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ANALYSIS OF LEVERAGE POSITION OF INDIAN HOTEL INDUSTRY

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Abstract

The present study describes that it is one of the important instruments to design an appropriate capital structure mix or financial plan. To design an appropriate capital structure mix or financial plan, the amount of EBIT under various financial plans, should be related to earning per share. One widely used means of examining the effect of leverage to analyze the relationship between EBIT and earning per share is leverage ratio. Leverage ratio is used to calculate the leverage of a company to get an idea of the Company's methods of financing or to measure its ability to meet financial obligations. In the present study four types of ratios were calculated, that is, debt to equity ratio, funded debt to total capitalisation ratio, net worth to total assets ratio and fixed assets to net worth ratio. This analysis describe that the need for the leverage to reduce the risk, that is, the effect of changes in revenue and costs on the shareholders' return.

1. Introduction

Tourism has been a major social phenomenon of societies all over the world. It has the potential to grow at a high rate and ensure consequential development of the infrastructure of the destinations. It has the capacity to capitalize on the country's success in the services sector and provide sustainable models of growth. Tourism sector stimulates other economic sectors like agriculture, horticulture, poultry, handicrafts, transport and construction, through its backward and forward linkages and cross-sectoral synergies.

Of the many and diverse components of the tourist industry, hotels constitute the most important segment. Hotels are the vital and essential part of the tourist industry. Without an adequate development of hotel resources, all the national scenery, all the climatic virtues and all the sporting and recreational facilities will not suffice to sustain a good volume of tourist trade. Economically, tourism brings in foreign exchange as it is an invisible export.

The hospitality and tourism cannot be separated as hospitality is the key to success in the tourism industry. The Indian tourism and hospitality industry experienced a growth of 24.6% during 2009–2010 timeframe. The industry is the third-largest foreign exchange earner, accounting for 6.2% of India's GDP and 8.8% of India's total employment.

2. Review of Literature

The hotel industry is considered a high-risk business by lenders and mortgage investors (Elgonemy, 2002). One major concern of hotel financing is the debt to equity ratio, as excessive debt increases the costs of finance that reverse the positive effects of leverage. According to

Kwansa and Parsa (1991) quoted in a study, loan default was found to be one of the events unique to the bankrupt companies.

Hotels typically have high operating expenses in comparison to other types of property. For example, in a hotel environment where the variable cost is 40 per cent and the rest are fixed cost, every 1 per cent of revenue lost only 0.4 per cent of expenses (Mammoser, 2009). At the same time, if revenue declines 20 per cent, the net cash flow would generally drop 35 per cent to 40 per cent (Fitch, 2009).As such, during a recession, a decline in hotel revenues will seriously impact the solvency of hotel properties that incurred large amount of debt.

3. Objectives of the Study

The main objective of the present study is to analyse the leverage position of the selected hotel companies in India.

4. Scope of the Study

There are about 1408 such hotel companies which are working in India on 31st December 2008. Hence the present study is confined to Hotel companies consisting of one central public sector and three private sectors only.

5. Research Methodology

5.1 Research Design

The present study is an analytical study on Leverage Position of Indian hotel Industry. The study is primarily analytical in the sense that it analyses the various financial variables based on secondary data. The methodology adopted for the study is presented in the following paragraphs.

5.2 Sampling Design

The present study is undertaken based on a sample of four Indian Hotel companies which share is about 10 per cent of total share of Indian Hotel Industry. The entire analysis is based on the data relating to leveragey analysis of the following hotel companies only.

1. Indian Hotels Company Limited (IHC)
2. East Indian Hotels Limited (EIH)
3. India Tourism Development Corporation Limited (ITDC)
4. Hotel Leela Venture Limited (HLV)

5.3 Collection of Data

The present study is mainly based on secondary data on hotel industry. Only hotel group-wise data are used. In order to carry out the aforesaid objectives, the secondary data were collected relating to hotel industry. The secondary data were collected from published sources like the published annual reports of companies which have been collected from the official website of the selected hotel companies, various publications of Hotel Company's association and individual companies, various books, periodicals, journals, thesis, news paper and websites. The papers presented by experts in various conferences have also been reviewed.

5.4 Processing of Data

All the data have been classified, tabulated for better comprehension and analysis. Simple mathematical tools like ratios, percentage and averages and statistical tools such as regression analysis, standard deviation and One-way analysis of variance have been applied for analysis of data. All the analysis has been done using SPSS for windows release 16.00 statistical package.

5.5 Framework of Analysis

In the present study some mathematical and statistical tools have been applied in order to realize the objectives of the study. The tools applied and the relevance of its applications is described below. The techniques of Ratio analysis has been used to study the magnitude and trend of profit and loss account and balance sheet of hotel companies during the study period.Standard deviation has been used to determine the variation in the ratios among the hotel companies.

5.6 Hypotheses

The leverage position of the selected hotel companies in India have been analysed by the testing the following null hypotheses.

1. There is no significant difference in debt to equity ratio of the selected hotel companies during the study period.
2. There is no significant difference in the funded debt to total capitalisation ratio of the selected hotel companies under study.
3. There is no significant difference in the net worth to total assets ratio of the selected hotel companies under study.
4. There is no significant difference in the fixed assets to net worth ratio of the selected hotel companies under study.

5.7 Period of Study

A period of 11 years from 1999-2000 to 2009-2010 has been covered under the present study.

5.8 Leverage Analysis

The common meaning of leverage is the effect of one variable on another variable. In financial accounting, leverage is used to measure the risk, that is, the effect of changes in revenue and costs on the shareholders' return. If the leverage is high, a small percentage increase or decrease in revenue (sales) results in too much increase or decrease in the shareholders' return or earning per Share. If the leverage is low, the return changes slightly despite a high increase or decrease in the sales.

5.4.1 Debt to Equity Ratio

This ratio is also called “External Internal” equity ratio and is generally represented in the form of percentage. It is calculated by dividing total debt of a business by its net worth. In simple words, a relationship is established between external equities, that is, the total outside liabilities and internal equities, that is, the shareholders’ funds or the tangible net worth. Thus,

$$\text{Dept to Equity Ratio} = \frac{\text{Total Debt}}{\text{Net worth}}$$

“For the purpose of calculation of this ratio, the term shareholders’ equity includes share capital, reserve & surpluses minus miscellaneous expenses (if any). This ratio is also known as ‘Net Worth to Total Indebtness Ratio’. This ratio is an indicator of the extent to which debt financing has been exploited by business. Generally, the ratio of 1:1 is considered satisfactory, that is, the loans & borrowing should not exceed the net worth.

This ratio indicated the soundness of debt equity mix by measuring the amount of long-term obligations in relations to the amount contributed by owners. The importance of this ratio lies in the fact that a proper mix of debt and equity aids in improving the rate of capital formation. It also helps in assessment of permanent liabilities of the organization in comparison to owners’ fund. It can measure the relative interest of owners and long-term creditors in a Company.

A high ratio indicating higher claims of creditors as compared to owners’ funds is least desirable. Although it may enable a concern to relish the advantage of high leverage, yet during market uncertainties such capital structure is bound to suffer unfavourable market conditions. Whereas, a low ratio always adds points of safely in creditor’s account, this ratio is a conflicting margin for creditors and shareholders of the concern. As creditors always prefer a low debt equity ratio for, the lower the ratio, the larger will be the amount contributed by owners of the concern and greater the stock of security to the creditors. Whereas, a higher ratio is favoured by shareholders, as in that case they can derive optimum benefit from the assets provided by creditors through leverage.

It is inferred from the Table 1 that the debt to equity ratio of Indian Hotels Company Limited was fluctuating trend with an average of 0.74 times. The ratio of the Company was increased from 0.45 times in 1999-2000 to 1.54 times in 2003-04 and then it decreased to 0.32 times in 2005-2006. The ratio was 0.53 times in 2006-2007 and it gradually increased to 0.98 times in 2009-2010 with the standard deviation of 0.34 times. The ratio was maximum in 2003-2004 (1.54) and minimum in 2005-2006 (0.32). During the period of study, the debt to equity ratio is below 1 except 2003-2004. As per rule, if the ratio is more than that of 1, the amount of risk assumed by creditors increases. Hence, the study reveals that a major portion of fund of the Indian Hotels Company Limited was gathered from the share holders than that of outsiders. It indicates that the risk assumed by creditors decreases.

Table 1: Debt to Equity Ratio of the Indian Hotel Industry from the year 1999-2000 to 2009-10

Year	IHC	EIH	ITDC	HLV	Average
1999 – 2000	0.45	0.56	0.00	3.33	1.09
2000 – 2001	0.53	0.56	0.01	2.40	0.88
2001 – 2002	0.86	0.83	0.06	3.11	1.22
2002 – 2003	0.85	1.05	0.03	3.02	1.24
2003 – 2004	1.54	1.23	0.17	2.87	1.45
2004 – 2005	0.89	1.21	0.11	1.63	0.96
2005 – 2006	0.32	0.89	0.00	1.93	0.79
2006 – 2007	0.53	0.85	0.00	1.39	0.69
2007 – 2008	0.56	0.76	0.00	2.84	1.04
2008 – 2009	0.58	0.86	0.00	3.49	1.23
2009 – 2010	0.98	0.89	0.00	3.48	1.34
Average	0.74	0.88	0.03	2.68	1.08
S.D	0.34	0.22	0.06	0.74	0.34
Maximum	1.54	1.23	0.17	3.49	1.61
Minimum	0.32	0.56	0.00	1.39	0.57

Source: data compiled and computed from annual reports and accounts from the year 1999-2000 to 2009-2010

It is clear from the Table 1 that the debt equity ratio of East Indian Hotels Limited was fluctuating and declining during the study period. The ratio was 0.56 times in 1999-2000 and then it went up to 1.23 times in 2003-2004. The ratio was 1.21 times in 2004-2005 and then it went down to 0.89 times in 2009-2010. The ratio was maximum at 1.23 times in 2003-2004 and minimum at 0.56 times both in 1999-2000 and 2000-2001. The average ratio was 0.88 times. The standard deviation was 0.22. The ratio was less than 1 in most of the years of study. It shows that the risk assumed by creditors decreases.

It is observed from the Table 1 that the debt equity ratio of India Tourism Development Corporation Limited was decreasing trend during the study period. The ratio was in negative figure in 1999-2000 and from the year 2005-2006 to 2009-2010. The average ratio was 0.03 times. Such type of capital budgeting decision was good, because there is no risk for creditors. But the company is advised to increase the net worth to invest in fixed assets.

It is evident from the Table 1 that the debt equity ratio of Hotel Leela Venture Limited was fluctuating trend during the study period with an average of 2.68 times. The ratio fluctuated from a lowest 1.39 times in 2006-07 to highest 3.49 times in 2008-09. The ratio was higher than 1 during the entire period of study. It indicates that the risk assumed by the creditors increases. Hence such type of capital budgeting is not advisable.

Table 2: Analysis of Debt to Equity Ratio - One way ANOVA

	Sum of Squares	df	Mean Square	F	P Value
Between Groups	41.956	3	13.985	78.160	.000*
Within Groups	7.157	40	.179		
Total	49.114	43			

Source: Computed from table 1
Note: *Significant at 1 per cent level

It is inferred from the Table 2 that there is significant difference in debt to equity ratios, while making an analysis, since the P Value is less than 0.01 at 1 per cent level of significant.

Table 3: Analysis of Variance of Debt to Equity Ratio by Duncan Method

Name of the Company	N	Subset for alpha = 0.05		
		1	2	3
India Tourism Development Corporation Limited	11	.0345		
Indian Hotels Company Limited	11		.7355	
East Indian Hotels Limited	11		.8809	
Hotel Leela Venture Limited	11			2.6809

Source: Computed from table 1

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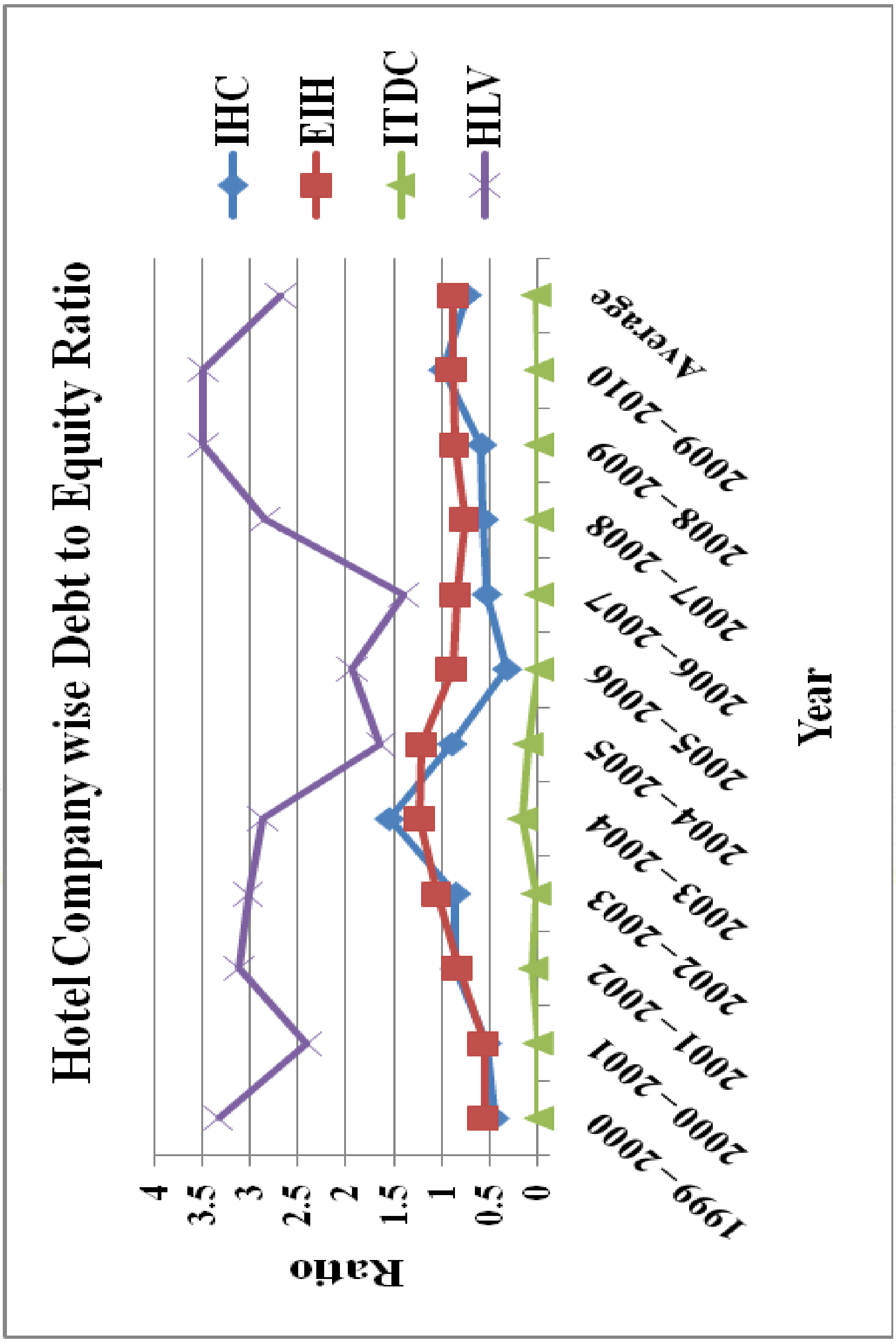
Testing of Hypothesis - ANOVA

Null Hypothesis: There is no significant difference in the debt to equity ratio of the selected hotel companies in Indian Hotel Industry during the study period.

It is proved from the table 3 that the results obtained by ANOVA test are supported by Duncan method. There are three subsets where India Tourism Development Corporation Limited falls under the first subset; Hotel Leela Venture Limited falls under third subset and the other two hotel companies form the second subset. The standard norm of debt to equity ratio is 1:1.

The mean value of Hotel Leela Venture Limited is higher than 1 and the mean value of other three hotel companies are lesser than 1. It shows that the risk assumed by creditors is high in Hotel Leela Venture Limited and the risk assumed by creditors is low in other three selected hotel companies. Hotel Leela Venture Limited is advised to reduce the debt in order to reduce the risk for the creditors. The other three hotel companies may raise the fund by debenture if they need in the future. By this way, there is a chance to fulfil their standard norm of debt to equity ratio.

Figure 1


Hotel Company wise Debt to Equity Ratio
IHC
EIH
ITDC
HLV
Ratio
4
3.5
3
2.5
2
1.5
1
0.5
0
1999-2000
2000-2001
2001-2002
2002-2003
2003-2004
2004-2005
2005-2006
2006-2007
2007-2008
2008-2009
2009-2010
Average
Year

5.4.2 Funded Debt to Total Capitalisation Ratio

Funded debt to total capitalization ratio is the relationship between the funded debt and the total capitalization. A Company's debt, such as bonds, long–term notes payable or debentures that will mature in more than one year or one business cycle. This type of debt is classified as funded debt because it is funded by interest payments made by the borrowing Firm over the term of the loan. Funded debt is synonymous with "long–term debt". Total amount of long–term debt and equity that forms a Company's Capital Foundation. The ratio is calculated as follows

$$\text{Funded debt to total Capatalisation Ratio} = \frac{\text{Funded Debt}}{\text{Total Capatalisation}}$$

It is inferred from the Table 4 that the average funded debt to total capitalisation ratio of Indian Hotels Company Limited was 0.41 times. The ratio ranged between minimum of 0.24 times in the year 2005-2006 and maximum of 0.61 times in the year 2003-2004. It showed a fluctuated trend during the study period. During the period of study, the ratio was at low level. Generally more the debt less will be the margin of safety for lenders. High debt reduces the earnings available to shareholders. In the Indian Hotels Company Limited funded debt was low compared to capitalisation. It indicates that it may increase the earnings of the shareholders.

It is observed from the Table 4 that the average funded debt to total capitalisation ratio of East Indian Hotels Limited was 0.37 times with a standard deviation of 0.09 times. The ratio was found highest of 0.47 times in the year 2004-2005 and lowest of 0.22 times in 1999-2000. During the period of study, the ratio was very low. It may increase the margin of safety for the lenders and it may increase the wealth of the shareholders.

It is clear from the Table 4 that the average funded debt to total capitalisation ratio of India Tourism Development Corporation Limited was 0.03 times. The funded debt to total capitalisation ratio of India Tourism Development Corporation Limited showed a declining trend during the study period. The standard deviation was 0.05. During the study period, the funded debt to total capitalisation ratio of the India Tourism Development Corporation Limited was very low. The ratio was 0.00 times in the year 1999-2000 and from the year 2005-2006 to 2009-2010 it indicates that the major portion of capital is financed by shareholders than the outsiders. Hence, it may increase the earnings of the shareholders.

It is evident from the Table 4 that the average funded debt to total capitalisation ratio of Hotel Leela Venture Limited was 0.59 times with a standard deviation of 0.07 times. The ratio was found highest of 0.69 times in the year 2007 -2008 and very lowest of 0.47 times in the year 2004-2005. During the study period, the funded debt to total capitalisation ratio of the Hotel Leela Venture Limited was high, compared to other three groups of hotels. It implies that the major portion of the capital was financed by the outsiders. Generally high debt decreases the earnings available to the shareholders. Hence, the earnings and the wealth of the shareholders of the Hotel Leela Venture Limited may decrease.

Table 4: Funded Debt to Total Capitalisation Ratio of the Indian Hotel Industry from the year 1999-2000 to 2009-10

Year	IHC	EIH	ITDC	HLV	Average
1999 – 2000	0.31	0.22	0.00	0.68	0.30
2000 – 2001	0.35	0.23	0.01	0.60	0.30
2001 – 2002	0.46	0.31	0.05	0.64	0.37
2002 – 2003	0.46	0.37	0.03	0.61	0.37
2003 – 2004	0.61	0.43	0.15	0.54	0.43
2004 – 2005	0.47	0.47	0.10	0.47	0.38
2005 – 2006	0.24	0.40	0.00	0.56	0.30
2006 – 2007	0.34	0.40	0.00	0.51	0.31
2007 – 2008	0.36	0.38	0.00	0.69	0.36
2008 – 2009	0.37	0.42	0.00	0.56	0.34
2009 – 2010	0.50	0.47	0.00	0.58	0.39
Average	0.41	0.37	0.03	0.59	0.35
S.D	0.10	0.09	0.05	0.07	0.08
Maximum	0.61	0.47	0.15	0.69	0.48
Minimum	0.24	0.22	0.00	0.47	0.23

Source: Data compiled and computed from annual reports and accounts from the year 1999-2000 to 2009-2010

Testing of Hypothesis – ANOVA

Null Hypothesis: There is no significant difference in the funded debt to total capitalisation ratio of the selected hotel companies in Indian Hotel Industries during the study period.

Table 5

Analysis of Funded Debt to Total Capitalisation Ratio - One way ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.770	3	.590	93.215	.000*
Within Groups	.253	40	.006		
Total	2.024	43			

Source: computed from table 4
*Note: Significant at 1 per cent level

It is inferred from the Table 5 that there is significant difference in the funded debt to total capitalisation ratios, while making an analysis, since the P Value is less than 0.01 at 1 per cent level of significant.

Figure 2

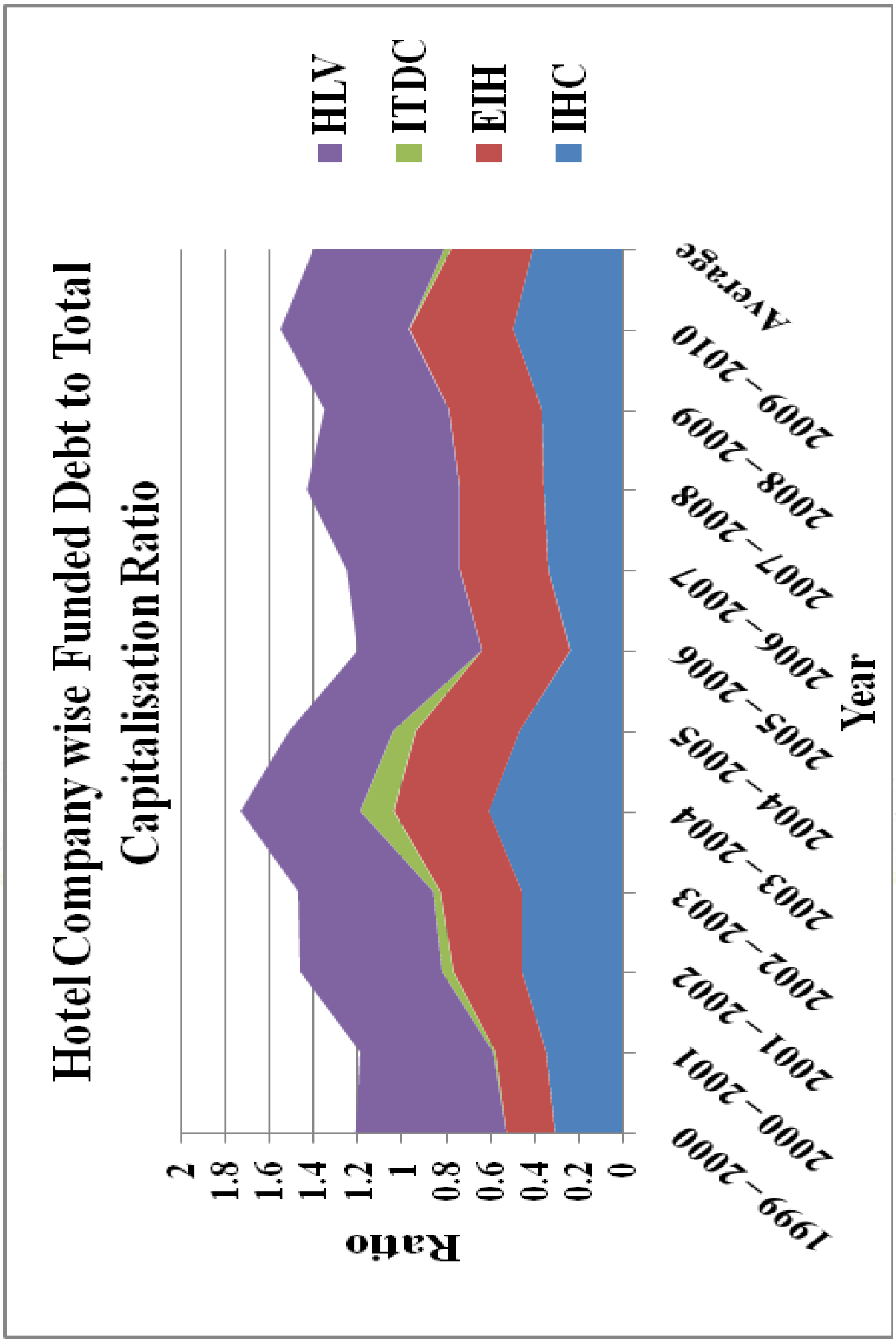

Hotel Company wise Funded Debt to Total Capitalisation Ratio
HLV
ITDC
EIH
IHC
Ratio
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1999-2000
2000-2001
2001-2002
2002-2003
2003-2004
2004-2005
2005-2006
2006-2007
2007-2008
2008-2009
2009-2010
Average
Year

Table 6
Analysis of Variance of Funded Debt to Total Capitalisation Ratio by Duncan Method

Name of the Company	N	Subset for alpha = 0.05		
		1	2	3
India Tourism Development Corporation Limited	11	.0309		
East Indian Hotels Limited	11		.3727	
Indian Hotels Company Limited	11		.4064	
Hotel Leela Venture Limited	11			.5855

Source: computed from table 4

It is proved that the results obtained by ANOVA tests are supported by Duncan method. There are three subsets, where India Tourism Development Corporation Limited falls under the first subset, Hotel Leela Venture Limited falls under third subset and the other two hotel companies form the second subset.

Among the four hotel companies, the funded debt of India Tourism Development Corporation Limited is very low; hence the mean value is at lowest proportion of 0.0309. The funded debt of Hotel Leela Venture Limited is high; hence the mean value is at highest proportion (0.5855). In total, the funded debt to total capitalisation ratio of Hotel Leela Venture Limited is high than the other three hotel companies.

5.4.3 Net Worth to Total Assets Ratio

A company's credit position also tends to be weakened if too large or too small a proportion of its net worth is tied up in total assets. A high ratio of net worth to total assets may indicate either excessive investment in total assets or inadequate net worth for an otherwise balanced enterprise. On the other hand, a low ratio in a line when heavy investment in experience equipment is normal may be a danger sign indicating the Firm's income will be drained by high equipment rental as subcontracting costs. The formula is

$$\text{Net worth to Total Assets Ratio} = \frac{\text{Net Worth}}{\text{Total Assets}}$$

It is inferred from the Table 7 that the net worth to total assets ratio of Indian Hotels Company Limited was fluctuated trend with an average of 0.59. The highest ratio had been found of 0.76 in the year 2005-2006 and the lowest ratio had also been found of 0.39 in the year 2003-2004. The standard deviation was 0.10. Generally, the higher the ratio, the stronger the financial condition of the organisation. The study indicates that the financial condition of the Indian Hotels Company Limited was not in a satisfactory level.

Table 7: Net worth to Total Assets Ratio of the Indian Hotel Industry from the year 1999-2000 to 2009-10

Year	IHC	EIH	ITDC	HLV	Average
1999 – 2000	0.69	0.78	1.00	0.32	0.70
2000 – 2001	0.65	0.77	1.00	0.40	0.71
2001 – 2002	0.54	0.69	0.95	0.36	0.64
2002 – 2003	0.54	0.63	0.97	0.39	0.63
2003 – 2004	0.39	0.57	0.85	0.46	0.57
2004 – 2005	0.53	0.53	0.90	0.53	0.62
2005 – 2006	0.76	0.60	1.00	0.44	0.70
2006 – 2007	0.66	0.60	1.00	0.49	0.69
2007 – 2008	0.64	0.62	1.00	0.31	0.64
2008 – 2009	0.63	0.58	1.00	0.44	0.66
2009 – 2010	0.50	0.53	1.00	0.42	0.61
Average	0.59	0.63	0.97	0.41	0.65
S.D	0.10	0.09	0.05	0.07	0.08
Maximum	0.76	0.78	1.00	0.53	0.77
Minimum	0.39	0.53	0.85	0.32	0.52

Source: Data compiled and computed from annual reports and accounts from the year 1999-2000 to 2009-2010

It is observed from the Table 7 that the net worth to total assets ratio of East Indian Hotels Limited was downward trend with an average of 0.63. The ratio was 0.78 in the year 1999-2000 and has gone down to 0.53 in the year 2009-2010. The ratio was ranged between 0.53 both in the years 2004-2005 and 2009-2010 and 0.78 in the year 1999-2000. The ratio showed standard deviation of 0.09. During the period of study, the ratio was in decreasing trend. It indicates that the financial condition of the East Indian Hotels Limited was not at satisfactory level.

It is clear from the Table 7 that the net worth to total assets ratio of the India Tourism Development Corporation Limited was downward and constant level with an average of 0.97. The net worth to total assets ratio ranged between 0.85 in the year 2003-2004 and 1.00 in 1999-2000 and 2000-2001 and from the year 2005-2006 to 2009-2010. The standard deviation was 0.05. The average ratio was 0.97. During the period of study, the India Tourism Development Corporation Limited has maintained this ratio at 1.00 in most of the years. Hence, it indicates that the financial condition of the India Tourism Development Corporation Limited was at a satisfactory level.

It is proved from the Table 7 that the net worth to total assets ratio of Hotel Leela Venture Limited was fluctuated trend. The ratio was 0.32 in the year 1999-2000 and it inclined to 0.53 in the year 2004-2005. And then the ratio declined to 0.31 in the year 2007-2008. The ratio again inclined to 0.42 in the year 2009-2010. The standard deviation was 0.07 and the average ratio was 0.41. During the study period, the net worth to total assets ratio of the Hotel Leela Venture Limited was fluctuated trend. It reveals that the financial condition of the Hotel Leela Venture Limited was not at satisfactory level.

Table 8: Analysis of Net worth to Total Assets Ratio - One way ANOVA

	Sum of Squares	df	Mean Square	F	P Value
Between Groups	1.777	3	.592	93.362	.000*
Within Groups	.254	40	.006		
Total	2.031	43			

Source: Computed from table 7
*Note: Significant at 1 per cent level

It is inferred from the Table 8 that there is significant difference in the net worth to total assets ratios, while making an analysis, since the P Value is less than 0.01 at 1 per cent level of significant.

Testing of Hypothesis - ANOVA

Null Hypothesis: There is no significant difference in the net worth to total assets ratio of the selected hotel companies in Indian Hotel Industry during the study period.

IJMDS

Figure 3

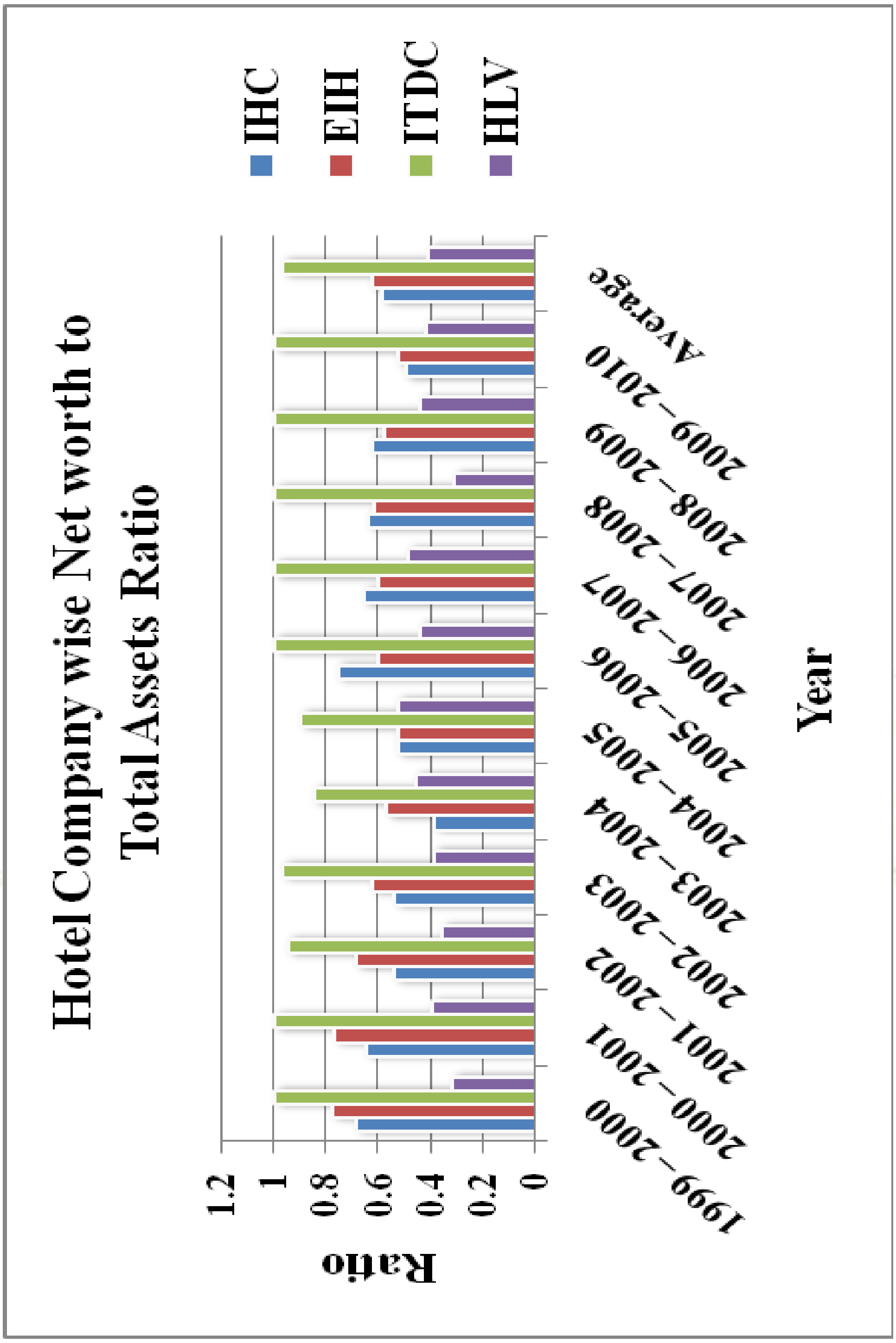

Hotel Company wise Net worth to Total Assets Ratio
IHC
EIH
ITDC
HLV
Ratio
1.2
1
0.8
0.6
0.4
0.2
0
1999-2000
2000-2001
2001-2002
2002-2003
2003-2004
2004-2005
2005-2006
2006-2007
2007-2008
2008-2009
2009-2010
Average
Year

Table 9: Analysis of Variance of Net worth to Total Assets Ratio by Duncan Method

Name of the Company	N	Subset for alpha = 0.05		
		1	2	3
Hotel Leela Venture Limited	11	.4145		
Indian Hotels Company Limited	11		.5936	
East Indian Hotels Limited	11		.6273	
India Tourism Development Corporation Limited	11			.9700

Source: Computed from table 7

It is proved that the results obtained by ANOVA test supported by Duncan method. There are three subsets, where Hotel Leela Venture Limited falls under the first subset, India Tourism Development Corporation Limited falls under third subset and the other two hotel companies form the second subset.

The mean value of net worth to total assets ratio of India Tourism Development Corporation Limited is nearby one. The mean value of other three hotel companies is lesser than one. It shows that, the financial condition of India Tourism Development Corporation Limited is at satisfactory level than the other three hotel companies. Hence these three hotel companies are advised to increase their net worth equal to total assets.

5.4.4 Fixed Assets to Net worth Ratio

Fixed Assets to Net worth Ratio indicated the relationship between net worth (shareholders' funds) and investment in net fixed assets (gross block minus depreciation).

$$\text{Fixed Assets to Net Worth Ratio} = \frac{\text{Net Fixed Assets}}{\text{Net Worth}}$$

No specific norm has been prescribed for fixed assets to net worth ratio. As this ratio indicated the proportion of fixed assets (after depreciation) which are supported by the contribution of shareholders? Therefore, in case this ratio exceeds the ratio of 1:1 it automatically reveals the portion of net fixed assets provided by the creditors. "This ratio measures the proportion of contributed capital that has been invested in fixed property". This ratio is regarded as an important tool for judgment of margin of safety for long-term creditors.

A high fixed asset to net worth ratio signifies less protection to creditors. Contrary to this, low ratio would mean that fixed assets are financed by shareholders' funds. Thus, it would extend the margin of safety for long-term creditors.

Table 10: Fixed Assets to Net worth Ratio of the Indian Hotel Industry from the year 1999-2000 to 2009-10

Year	IHC	EIH	ITDC	HLV	Average
1999 – 2000	0.98	1.10	0.48	2.58	1.29
2000 – 2001	1.06	1.13	0.52	2.16	1.22
2001 – 2002	1.35	1.46	0.49	2.47	1.44
2002 – 2003	1.41	1.57	0.43	2.36	1.44
2003 – 2004	1.59	1.70	0.40	1.97	1.42
2004 – 2005	1.32	1.81	0.31	1.66	1.28
2005 – 2006	0.90	1.60	0.23	1.88	1.15
2006 – 2007	1.35	1.63	0.21	1.90	1.27
2007 – 2008	1.28	1.62	0.15	2.87	1.48
2008 – 2009	1.26	1.65	0.17	2.25	1.33
2009 – 2010	1.63	1.80	0.34	2.40	1.54
Average	1.28	1.55	0.34	2.23	1.35
S.D	0.23	0.24	0.13	0.36	0.24
Maximum	1.63	1.81	0.52	2.87	1.71
Minimum	0.90	1.10	0.15	1.66	0.95

Source: Data compiled and computed from annual reports and accounts from the year 1999-2000 to 2009-2010

It is inferred from the Table 10 that the fixed assets to net worth ratio of Indian Hotels Company Limited was showing fluctuated trend during the study period. The ratio ranged between 0.90 in the year 2005-2006 and 1.63 in the year 2009-2010. The average ratio was 1.28 with the standard deviation of 0.23. During the period of study, the fixed assets to net worth ratio of the Indian Hotels Company Limited are greater than 1.00 in all the years of study, except the year 2005-2006 (0.90). It indicates over – investment in the fixed assets. It may cause large depreciation and it may reduce the profit of the Indian Hotels Company Limited and it may reduce the margin of safety for the long term creditors.

It is observed from the Table 10 that the fixed asset to net worth ratio of East Indian Hotels Limited was showing highly fluctuated trend with an average of 1.55. The ratio was 1.10 in the year 1999-2000 and it went up to 1.81 in the year 2004-2005. The ratio went down to 1.60 in the year 2005-2006 and again it went up to 1.80 in the year 2009-2010. The highest ratio was 1.81 in the year 2004-2005 and lowest in the year 1.10 (1999-2000). The average ratio was 1.55 with the standard deviation of 0.24. During the period of study, the fixed assets to net worth ratio of the East Indian Hotels Limited are greater than 1.00 in all the years of study. It indicates over– investment in the fixed assets. It may cause large depreciation and it may reduce the profit of the East Indian Hotels Limited. And it may reduce the margin of safety for the long term creditors.

It is evident from the Table 10 that the fixed asset to net worth ratio of the India Tourism Development Corporation Limited showed declining trend with an average of 0.34. The ratio ranged between 0.15 in the year 2007-2008 and 0.52 in the year 2000-01. During the period of study, the fixed assets to net worth ratio of the India Tourism Development Corporation Limited are lesser than 1.00 in all the years of study. It indicates under–investment in the fixed assets. It may also reduce the profit of the organisation and it may increase the margin of safety for the long term creditors.

It is clear from the Table 10 that the fixed asset to net worth ratio of Hotel Leela Venture Limited was fluctuated trend during the study period. The ratio was 2.58 in the year 1999-2000 and it went down to 1.66 in the year 2004-2005. The ratio was 1.88 in the year 2005-2006 and it has gone to 2.87 in the year 2007-2008. In the year 2009-2010 again it came down to 2.40. The ratio ranged between 1.66 and 2.87 with an average of 2.23. The standard deviation was 0.36. During the period of study, the fixed assets to net worth ratio of the Hotel Leela venture Limited are greater than 1.00 in all the years of study. It indicates over–investment in the fixed assets. It may cause large depreciation and it may reduce the profit of the Hotel Leela Venture Limited. And it may reduce the margin of safety for the long term creditors.

Testing of Hypothesis - ANOVA

Null Hypothesis: There is no significant difference in the fixed assets to net worth ratio of the selected hotel companies in Indian Hotel Industry during the study period.

Table 11: Analysis of Fixed Assets to Net worth Ratio - One Way ANOVA

	Sum of Squares	df	Mean Square	F	P Value
Between Groups	20.202	3	6.734	106.075	.000*
Within Groups	2.539	40	.063		
Total	22.741	43			

Source; Computed from table 10
Note: *Significant at 1 per cent level

It is inferred from the Table 11 that there is significant difference in the fixed assets to net worth ratios, since the P Value is less than 0.01 at 1 per cent level of significant.

Figure 4

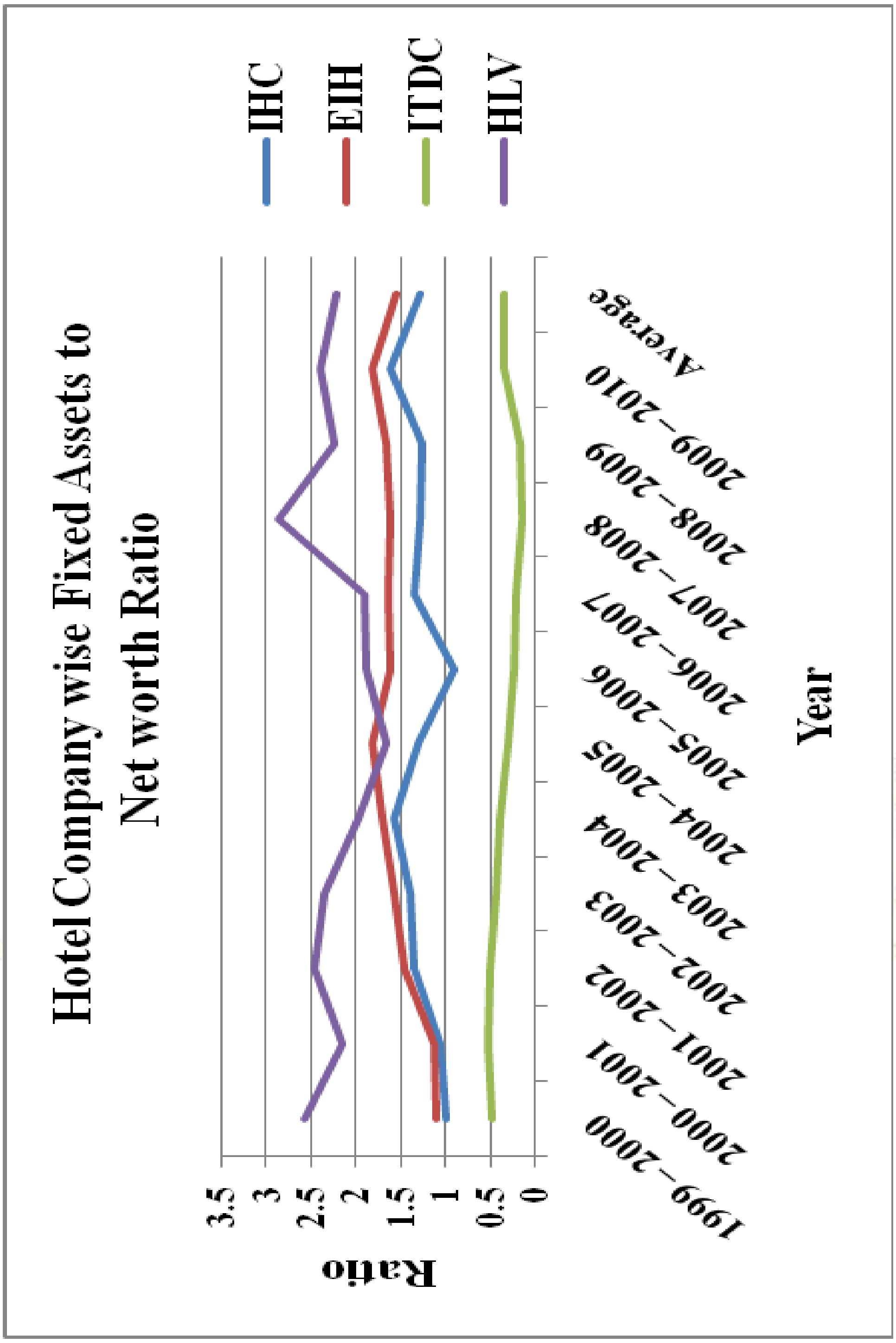

Hotel Company wise Fixed Assets to Net worth Ratio
IHC
EIH
ITDC
HLV
Ratio
3.5
3
2.5
2
1.5
1
0.5
0
1999-2000
2000-2001
2001-2002
2002-2003
2003-2004
2004-2005
2005-2006
2006-2007
2007-2008
2008-2009
2009-2010
Average
Year

Table 12: Analysis of Variance of Fixed Assets to Net worth Ratio by Duncan Method

Name of the Company	N	Subset for alpha = 0.05			
		1	2	3	4
India Tourism Development Corporation Limited	11	.3391			
Indian Hotels Company Limited	11		1.2845		
East Indian Hotels Limited	11			1.5518	
Hotel Leela Venture Limited	11				2.2273

Source; Computed from table 10

It is proved that the results obtained by ANOVA test are supported by the Duncan method. There are four subsets, where India Tourism Development Corporation Limited falls under the first subset, Indian Hotels Company Limited falls under second subset, East Indian Hotels Limited falls under third subset and Hotel Leela Venture Limited form the fourth subset. The mean value of fixed assets to net worth ratio of Hotel Leela Venture Limited (2.2273) is higher, followed by East Indian Hotels (1.5518), Indian Hotels Company Limited (1.2845) and India Tourism Development Corporation Limited (0.3391). It shows that, India Tourism Development Corporation Limited has under investment in fixed assets and the other hotel companies have over investment in fixed assets. Both the situation may reduce the profit of the organisation and it may reduce the margin of safety for the long term creditors.

5.5 Conclusion

Chapter titled "Analysis of Leverage Position of Indian Hotel Industry" describes that it is one of the important instruments to design an appropriate capital structure mix or financial plan. To design an appropriate capital structure mix or financial plan, the amount of EBIT under various financial plans, should be related to earning per Share. One widely used means of examining the effect of leverage to analyze the relationship between EBIT and earning per share is leverage ratio.

Leverage ratio is used to calculate the leverage of a company to get an idea of the Company's methods of financing or to measure its ability to meet financial obligations. There are several different ratios, but in the present study four types of ratios was calculated. Those are debt to equity ratio, funded debt to total capitalisation ratio, net worth to total assets ratio and fixed assets to net worth ratio.

The present study reveals that the debt capital of Hotel Leela Venture Limited is at highest proposition compared to equity capital. India Tourism development Corporation Limited has no debt capital and Indian Hotels Company Limited and East Indian hotels Limited have debt capital in the lowest proposition compared to equity capital. The capital structure of the four selected hotel company is not at a satisfactory level.

Normally, high leverage ratio indicating higher claims of creditors as compared to owners' funds is least desirable. Although it may enable a concern to relish the advantage of high leverage, yet during market uncertainties such capital structure is bound to suffer unfavourable market conditions and the high leverage may reduce the solvency position also. Whereas, a low ratio always adds points of safely in creditor's account, this ratio is a conflicting margin for creditors and shareholders of the concern. Hence, Hotel Leela Venture Limited is advised to reduce the debt capital and the other three hotel companies are advised to increase the debt capital equal to equity capital.

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