously urgent that banks should create own systems of liquidity analysis for the purpose of preventing at any moment their illiquidity and insolvability. The study that we present is an analysis guide for the liquidity state and preventing liquidity risk, where we highlight aspects regarding: the concept of bank liquidity, liquidity administration, liquidity risk management, liquidity indicators and methods for measuring liquidity risk.

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Nevins D. Baxter (1967) examined that the risk associated with excessive leverage with likely increased the cost of capital of the firm. A high degree of debt increase the likelihood of bankruptcy and therefore increase the risk of overall earnings streams. Since there appear to be very real costs associated with bankruptcy other things equal, excess leverage can reduce value of the firm.

Safieddin and Titman (1999) presents result consistent with use of debt being positively associated with an alignment of interest between shareholder and managers as they target of failed takeovers that subsequently increased their leverage ratio tend to experience significantly better performance that those that do not.

Samuel H.Baskar (1973) utilized a simultaneous equation approach and found that leverage measured inversely by the ratio of equity to assets and had the theoretically correct negative sign and was significant as well. And also found that the predictability of output changes on total cost and hence on profit fluctuation may separately influence financial leverage decisions in expected ways, although their effect are not significant at ordinary test level.

UriBen-Zion Sol S.Shalit (1975) demonstrated that Fisher's findings with respects to corporate bonds are also true for common stock: the firm's size and leverage are important determinats of its risk. In addition, the firm's dividend record measures the firm's success in maintaining its target dividend policy , its underlying earning stability and, to some extent, simply its age.

6. DATA ANALYSIS AND INTERPRETATION

A) SHORT TERM SOLVENCY ANALYSIS

a) CURRENT RATIO

The current ratio is the most common ratio for measuring liquidity. The current ratio is the ratio of total current assets and total current liabilities.

Current Ratio\ = Current Assets/Current Liability

TABLE NO 1.MEAN, S.D, C.V OF CURRENT RATIO FOR SELECT STEEL COMPANIES

Company / Year	BHUSHAN	SAIL	JSW	TATA	VISA
2011	1.35	1.1	0.44	0.47	0.39
2010	1.47	0.95	0.37	0.46	0.51
2009	1.22	1.3	0.37	0.51	0.50
2008	1.22	1.15	0.54	0.52	0.80
2007	1.41	1.16	0.44	0.53	0.83
2006	1.50	1.04	0.45	0.94	0.76
MEAN	**1.36**	**1.12**	**0.435**	**0.57**	**0.63**
S.D	**0.71**	**0.37**	**0.49**	**0.467**	**0.44**
C.V	**52.2**	**33**	**133**	**81**	**71**

S.D- Standard Deviation , C.V- Coefficient of Variation .
Source: Secondary Data.

Interpretation:

The above Table 1 shows that the Mean, S.D, C.V of Current Ratio of select Steel Company in India , the higher mean value 1.36 for Bhushan Steel, Sail-1.12 and the lowest mean value for JSW is 0.435, and also the S.D is 0.71 is higher for Bhushan and the lowest S.D value for SAIL is 0.37.

b) QUICK RATIO

Quick Ratio is also known as liquid ratio or acid test ratio or near money ratio. An indicator of a company's short-term liquidity. The quick ratio measures a company's ability to meet its short-term obligations with its most liquid assets. The higher the quick ratio, the better the position of the company.

Quick Ratio =Quick assets/Current Liabilities

TABLE NO.2. MEAN, S.D., C.V OF QUICK RATIO FOR SELECT STEEL COMPANIES

Co. / Year	BHUSHAN	SAIL	JSW	TATA	VISA
2011	0.18	0.30	0.09	4.3	0.04
2010	0.43	0.27	0.08	0.10	0.09
2009	0.45	0.33	0.06	0.12	0.09
2008	0.44	0.39	0.15	0.14	0.24
2007	0.59	0.33	0.12	0.16	0.25
2006	0.70	0.27	0.10	0.39	0.23
MEAN	**0.465**	**0.315**	**0.1**	**0.86**	**0.156**
S.D	**0.157**	**0.46**	**0.18**	**1.50**	**0.35**
C.V	**34**	**147**	**187**	**175**	**226**

S.D- Standard Deviation , C.V- Coefficient of Variation .
Source: Secondary Data

Interpretation:

The above Table indicates that the Mean, S.D, C.V of Quick Ratio of select Steel Company in India, the higher mean value is 0.86 for TATA , and the lowest mean value for JSW is 0.10 , and also the indicates the S.D 1.50 for TATA and the lowest S.D value for Bhushan steel is 0.157.

c) CASH POSITION RATIO

It is otherwise called as Absolute Liquidity Ratio. When liquidity is highly restricted in terms of cash and equivalents, this ratio should be calculated. The inventory and the debtors are excluded from current assets.

Cash Position Ratio = Cash /Current Liabilities

TABLE NO.3.MEAN, S.D., C.V OF CASH POSITION RATIO FOR SELECT STEEL COMPANIES

Co. / Year	BHUSHAN	SAIL	JSW	TATA	VISA
2011	0.01	0.01	0.02	0.04	0.003
2010	0.05	0.017	0.013	0.05	0.01
2009	0.07	0.03	0.02	0.05	0.003
2008	0.014	0.052	0.05	0.06	0.05
2007	0.017	0.058	0.05	0.07	0.05
2006	0.019	0.042	0.02	0.15	0.03
MEAN	**0.03**	**0.03**	**0.02**	**0.06**	**0.02**
S.D	**0.05**	**0.16**	**0.137**	**0.232**	**0.137**
C.V	**167**	**562**	**687**	**388**	**687**

S.D- Standard Deviation, **C.V**- Coefficient of Variation.
Source: Secondary Data

Interpretation:

The above Table inferred that the Mean, S.D, C.V of Cash Position Ratio of select Steel Company in India, the higher mean value is 0.06 for TATA, and the lowest mean value for JSW &VISA is 0.02 , and also the indicates the highest S.D 0.232 for TATA and the lowest S.D value for JSW &VISA steel is 0.137.

d) STOCK RATIO

This is also known as Stock Velocity. This ratio is calculated to consider the adequacy the quantum of capita and justification for investing in inventory. This ratio is use to measuring the profitability.

Stock Ratio = Cost of Goods Sold /Inventory

TABLE NO. 4 MEAN, S.D., C.V OF STOCK RATIO FOR SELECT STEEL COMPANIES

Company / Year	BHUSHAN	SAIL	JSW	TATA	VISA
2011	1.59	2.43	4	3.8	3.05
2010	2.18	2.5	4.4	3.9	2.62
2009	2.92	2.7	3.5	3.42	2.48
2008	3.03	3.08	3.3	3.36	2.19
2007	4.17	2.8	4.8	3.57	3.57
2006	4.72	2.87	4.3	2.57	2.83
MEAN	**3.10**	**2.73**	**4.05**	**3.43**	**2.79**
S.D	**2.77**	**2.81**	**3.55**	**2.92**	**2.27**
C.V	**89**	**89**	**88**	**85**	**82**

S.D- Standard Deviation, **C.V**- Coefficient of Variation.
Source: Secondary Data.

Interpretation:

The above Table shows that the Mean, S.D, C.V of Stock Ratio of select Steel Company in India, the higher mean value is 4.05 for JSW, and the lowest mean value for SAIL is 2.73 , and also the indicates the highest S.D 3.55 for JSW and the lowest S.D value for VISA steel is 2.27.

TABLE 5 CORRELATION ANALYSIS CORRELATION BETWEEN CURRENT RATIO OF BHUSHAN AND SAIL COMPANY

S.NO	X(BHUSHAN)	Y(SAIL)	X2	Y2	XY
1	1.35	1.1	1.822	1.21	1.485
2	1.47	0.95	2.160	0.902	1.396
3	1.22	1.3	1.488	1.69	1.586
4	1.22	1.15	1.488	1.322	1.403
5	1.41	1.16	1.988	1.345	1.635
6	1.50	1.04	2.25	1.081	1.56
TOTAL	**8.17**	**6.7**	**11.196**	**7.550**	**9.064**

$$r = \frac{\sum xy - \frac{(\sum x)(\sum y)}{n}}{\sqrt{\left(\sum x^2 - \frac{(\sum x)^2}{n}\right)\left(\sum y^2 - \frac{(\sum y)^2}{n}\right)}}$$

r = -0.81

Interpretation:

The correlation between two variables is negative. There is negative relationship (r = -0.81) between Bhushan and SAIL current ratio position . It can be clear that companies belonging to the same Steel industry have maintaining different current ratio position among themselves.

B) LONG TERM SOLVENCY ANALYSIS

a) DEBT – EQUITY RATIO

The relationship between borrowed funds and owner's capital is a popular measure of the long – term financial solvency of a firm. This relationship is shown by the debt-equity ratio. It is determined to ascertain soundness of the long – term financial policies o0f the company.

Debt- Equity Ratio = Total Debt /Shareholders Fund

TABLE NO. 6. MEAN, S.D., C.V OF DEBT-EQUITY RATIO FOR SELECT STEEL COMPANIES

Co. / Year	BHUSHAN	SAIL	JSW	TATA	VISA
2011	2.81	0.54	1.02	0.58	3.94
2010	2.85	0.49	1.74	0.67	3.59
2009	3.97	0.26	2.12	0.90	3.18
2008	3.51	0.13	1.53	0.65	2.01
2007	2.66	0.24	0.74	0.69	1.57
2006	2.28	0.34	0.94	0.32	0.62
MEAN	**3.01**	**0.33**	**1.348**	**0.63**	**2.48**
S.D	**2.52**	**0.44**	**0.84**	**0.44**	**2.25**
C.V	**84**	**135**	**62**	**71**	**91**

S.D- Standard Deviation, C.V- Coefficient of Variation .
Source: Secondary Data.

Interpretation:

The above Table indicates that the Mean, S.D, C.V of Debt-Equity Ratio of select Steel Company in India, the higher mean value is 3.01 for Bhushan, and the lowest mean value for SAIL is 0.33 , and also the indicates the highest S.D 2.52 for Bhushan and the lowest S.D value for SAIL & TATA is 0.44.

b) TOTAL DEBT RATIO

A ratio that indicates what proportion of debt a company has relative to its assets. The measure gives an idea to the leverage of the company along with the potential risks the company faces in terms of its debt-load. A debt ratio of greater than 1 indicates that a company has more debt than assets, meanwhile, a debt ratio of less than 1 indicates that a company has more assets than debt. Used in conjunction with other measures of financial health, the debt ratio can help investors determine a company's level of risk.

Debt Ratio = Total Debt/Total Assets

TABLE NO.7.MEAN, S.D, C.V OF TOTAL DEBT RATIO FOR SELECT STEEL COMPANIES

Company / Year	BHUSHAN	SAIL	JSW	TATA	VISA
2011	0.73	0.35	0.49	0.36	0.78
2010	0.74	0.33	0.63	0.40	0.76
2009	0.76	0.21	0.67	0.47	0.74
2008	0.77	0.11	0.60	0.39	0.66
2007	0.72	0.19	0.42	0.40	0.61
2006	0.69	0.25	0.48	0.24	0.38
MEAN	**0.735**	**0.24**	**0.54**	**0.37**	**0.65**
S.D	**0.44**	**0.418**	**0.48**	**0.47**	**0.44**
C.V	**60**	**174**	**89**	**128**	**69**

S.D- Standard Deviation , **C.V**- Coefficient of Variation
Source: Secondary Data.

Interpretation:
The above Table indicates that the Mean, S.D, C.V of Total debt Ratio of select Steel Company in India, the higher mean value is 0.735 for Bhushan, and the lowest mean value for SAIL is 0.24, and also indicates the highest S.D 0.48 for JSW and the lowest S.D value for SAIL is 0.418.

c) PROPRIETARY RATIO
Proprietary ratio relates the shareholders funds to total assets. It is a variant of the equity ratio. This ratio shows the long term or future solvency of the business. It is calculated dividing shareholders funds by the total assets. This ratio shows the financial strength of the company.
Proprietary Ratio = Shareholders' Fund / Total Assets

TABLE NO. 8.MEAN, S.D., C.V OF PROPRIETARY RATIO FOR SELECT STEEL COMPANIES

Co. / Year	BHUSHAN	SAIL	JSW	TATA	VISA
2011	0.26	0.64	0.48	0.62	0.19
2010	0.25	0.66	0.36	0.59	0.21
2009	0.19	0.78	0.31	0.52	0.23
2008	0.22	0.88	0.39	0.60	0.33
2007	0.27	0.80	0.57	0.58	0.38
2006	0.30	0.74	0.51	0.74	0.61
MEAN	**0.24**	**0.75**	**0.43**	**0.60**	**0.32**
S.D	**0.41**	**0.42**	**0.48**	**0.47**	**0.44**
C.V	**171**	**57**	**112**	**79**	**137**

S.D- Standard Deviation , **C.V**- Coefficient of Variation .
Source: Secondary Data.

Interpretation:
The above Table 8 inferred that the Mean, S.D, C.V of Proprietary Ratio of select Steel Company in India, the higher mean value is 0.75 for SAIL, and the lowest mean value for Bhushan is 0.24, and also the indicates the highest S.D 0.48 for JSW and the lowest S.D value for Bhushan is 0.41.

d) INTEREST COVERAGE RATIO
This ratio measures the debt servicing capacity of a firm in so far as fixed interest on long term loan is concerned. That is, the relationship between Earnings Before Interest and Tax (EBIT) and fixed interest charges. It is expressed in percentage or number of times. It also highlights the ability of the firm to raise additional funds in future.
Interest coverage ratio = EBIT / Interest

TABLE NO.9 MEAN, S.D., C.V OF INTEREST COVERAGE RATIO FOR SELECT STEEL COMPANIES

Co / Year	BHUSHAN	SAIL	JSW	TATA	VISA
2011	4.8	1.58	4.06	6.79	1.81
2010	6.48	25.95	4.02	4.9	1.97
2009	5.78	38.14	1.70	5.9	-0.73
2008	6	46.75	6.02	8.6	2.81
2007	5.3	29.63	5.97	25.6	2.60
2006	3.1	13.43	4.51	31.83	2.31
MEAN	**5.24**	**28.28**	**4.38**	**13.93**	**1.79**
S.D	**4.84**	**30.14**	**4.11**	**17.14**	**1.68**
C.V	**92**	**107**	**94**	**123**	**94**

S.D- Standard Deviation , **C.V**- Coefficient of Variation .
Source: Secondary Data.

Interpretation:
The above Table indicates that the Mean, S.D, C.V of Interest Coverage Ratio of select Steel Company in India, the higher mean value is 28.28 for SAIL, and the lowest mean value for VISA is 1.79, and also the indicates the highest S.D 30.14 for SAIL and the lowest S.D value for VISA is 1.68. High ratio indicates the better is the position of long term creditors.

ONE – WAY ANNOVA TABLE FOR DEBT EQUITY RATIO

Source	Degree of freedom	Sum of Square	Mean Square	F-ratio	5% F -limit
Between Companies	2	10.44	5.22	7.90	F(2,15)=3.68
Within Companies	15	9.96	0.66		
Total	17	20.41			

Interpretation:

In order to find out whether the mean value of debt – equity ratio of the companies differ from each other, Hypotheses of the study was formulated like that

Null Hypothesis

Ho = Debt – equity ratio position of Selected companies does not differ significantly.

Alternate Hypothesis

H1 = Debt – equity ratio position of Selected companies does differ significantly.

The ANOVAs table has shown that, there is significant difference among the mean value of debt equity position among the companies. Since the calculated value of F is 7.90 which greater than table value of 3.68 (CV > TV at 5% significant level), the Null Hypothesis is rejected and alternative hypothesis is accepted. It can be clear that companies belonging to the same Steel industry have maintaining different Debt – Equity position among themselves.

7. FINDINGS FROM THE STUDY

- The highest mean value of current ratio for Bhushan is 1.36 and lowest mean value for JSW is 0.435 and also indicates the highest S.D is 0.71 for Bhushan and lowest S.D is 0.37 for SAIL. There is moderate fluctuation to maintain their current ratio.
- TATA has the highest portion of quick ratio position is 0.86 as compared to other selected companies. All other selected companies should maintain the average level of quick ratio. The lowest mean value of quick ratio is 0.1 for JSW, and also indicates the TATA have highest value of S.D is 1.50.
- TATA has highest mean value is 0.06 and lowest mean value is 0.02 for JSW and also TATA showed highest S.D. is 0.232 and lowest S.D for Bhushan is 0.05. There is moderate fluctuation in cash position ratio.
- Gradual increase and decrease in all select companies stock ratio position. JSW has highest mean value is 4.05 and lowest mean value for SAIL is 2.73 and also shows the highest S.D for JSW is 3.55 and lowest S.D of stock ratio is 2.27 for VISA.
- From the correlation analysis, there is negative relationship between Bhushan and SAIL's Current Ratio Position , so that the Companies belongs to same steel industry are maintaining different level of Current Ratio Position.
- Gradual increase in their debt equity position, Bhushan showed highest mean value is 3.01 and lowest mean value for SAIL is 0.33 and also indicates the highest S.D is 2.52 for Bhushan and lowest S.D is 0.44 for SAIL and TATA.
- There has been moderate fluctuation in their total debt ratio. Bhushan is having highest mean value is 0.735 and lowest debt ratio of mean value is 0.24 for SAIL, and also showed highest S.D for JSW is 0.48 and lowest S.D is 0.44 for Bhushan and VISA.
- There has been decrease in their proprietary ratio. From 2006 all selected companies decrease their proprietary ratio. The highest mean value of proprietary ratio for SAIL is 0.75 and lowest mean value of proprietary ratio for 0.24 for Bhushan and also the highest value of S.D is 0.48 for JSW and lowest S.D is 0.41 for Bhushan.
- Gradual increase and decrease in their interest coverage ratio. The highest mean value of interest coverage ratio is 28.28 for SAIL and lowest mean value of interest coverage ratio for VISA is 1.79 and also showed the highest S.D for SAIL is 30.14 and lowest S.D is 1.68 for VISA.
- From the ANOVA table there is significant difference of debt equity ratio of JSW, TATA and VISA. The calculated F Value 7.90 has been greater than the table value 3.68 at 5% level of significance. Hence Null hypothesis was rejected.

8. CONCLUSION

Liquidity plays a vital role in survival of a business. Some describe it as solvency, but it would be better if the term 'solvency' is reserved for "ability to survive in the long run". Bhushan have highest Current Ratio compared to other selected companies but other selected companies need to increase the Current ratio position. Quick ratio for TATA is more than 1:1; it indicates the sound financial position from other selected companies. Debt equity ratio of Bhushan and Visa is more than 2:1 ratio, it shows that restriction to borrowing funds, and Bhushan is having highest total debt ratio from others, they need to decrease their total debt position. SAIL has been in sound position in proprietary level from other selected unit. Bhushan, JSW & VISA are showing below the average of 60%, they need to increase their position. From the correlation analysis it can conclude that there is negative relationship between Bhushan and SAIL for maintaining their current ratio position. From the ANOVA result it can conclude that companies belong to the same industry followed a different debt equity position during the study period.

REFERENCES:

1. **Abdus Samad** (2004) in his paper examines the comparative performance of Bahrain's Samad, Abdus, and Kabir Hassan (2000), " the performance of Malausian Islamic Bank during 1`984-1997: An Exploratory study," thoughts on Economics 10, no.1&2: 7-26
2. **Adrian Morar** (2009). "Liquidity risk in the Romanian credit union", Journal of International Finance and Economics 9.2 (May 2009): p87(4).
3. **R. Angamuthu & A. Sivanandam** (2012). "Long-Term And Short-Term Solvency Status Of Select Cement Industrial Units In Tamil Nadu", IJEMR – February 2012-Vol 2 Issue 2
4. **Assem Safieddine & Sheridan Titman**. "Leverage and Corporate Performance: Evidence from Unsuccessful Takeovers", Journal of finance, Volume 54: Issue 2 Page range: 547 – 580
5. **Bhat** (1980). "Determinates of financial leverage: further evidence", CA(29)(6) p 451-452
6. **Bruno Biais & Catherine Casamatta**. "Optimal Leverage and Aggregate Investment", Journal of finance Volume 54: Issue 4 Page range: 1291 - 1323
7. **Crutuchley and Hansen** (1989). " A test of the agency theory of managerial ownership corporate leverage and corporate dividends ": Financial Management : vol.18: 1989 pp36-46
8. **Daniel M. Bryan ,Samuel L. Tiras, Clark M. Wheatley** "The Interaction of Solvency with Liquidity and its Association with Bankruptcy Emergence", Journal of Business Finance & Accounting Volume 29, Issue 7-8, pages 935–965, September/October 2002
9. **Doron Nissim (Graduate School of Business, Columbia University) & STEPHEN H. PENMAN (Graduate School of Business, Columbia University).** "Financial Statement Analysis of Leverage and How It Informs About Profitability and Price-to-Book Ratios"
10. **Douglas W. Diamond &Raghuram G. Rajan** (2005), "Liquidity Shortages and Banking Crises", The Journal of Finance Volume 60, Issue 2, pages 615–647, April 2005
11. **Jensen, Solbery and Zorn** (1992). " Simultaneous determination of insider ownership, debt and dividend policies": Journal of Finance and Quantitative Analysis vol 27 1992; P 247-263
12. **Kader, Jandbotam., and Asarpota, Anju k.** (2007), "Comparative financial performance of Islamic Vis a vis conventional banks in the UAE". Paper presented at 2006-2007 Annual Student Research Symposium& First Chancellor's undergraduate Research Award at UAE university
13. **Ioan Batrancea, Larissa Batrancea and Andrei Moscvicio** (2008). "The analysis of the banking liquidity risk", The Journal of International Business and Economics 8.1 (Jan 2008): p111(12).
14. **Ioan Batrancea, Larissa Batrancea and Andrei Moscvicio** (2009). "The analysis of the entity's liquidity--a means of evaluating cash flow",Journal of International Finance and Economics vol 9.1 (Jan 2009): p92(6).
15. **Morellec.E** (2001). "Asset liquidity, capital structure, and secured debt". Journal of financial Economics (61) pg 173-206
16. **Nevins D. Baxter** (1967). " Leverage, Risk of return and cost of capital": The Journal of Finance vol 22 no:3 sep 1967: P 395-403
17. **Safieddin and Titman** (1999), "Leverage and corporate performance Evidence from unsuccessful takeover". Journal of Finance vol 54:1999 p.219-244
18. **Samuel H. Baskar** (1973). " Risk and Leverage and profitability: An industry Analysis": the review of economics and statistics : Vol 55; no.4 nov1973 pp.503-507.
19. **Viral V. Acharya & S. Viswanathan**(2011). "Leverage, Moral Hazard, and Liquidity",The Journal of Finance Volume 66, Issue 1, pages 99–138, February 2011
20. **UriBen-Zion Sol S.Shalit** (1975). " Size, Leverage and dividend record as determinants of Equity Risk": The Jounral of Finance vol 30 no.4 sep 1975 pp 1015-1026

Text books:

- **C.R. Kothari,** Research Methodology, methods and techniques, New Age International Publishers.
- **R.S.N. Pillai & Bagavathi,** , Management Accounting (2007), S. chand & Company ltd.
- **Chandra Prasanna.**, Financial Management, Tata McGraw Hill Publishing Company Ltd.
- **S. Arora & P.N Arora,** Statistics for Management, S. Chand
- **Khan., and Jain.**, financial management, (2004) Tata McGraw Hill Company Ltd, New Delhi

Websites

www.nse-india.com
www.moneycontrol.com
www.bhushan-group.org
www.tatasteel.com
www.visasteel.com
www.sail.co.in
www.jsw.in