CHAPTER-7

FINDINGS AND CONCLUSION

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CHAPTER-7

FINDINGS & CONCLUSION

In this chapter, the major findings of this study have been summarized. The results of trend analysis conducted for total sample of FDI Companies in India along with industry-wise trend analysis are discussed. Major findings of empirical analysis conducted at firm level to study the Determinants of Capital Structure of FDI Companies in India and empirical results based on industry-wise analysis are summarized in this chapter. The chapter ends with statement of key implications, limitations of the study and suggestions and scope for further research in the related area.

7.1 Background of the Study

FDI flows are generally perceived as major vehicles for growth of a developing economy like India. More and more Indian companies from several industries are trying to attract Foreign Direct Investments, and one of the ways is to encourage equity participation by foreign affiliates. Government of India is also adopting a liberalized policy towards its inward FDI flows. This study is undertaken to identify the factors which influence the decisions relating to the financing mix- the Capital Structure decision adopted by Foreign Direct Investment Companies in India. It is difficult to find empirical evidence as to how actually FDI Companies make a choice between financial instruments to determine their Capital Structure and hence an attempt has been made in this study by employing firm level data to identify Capital Structure Determinants of FDI Companies in India.

The main *objective* of the study has been to examine the trends and patterns of financing mix adopted by FDI Companies in India over the study period and to identify the major Determinants influencing the Capital Structure decisions of FDI Companies in India by undertaking empirical analysis at firm level and also at industry level by grouping the sample FDI Companies into various industries.

For the purpose of undertaking this study, the selected sample of 140 Foreign Direct Investment companies in India represented eleven industries. Each of these companies

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has 10% or more of foreign promoter's shares in their equity holdings as on 31/03/2007 and hence are selected as sample FDI Companies in India. The period of the study is eighteen years, starting from the year 1990-1991 to the year 2007-2008.

To test the hypotheses of the study (As mentioned in Chapter-3, Section 3.2), Sixteen measures of Capital Structure: a variety Debt Ratios categorized into three major heads: a) Short Term Debt Ratios, b) Long Term Debt Ratios and c) Total Debt Ratios have been applied in the study. In this study, Fourteen Independent Variables (Determinants Of Capital Structure) explained by Thirty-Four Indicators have been selected to study the impact of these Determinants on Capital Structure policies of 140 sample firms of FDI Companies in India. The list of all the Debt Ratios, their abbreviations, List of the Determinants of Capital Structure and definitions of all the indicators of the Determinants and their abbreviations used are presented below:

Measures of Debt Ratios			
Sr. No	Dependent Variable (Debt Ratios)	Abbreviation	Category
1	Bank Borrowings Repayable in Less than One Year / Total assets	STBB+CPLTD/TA	STDRatio1
2	Short Term Debt / Total Assets	STD/TA	STDRatio2
3	Short Term Debt1/ Total Assets	STD1/TA	STDRatio3
4	Total Trade Credit & Equivalent / Total Assets	TC&E/TA	STDRatio4
5	Short Term Debt/ Net Worth	STD/NW	STDRatio5
6	Short Term Debt 1/ Net Worth	STD1/NW	STDRatio6
7	Bank Borrowings Repayable in More than One Year/ Total Assets	LTBB/TA	LTDRatio1
8	Long Term Debt/ Total Assets	LTD/TA	LTDRatio2
9	Long Term Debt / Networth	LTD/NW	LTDRatio3
10	Long Term Debt / (Networth + Long Term Debt)	LTD/(NW+LTD)	LTDRatio4
11	Long Term Borrowings / Short Term Borrowings 1	LTD/STD1	LTDRatio5
12	Total Debt / Total Assets	TD/TA	TDRatio1
13	Total Liabilities / Total Assets	TL/TA	TDRatio2
14	Total Debt / Networth	TD/NW	TDRatio3
15	Total Debt/ Total Debt+Networth	TD/(TD+NW)	TDRatio4
16	Total Liabilities/ Networth	TL/NW	TDRatio5
Note: STD Ratio = Short Term Debt Ratio, LTD Ratio = Long Term Debt Ratio, TD Ratio = Total Debt Ratio			

Definitions of Independent Variables- Determinants of Capital Structure			
Sr. No	Determinants	Indicators	Abbreviation
1	Size	Natural Logarithm of Sales	Log of sales
		Natural Logarithm of Gross Total Fixed Assets	Log of GTFA
		Natural Logarithm of Total Net Assets	Log of TNA
2	Profitability	Profit Before Interest & Tax /Total Net assets	PBIT/TNA
		Profit Before Interest,Tax, Depreciation & Amortization /Total Gross Assets	PBITDA/TGA
		Profit Before Tax /Total Net Assets	PBT/TNA
		Profit Before Interest & Tax / Sales	PBIT/Sales
		Profit Before Interest & Tax / Capital Employed	PBIT/CE
3	Collateral	Net Fixed Assets/Total Net Assets	NFA/TNA
		Gross Fixed Assets /Total Gross Assets	GFA/TGA
		(Net Fixed Assets +Inventory +Accounts Receivable)/ Total Net Assets	(Nfa+Inv+AR)/TNA
		Land &Building /Total Gross Assets	L&B/TGA
		Plant & Equipment /Total Gross Assets	P&E/TGA
		Inventories/Total Net Assets	INV / TNA
4	Volatility	Standard Deviation of Profit Before Interest &Tax	SD of PBIT
		Standard Deviation of Percentage Change in Profit Before Interest &Tax	SD of % change in PBIT
		Standard Deviation of Profit Before Interest, Tax, Depreciation & Amortization / Total Gross Assets	SD of PBITDA/TGA
		Coefficient of Variation of Profit Before Interest & Tax	COV of PBIT
		Coefficient of Variation of Profit Before Interest & Tax/Capital employed	COV of PBIT to CE
		Coefficient of Variation of Profit Before Interest & Tax/Total Net Assets	COV of PBIT to TNA
5	Growth Rate	Compound Annual Growth Rate of Total Assets	CAGR of TNA
		Compound Annual Growth Rate of Sales	CAGR of Sales
6	Non-Debt Tax Shields	Depreciation /Total Gross Assets	Depr/TGA
		Depreciation+ Export Turnover /Total Gross Assets	Depr+ET/TGA
		Depreciation /Profit Before Interest, Tax, Depreciation& Amortization	Depr/PBITDA
7	Debt Service Capacity	Profit Before Interest, Tax& Depreciation/Interest payments	PBDIT/INT
8	Age	Age as on 31-03-2008	Age as on 31-03-2008
		Natural Logarithm of Age of firm	Log of age of firm
9	Dividend Payout	Equity Dividend /Profit After Tax	Equity Div/PAT
10	Liquidity	Current Assets /Current Liabilities	CA/CL
11	Net Exports	Net Exports /Sales	Net exp/Sales
12	Cost of Equity	Dividend Payment/ Share Capital+Reserves	DIV/SC
13	Uniqueness	Research & Development Expenditure / Sales .	R&D /Sales
14	Cost of Borrowing	Interest Payment/Total Debt	INT /DEBT

For the purpose of testing the main hypotheses of the study (As mentioned in Chapter-3, Section 3.2), Simple Linear Regressions, Quadratic Trend model, and Multiple Regression Technique have been applied. Along with these techniques, the other statistical tools like Mean, Median, Standard Deviation, Coefficient of variation, Bivariate Correlations to compute Pearson's correlation coefficients among the explanatory variables coefficients have also been applied. Test of significance like t-test, F-test, p-value, Durbin-Watson statistic (D statistic) to detect autocorrelation, Variance inflationary Factor (VIF) to detect collinearity among explanatory variables have also been applied to test the hypothesis. Apart from the above statistical tools, Ratio analysis and Trend analysis have also been used for the purpose of the study.

7.2 Methodology Adopted

To undertake the present study, the following research methodology was adopted:

Trend analysis: Proportion of various components of Capital Structure: The general trends in Capital Structure of 140 FDI Companies in India as well as the industry-wise trends have been studied by calculating year-wise Debt Ratios for the period from 1991 to 2008, their Mean, Median, Standard Deviation (SD) and Coefficient of Variation (COV). Trends reflected in Composition of Owner's Funds, the Financing Mix adopted, Composition of Total Non-Equity Liabilities, Retention Ratios, Composition of Total Sources of Funds are also studied.

Trends over a period of time (Time Trends): Various Debt Ratios (Table 3.3, Chapter-3) are regressed on time to examine the rate of change in Ratio per year. To study the time trends in Capital Structure of FDI Companies, the 'Method of Least Squares' is applied. In the first step, to examine whether Debt Ratios of FDI Companies in India exhibit a significant linear trend, the Linear Trend Model (The Simple Linear Regression equation) is applied. However, in some Debt Ratios, on observing the Durbin Watson - "D' statistic, the problem of first order autocorrelation is detected. This can be due to specification bias in the model, that is, the Ratio actually follows the non-linear trend, rather than the linear trend. To take care of this, Quadratic model is also fitted.

Determinants of Capital Structure: In this study, empirical analysis at firm level as well as industry-wise empirical analysis is conducted. In the *first stage* of empirical analysis at firm level, simple linear regressions between each indicator of an independent variable one at a time, with each Debt Ratio are conducted. In the *second stage* of empirical analysis, out of the thirty-four indicators explaining fourteen independent variables, twenty-two indicators which had significant impact on Debt Ratios in simple regressions are selected for conducting multiple regression analysis. The number of independent variables (Determinants of Capital Structure) still remains the same.

For conducting multiple regressions, four measures of Capital Structure, which include two Short Term Debt measures (STD1/TA and TC&E/TA), one Long Term Debt measure (LTD/TA) and one Total Debt measure (TL/TA) are selected. A Correlation Matrix among various indicators of Determinants is used to examine multicollinearity problem. For conducting multiple regressions, the standard model of regression as well as stepwise regression method has been employed in this study. 'Thirty-Three' multiple regression runs for each Short Term Debt measure and 'thirty' multiple regression runs for Long Term Debt and Total Debt Measure each (Table 5.29, 5.30, 5.31, 5.32 , Chapter-5) are conducted. Out of these regression runs, only those regression runs which were able to explain more than 50% of variation in the Debt Ratio are reported. Variance inflationary factors for each regression run are also reported.

For conducting industry-wise empirical analysis, three major industry groups – Chemical Industry, Machinery industry and Transport Industry having at least 15 member companies are selected for industry-wise analysis. This is necessary for having at least ten data points for conducting multiple regression analysis and only these three industries satisfy this criterion. The same debt measures as applied in empirical analysis at firm level study are selected for carrying out multiple regressions in industry-wise analysis. The same regression runs as reported at firm level analysis (Chapter-5) are also conducted for each selected industry and the best multiple regression runs in each industry are reported for further industry-wise comparison on Capital Structure Determinants. Industry-wise Correlation Matrix, Variance

inflationary factors for each reported multiple regression run of each industry are also presented.

7.3 Major Findings

The major findings of Trend Analysis of Capital Structure of FDI Companies in India conducted in Chapter-4 are summarized as follows:

I Trend Analysis

7.3.1 Trends over a Period of Time (Time Trends)

1. The study rejects the null hypotheses (H_{01}, Chapter-3) that no significant linear trend is observed in Debt Ratios of FDI Companies over a period of time and that the Debt Ratios of FDI Companies do not change with passage of time and accepts the alternative hypotheses that significant linear and quadratic (curvilinear) trends are observed in Debt Ratios of FDI Companies in India.

2. The study rejects the null hypothesis (H_{02}, Chapter-3) that no significant linear trend is observed in industry-wise Debt Ratios of FDI Companies over a period of time and that the industry-wise Debt Ratios of FDI Companies do not change with passage of time and accepts the alternative hypotheses that significant linear and quadratic (curvilinear) trends are observed in industry-wise Debt Ratios of FDI Companies over a period of time.

3. To study the Time Trends in Capital Structure for the overall sample of 140 FDI Companies, the 'Method of Least Squares' is applied. First Linear Trend Model (Table 4.2.6-The simple linear regression, Chapter-4) was run. On examining 'D' statistics, need was felt to apply quadratic equation and hence Quadratic Trend Model (Table 4.2.7, Chapter-4) was also applied. Time trend analysis revealed that some Debt Ratios exhibited linear trend. They are STBB+CPLTD/TA (-ve), STD/TA (-ve), STD/NW (-ve), LTBB/TA (+ve), and LTD/(NW+LTD) (-ve). The Ratios in which Quadratic trend model fitted the best are STD1/TA, TC&E/TA, STD1/NW, LTD/NW, TL/TA, TD/NW, TD/(TD+NW), TL/NW. The quadratic trend indicated that these Debt Ratios are decreasing at an increasing rate. The Debt Ratios LTD/TA and TD/TA decrease at an increasing rate, however the problem of autocorrelation persists

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as the 'D' statistic of LTD/TA Ratio lies below the lower critical value and the D' statistic of TD/TA Ratio lies in the inconclusive area.

4. For studying industry-wise time trends, five major industry groups are selected- Chemical Industry, Food Industry, Machinery Industry, Services industry and Transport Industry. The industry-wise time trends observed are summarized as follows:

Industry-Wise Results of Time Trends	
LINEAR TREND	
Industry	**Debt Ratios**
Food	STD/NW(-ve), LTD/(NW+LTD)(-ve), TD/NW(-ve) and TD/(TD+NW) (-ve)
Chemicals	TC&E/TA (-ve) and LTD/NW (-ve)
Machinery	STD/TA(-ve), STD1/NW(-ve), LTBB/TA(-ve), LTD/NW(-ve), TD/NW (-ve), TD/(TD+NW) (-ve).
Transport	STBB+CPLTD/TA (-ve), STD/TA (-ve) and STD1/TA (-ve)
Services	STD/TA (-ve)
QUADRATIC TREND	
Industry	**Debt Ratios**
Food	STD1/TA, TC&E/TA and TL/TA
Chemicals	STBB+CPLTD/TA, STD/TA, STD/NW, STD1/NW, LTD/TA, LTD/(NW+LTD), TD/TA, TD/NW, TD/(TD+NW) and TL/NW
Machinery	STD1/TA, TC&E/TA, STD/NW, TD/TA, TL/TA and TL/NW.
Transport	TC&E/TA, TD/TA, TL/TA, TD/(TD+NW) and TL/NW.
Services	STBB+CPLTD/TA, STD1/TA and TC&E/TA
NO TREND	
Industry	**Debt Ratios**
Food	STBB+CPLTD/TA, STD/TA, LTBB/TA, LTD/NW and TD/TA
Chemicals	LTBB/TA
Machinery	STBB+CPLTD/TA and LTD/(NW+LTD)
Transport	STD/NW, STD1/NW, LTD/NW, LTBB/TA, LTD/(NW+LTD) and TD/NW.

Services	STD/NW, STD1/NW, LTBB/TA, LTD/TA, LTD/NW, LTD/(NW+LTD), TD/TA, TD/NW, TD/(TD+NW) and TL/NW
Ratios Decreasing at an Increasing Rate but Problem of Autocorrelation Persists	
Industry	**Debt Ratios**
Food	STD1/NW, TL/NW
Chemicals	STD1/TA and TL/TA
Machinery	LTD/TA
Transport	LTD/TA
Services	TL/TA

7.3.2 Proportion of Various Components of Capital Structure- (Overall and Industry-Wise Trends):

5. FDI Companies in India resort to low debt levels in their Capital Structure. During the initial years of liberalization in 1991 and 1992, the debt levels seem to be high and then show a continuous declining trend (Table 4.2.1, Chapter-4). There has been a marked decline in preference of Long Term Debt Funds as Long Term Debt Ratios have shown a significant decline throughout the study period (Figure 4.1.4, Chapter-4). Even Long Term Debt Ratios in various industries show a similar declining trend indicating that preference for Long Term Debt in the Capital Structure of FDI Companies in India has declined over the study period.

6. Figure 7.1 indicates that out of all the sources of funds, FDI Companies in India heavily depend on their internal funds in the form Reserves & Surplus followed by Current Liabilities (Trade Credits & Equivalents) as the next most important source of funds. Long Term Bank Borrowings and Debentures contribution towards long term debt sources and to the total sources of funds is very meager as it has been observed that Long Term Bank Borrowings and Debentures have contributed only around 3% and 4% respectively towards the total sources of funds of FDI Companies in

India. Surprisingly Short Term Bank Borrowings occupy only 6% share in total sources of funds and Long Term Bank Borrowings contribute only 3%, which means, bank financing is also not much a preferred source of finance for FDI Companies in India.

7. It is observed that a major proportion of Total Liabilities (Figure 7.2) consist of Short Term Debt Funds and in Short Term Debt Funds, Current Liabilities & Provisions are the most dominant and the most preferred source of finance. Commercial paper contributes a negligible proportion towards Short Term Debt Funds. The preference for Debentures as a source of finance has shown a declining trend from 6% in the year 1991 to 1% in the year 1998.

8. The average composition of Owner's Funds of FDI Companies (Table 4.2.2, Chapter-4) indicates that the proportion of Internal Funds in the form of Reserves & Surplus have shown a marked increase over the study period, whereas the proportion of Share Capital in Owner's Funds has declined over the study period indicating that these companies must be profitable companies with high retention Ratios. The average retention Ratios prove the fact that indeed FDI Companies have very high retention Ratios (Table 4.2.5, Chapter-4). It also indicates that additional equity has not been issued to raise finance. Inessa L& Maria S (2005)[1] in their study had also found that foreign owned firms have lower debt levels; it was believed by them that one of the reasons could be easier access to foreign equity finance among foreign owned firms. But this does not seem to be the case in this study. It is observed that FDI Companies in India believe in using more of internally generated funds rather than externally generated funds to finance their investments and prefer Short Term Debt over long term debt, then use long term debt to finance their long term assets and do not prefer to issue additional equity to raise finance. This seems to be characteristic feature of FDI Companies in India, which in turn might be making them an attractive FDI destination companies.

Figure 7.1   Composition of Total Sources of Funds
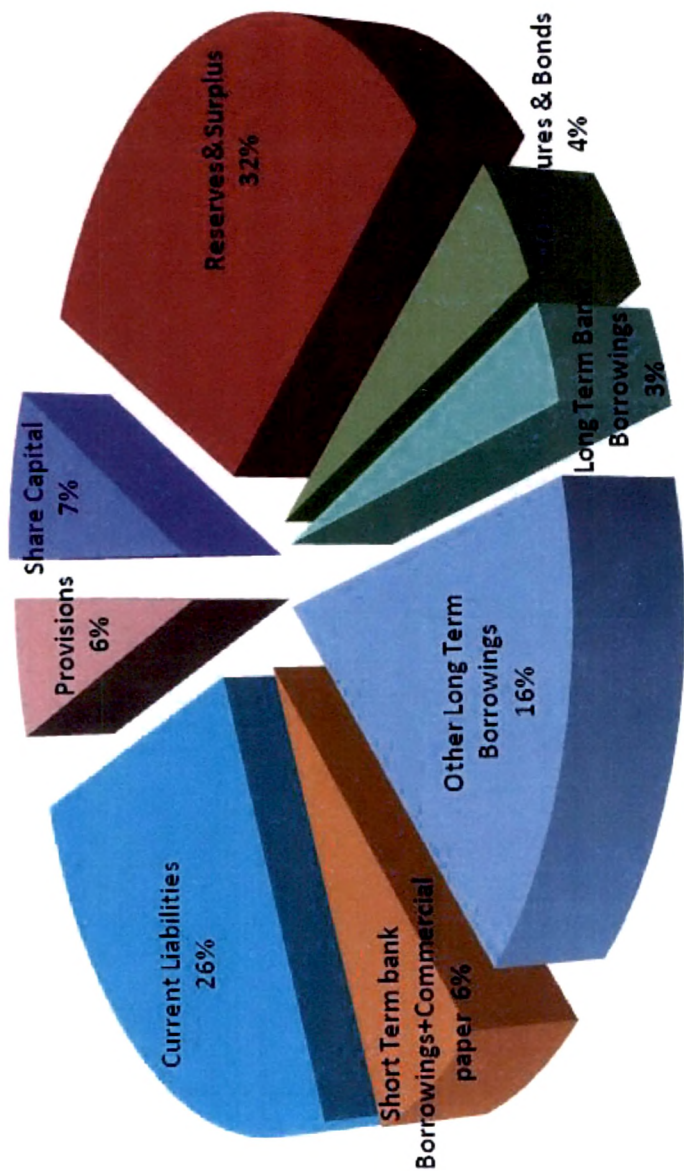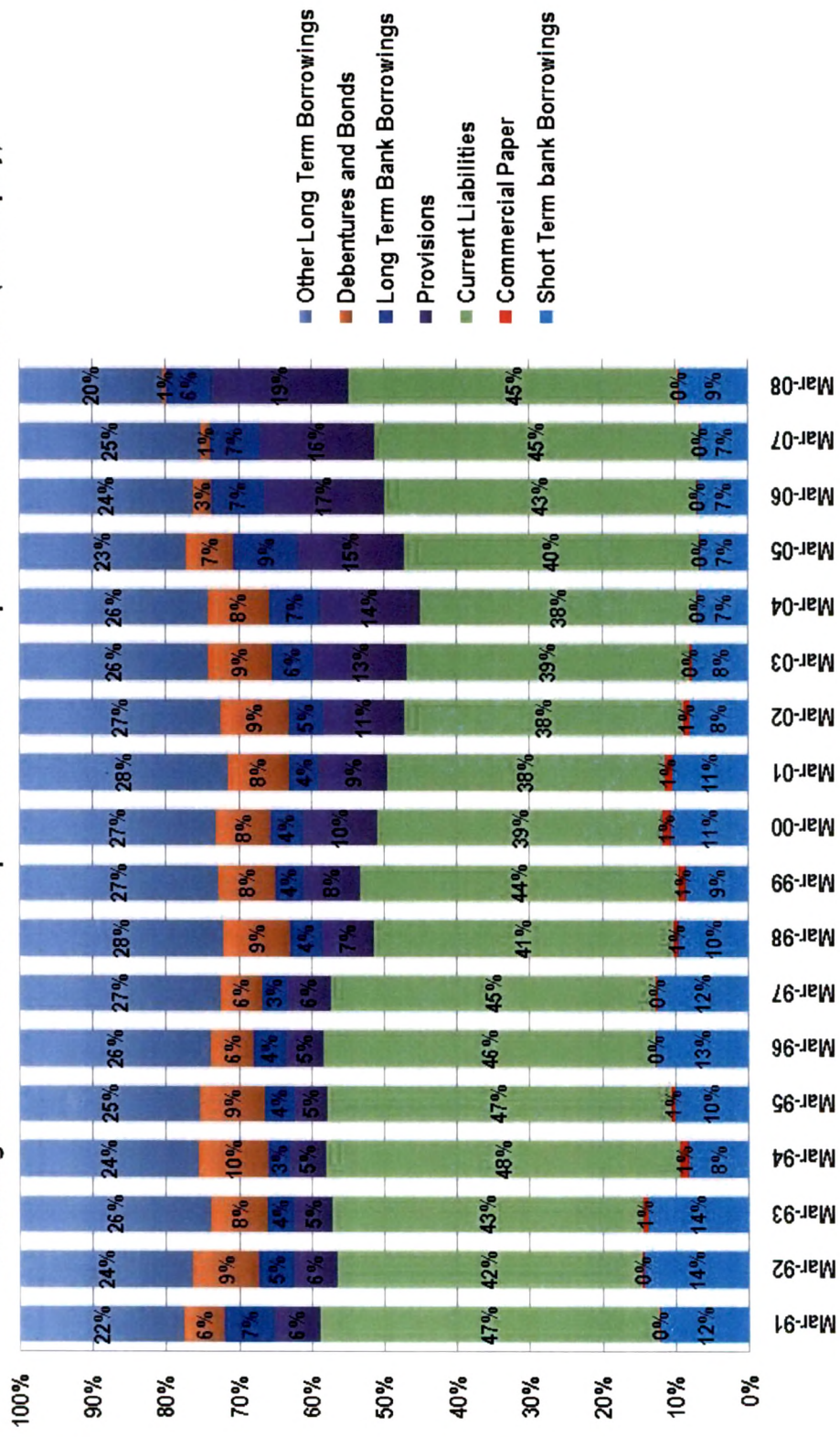(Average of 140 FDI Companies from 1991-2008)

Figure 7.2
Financing Pattern of 140 FDI Companies in India - Composition of Total Liabilities (Non-Equity)

Legend:
- Other Long Term Borrowings
- Debentures and Bonds
- Long Term Bank Borrowings
- Provisions
- Current Liabilities
- Commercial Paper
- Short Term bank Borrowings

	Mar-91	Mar-92	Mar-93	Mar-94	Mar-95	Mar-96	Mar-97	Mar-98	Mar-99	Mar-00	Mar-01	Mar-02	Mar-03	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Other Long Term Borrowings	22%	24%	26%	24%	25%	26%	27%	28%	27%	27%	28%	27%	26%	26%	23%	24%	25%	20%
Debentures and Bonds	6%	9%	8%	10%	9%	6%	6%	9%	8%	8%	8%	9%	9%	8%	7%	3%	1%	1%
Long Term Bank Borrowings	7%	5%	4%	3%	4%	4%	3%	4%	4%	4%	4%	5%	6%	7%	9%	7%	7%	6%
Provisions	6%	6%	5%	5%	5%	5%	6%	7%	8%	10%	9%	11%	13%	14%	15%	17%	16%	19%
Current Liabilities	47%	42%	43%	48%	47%	46%	45%	41%	44%	39%	38%	38%	39%	38%	40%	43%	45%	45%
Commercial Paper	0%	0%	1%	1%	1%	0%	0%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Short Term bank Borrowings	12%	14%	14%	8%	10%	13%	12%	10%	9%	11%	11%	8%	8%	7%	7%	7%	7%	9%

II Determinants of Capital Structure

Since the trend analysis of FDI Companies in India revealed that Short Term Debt contributed a major proportion in the total financing mix, it became all the more important to study the Determinants of Short Term Debt Ratio along with Long Term and Total Debt Ratios. The term Capital Structure refers to permanent financing of a company, mainly the proportion of Long Term Debt and Equity mix which a company uses to finance its operations, whereas the term Financial Structure denotes the way in which a company's assets are financed. In this study, since the Determinants of various forms of Short Term Debt Ratios are studied along with Long Term and Total Debt Ratios, the term Financial Structure or Capital Structure have been used as synonyms.

To infer the Determinants for different measures of Capital Structure for all FDI Companies under study and for different industries together, the findings of Chapter-5 and Chapter-6 are presented here jointly.

7.3.3 Major Findings– Simple Regressions

The summarized simple regression results have been presented in (Table 5.16, Chapter-5). The main conclusions derived from the results of simple linear regressions conducted between each indicator of an independent variable, one at a time, with each Debt Ratio (dependent variable) are as follows:

1. The results of simple linear regressions between each indicator of an independent variable with each Debt Ratio reject the null hypothesis (H_{03} to H_{16}, as mentioned in Chapter-3) that there is no significant impact of Size of a company, Profitability of a company, Collateral Value of Assets, Volatility of companies' earnings, Growth Rate of a company, existence of Non Debt Tax Shields, Debt Service Capacity, Age of a company, Dividend Payout, Liquidity, Net Exports, Cost of Borrowings, Cost of Equity and Uniqueness of a company on a company's Debt Ratios and accepts the alternative hypothesis that all the above mentioned Determinants have significant impact on Debt Ratios (Capital Structure) of FDI Companies in India

2. **Size** as measured by Log of GTFA has significant negative impact on Short Term Debt Ratios, but has significant positive impact on Long Term Debt Ratios. Size as measured by Log of Sales has significant positive impact on TC&E/TA Ratio. Size generally has insignificant impact on Total Debt Ratios except in case of TD/TA Ratio where Size as measured by Log of GTFA has positive impact on the Ratio. This indicates that large size companies having large fixed assets tend to borrow more of Long Term Debt rather than Short Term Debt.

3. **Profitability** has significant negative impact on all the Debt Ratios. This result confirms the prediction of the Pecking Order Theory according to which, profitable companies having large cash flows tend to have low Debt Ratios.

4. **Collateral** indicators NFA/TNA and GFA/TGA have significant negative impact on Short Term Debt Ratios but have significant positive impact on Long Term and Total Debt Ratios. Collateral indicators (Nfa+ Inv+ AR)/TA and INV/TNA have significant positive impact on Short Term Debt Ratios. Collateral indicators - INV/TNA has significant negative impact on Long Term Debt Ratios. This indicates that Collaterals in the form of Tangible Fixed Assets are used to borrow Long Term Debt Funds, at the same time, Collaterals in the form of Inventories and Accounts Receivables support Short Term Debt.

5. **Volatility** indicator COV of PBIT/TNA has significant positive impact on all the Short Term and Total Debt Ratios. Another indicator of Volatility - SD of PBIT has negative impact on Short Term Debt Ratios STBB+CPLTD/TA and STD/TA but has insignificant impact on all the other Debt Ratios. The other indicator of Volatility - COV of PBIT/CE also has negative impact on TC&E/TA Ratio and on TL/TA Ratio, but has insignificant impact on all the other Debt Ratios. The results of the indicator COV of PBIT/TNA are more consistent as they indicate significant positive impact on all the Short Term and Total Debt Ratios and indicate that firms having volatile earnings tend to borrow more Short Term Debt Funds.

6. **Growth Rate** as measured by CAGR of TNA has significant negative impact on Short Term Debt Ratios and Total Debt Ratio – TL/ TA, but has insignificant impact on Long Term Debt Ratios. This indicates that high growth firms in terms of Total assets tend to borrow less from Short Term Debt Funds.

7. **Non Debt Tax Shield** indicators have negative impact on Short Term Debt Ratios, positive impact on Long Term Debt Ratios and Total Debt Ratios.

8. **Debt Service Capacity** has negative impact on STD/TA Ratio and Total Debt Ratios but has insignificant impact on Long Term Debt Ratios. This reveals that in spite of having sufficient Debt Servicing Capacity, companies do not resort to high debt levels for financing purposes.

9. **Age** has positive impact on TC&E/TA Ratio and significant negative impact on Long Term and Total Debt Ratios. This indicates that Mature Age firms prefer to borrow more from Short Term Debt Funds rather than borrowing from Long Term Debt sources.

10. **Dividend Payout** has negative impact on STD / NW Ratio, LTD / TA Ratio, and on Total Debt Ratios indicating that generally companies having higher Dividend Payouts will borrow less.

11. **Liquidity** has significant negative impact on Short Term Debt Ratios-STD1/TA Ratio and TC& E/TA Ratio, and Total Debt Ratios – TL/TA Ratio and TL/NW Ratio. Liquidity has insignificant impact on Long Term Debt Ratios. This means that companies having liquid assets will borrow less.

12. **Net Exports** have significant positive impact on Short Term Debt Ratios-STD1/TA Ratio and TC&E/TA Ratio and on Total Debt Ratios – TL/TA Ratio and TL/NW Ratio. Net Exports have insignificant impact on Long Term Debt Ratios. The results indicate that companies which are Net Exporters might borrow more from Short Term Debt sources.

13. **Cost of Equity** has significant negative impact on Short Term, Long Term and Total Debt Ratios. This means that as the Cost of Equity increases companies tend to borrow less.

14. **Cost of Borrowings** has significant positive impact on Short Term Debt Ratios- STD1/TA Ratio and TC& E/TA Ratio, significant negative impact on Long Term Debt Ratios – LTBB/TA Ratio and LTD/TA Ratio and on Total Debt Ratio – TD/TA Ratio. The results indicate that as Cost of Borrowings increase, companies prefer to borrow from Short Term Debt sources.

7.3.4 Major Findings– Multiple Regressions

1. At firm level multiple regression analysis, the study rejects the null hypothesis (H_{03}, H_{04}, H_{05}, H_{06}, H_{07}, H_{08}, H_{10}, H_{12}, H_{13}, H_{14}, H_{15} and H_{16}, as mentioned in Chapter-3) that there is no significant impact of Size of a company, Profitability of a company, Collateral value of assets, Volatility of companies' earnings, Growth rate of a company, existence of Non Debt Tax Shields, Age of a company, Liquidity, Net Exports, Cost of borrowings, Cost of Equity and Uniqueness of a company on a company's Debt Ratios. The study accepts the alternative hypothesis that all the above mentioned Determinants have significant impact on Debt Ratios (Capital Structure) of FDI Companies in India.

2. At firm level multiple regression analysis, the study accepts the null hypothesis (H_{09}, As mentioned in Chapter-3), that there is no significant impact of **Debt Service Capacity** of a company on Debt Ratios. This is due to the fact that Debt Service Capacity was not a significant predictor in multiple regressions conducted on various Debt Ratios.

3. At firm level multiple regression analysis, the study accepts the null hypothesis (H_{11}, As mentioned in Chapter-3), that there is no significant impact of **Dividend Payout** of a company on Debt Ratios. Dividend Payout was not a significant predictor in multiple regressions conducted on various Debt Ratios.

4. At Industry-wise analysis of Determinants of Capital Structure, the study rejects the null hypothesis that there is no significant impact of Size of a company, Profitability of a company, Collateral value of assets, Volatility of companies' earnings, existence of Non Debt Tax Shields, Age of a company, Dividend Payout, Liquidity, Net Exports, Cost of borrowings, Cost of Equity

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and Uniqueness of a company on a company's Debt Ratios. The study accepts the alternative hypothesis that all the above mentioned Determinants have significant impact on Debt Ratios of FDI Companies from three major industry groups – Chemical, Machinery and Transport industry.

5. At Industry-wise analysis of Determinants of Capital Structure, the study accepts the null hypothesis that there is no significant impact of Growth rate of a company and Debt Service Capacity of a company on Debt Ratios as these Determinants were not a significant predictor in multiple regressions conducted on various Debt Ratios of the selected industry groups.

7.3.4.1 Results of Multiple Regressions of STD1/TA Ratio

This is an overall Short Term Debt Ratio comprising all forms of Short Term Debt: Short Term Bank Borrowings, Commercial Paper, and Current Liabilities & Provisions. The summary results of multiple regressions conducted on STD1/TA Ratio at firm level analysis and across industries are presented in Table -7.1 and reveal that:

1. **Size** is not a significant Determinant of STD1/TA Ratio either for overall sample or at industry level analysis.

2. **Profitability** has significant negative impact on STD1/TA Ratio of overall sample but is not a significant Determinant at industry level analysis of STD1/TA Ratio.

3. **Collaterals** in the form of Fixed Assets as measured by NFA/TNA have significant negative impact on STD1/TA Ratio of the overall sample as well as on Chemical Industry and Machinery Industry. Collateral effect as measured by INV/TNA has significant positive impact on STD1/TA Ratio of overall sample only. This indicates that FDI Companies in India follow the **'Matching Principle'** as their financing policy. "According to this principle, the maturity of the sources of financing should match the maturity of the assets being financed. This means that fixed assets and permanent current assets should be supported by long term sources of finance whereas fluctuating

current assets must be supported by short term sources of finance", (Chandra Prasanna, 5th Edition, page 597)[2].

4. **Volatility** has significant positive impact on STD1/TA Ratio of overall sample as well as STD1/TA Ratio of Machinery industry.

5. **Growth rate** as measured by Compound Growth Rate of Sales has significant positive impact on STD1/TA Ratio for the overall sample but is not a significant predictor of STD1/TA Ratio at industry level.

6. **Non Debt Tax Shields** do not have any significant impact on STD1/TA Ratio either for overall sample or at industry level analysis.

7. **Debt Service Capacity** has no significant impact on STD1/TA Ratio of overall sample or at industry level analysis.

8. **Age** is not a significant Determinant of STD1/TA Ratio either for overall sample or at industry level analysis

9. **Dividend Payout** has no significant impact on STD1/TA Ratio of overall sample or at industry level analysis

10. **Liquidity** has significant negative impact on STD1/TA Ratio of overall sample as well as on STD1/TA Ratio of Chemical and Machinery industry indicating that greater liquid assets would mean lower Short Term Debt ratios as major working capital requirements would be financed out of these liquid assets.

11. **Net Exports** have no significant impact on STD1/TA Ratio of overall sample or at industry level analysis.

12. **Cost of Equity** has significant positive impact on the overall sample but is not a significant Determinant at industry level analysis. The positive impact of Cost of Equity on STD1/TA Ratio indicates that if costs of equity increases, FDI Companies borrow more from Short Term Debt sources.

13. **Uniqueness** of a firm has no significant impact on STD1/TA Ratio of overall sample or at industry level analysis.

14. **Cost of Borrowings** have no significant impact on STD1/TA Ratio of overall sample or at industry level analysis.

Table 7.1					
Summary of Results of Mutiple Regressions on STD1/TA ratio of FDI companies in India					
Independent Variables	Indicators	Overall sample (140 companies)	Chemical Industry (37 companies)	Machinery Industry (38 companies)	Transport Industry (18 companies)
Size	Log of sales	N.S	N.S	N.S	None of the indicators are significant
	Log of TNA	N.S	N.S	N.S	
	Log of GTFA	---	---	---	
Profitability	PBT/TNA	–VE**	N.S	N.S	
	PBITDA/TGA	---	---	---	
Collateral	NFA/TNA	–VE**	–VE**	–VE**	
	GFA/TGA	---	---	---	
	(Nfa+Inv+AR)/TNA	---	---	---	
	INV/TNA	+VE**	N.S	N.S	
Volatility	COV of PBIT/ TNA	+VE**	N.S	+VE**	
	SD of PBITDA/TGA	---	---	---	
Growth rate	CAGR of TNA	N.S	N.S	N.S	
	CAGR of Sales	+VE**	N.S	N.S	
NDTS	Depr/TGA	---	---	---	
Debt Service capacity	PBDIT/INT	---	---	---	
Age	Log of age of firm	N.S	N.S	N.S	
Dividend payout	Equity Div/PAT	N.S	N.S	N.S	
Liquidity	CA/CL	–VE**	–VE**	–VE**	
Net Exports	Net exp/Sales	N.S	N.S	N.S	
Cost of Equity	DIV/SC	+VE**	N.S	N.S	
Uniqueness	R&D/Sales	N.S	N.S	N.S	
Cost of Borrowing	INT/DEBT	N.S	N.S	N.S	
* indicates significance at 5% level, ** indicates significance at 1% level					
Not Significant=(NS), Positive= (+VE), Negative =(–VE)					
A Dash means -- the indicator is not included in final regression runs					

7.3.4.2 Results of Multiple Regressions of TC&E/TA Ratio

Since Current Liabilities emerged as one of the most important source of financing adopted by FDI Companies in India, this measure was selected for multiple regressions conducted at firm level and industry level analysis. The summary results of multiple regressions conducted on TC&E/TA Ratio at firm level analysis and across industries are presented in Table -7.2 and reveal that:

1. **Size** as measured by Log of sales has positive impact on TC&E/TA Ratio of overall sample as well as on Chemical industry indicating that as the Size of

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company in terms of sales increases, its requirement for short term funds to meet the financing requirements of working capital also increase which are met through availing trade credits facilities.

2. **Profitability** has significant negative impact on TC&E/TA Ratio of overall sample and on Machinery industry. The results indicate that profitable FDI Companies in India do not prefer to borrow even from short term sources like trade credit as they have sufficient internally generated cash reserves to meet their short term financing requirements.

3. **Collaterals** in the form of fixed assets as measured by NFA/TNA have significant negative impact on TC&E/TA Ratio of the overall sample as well as on Machinery Industry and Transport Industry. Collateral effect as measured by GFA/TGA has significant negative impact on TC&E/TA Ratio of overall sample as well as on Chemical industry and Machinery industry. Collateral indicator INV/TNA has significant positive impact on overall sample and on Transport industry again confirming the 'Maturity Matching Principle" of financing the assets. Collateral indicator Nfa+Inv+AR/TNA has significant positive impact on TC&TA Ratio of overall sample only.

4. **Volatility** has significant positive impact on TC&E/TA Ratio on the overall sample as well as on Chemical and Machinery Industry. Volatility has significant negative impact on TC&E/TA Ratio of Transport industry. This shows that FDI Companies from Transport industry adopt a conservative approach when there are volatile earnings.

5. **Growth rate** does not have any significant impact on TC&E/TA Ratio either for overall sample or at industry level analysis

6. **Non Debt Tax Shields** do not have any significant impact on TC&E/TA Ratio either for overall sample or at industry level analysis.

7. **Debt Service Capacity** has no significant impact on TC&E/TA Ratio of overall sample or at industry level analysis.

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		Table 7.2			
		Summary of Results of Mutiple Regressions on TC&E/TA ratio of FDI companies in India			
Independent Variables	Indicators	Overall sample (140 companies)	Chemical Industry (37 companies)	Machinery Industry (38 companies)	Transport Industry (18 companies)
Size	Log of sales	+VE**	+VE**	N.S	N.S
	Log of TNA	N.S	N.S	---	---
	Log of GTFA	N.S	---	N.S	---
Profitability	PBT/TNA	–VE*	N.S	N.S	N.S
	PBITDA/TGA	–VE**	N.S	–VE**	---
Collateral	NFA/TNA	–VE**	N.S	–VE**	–VE**
	GFA/TGA	–VE**	–VE**	–VE**	---
	(Nfa+Inv+AR)/TNA	+VE**	.N.S	N.S	---
	INV/TNA	+VE**	---	N.S	+VE**
Volatility	COV of PBIT/ TNA	+VE*	+VE**	+VE**	–VE*
	SD of PBITDA/TGA	N.S	N.S	+VE**	---
Growth rate	CAGR of TNA	N.S	N.S	N.S	N.S
	CAGR of Sales	N.S	N.S	N.S	N.S
NDTS	Depr/TGA	N.S	---	N.S	---
Debt Service capacity	PBDIT/INT	N.S	N.S	N.S	---
Age	Log of age of firm	+VE*	+VE**	N.S	N.S
Dividend payout	Equity Div/PAT	N.S	+VE*	N.S	–VE**
Liquidity	CA/CL	–VE**	–VE**	–VE**	–VE**
Net Exports	Net exp/Sales	N.S	N.S	N.S	N.S
Cost of Equity	DIV/SC	+VE*	---	N.S	N.S
Uniqueness	R&D/Sales	–VE**	N.S	N.S	N.S
Cost of Borrowing	INT/DEBT	+VE**	N.S	N.S	N.S
* indicates significance at 5% level, ** indicates significance at 1% level					
Not Significant=(NS), Positive= (+VE), Negative =(–VE)					
A Dash means -- the indicator is not included in final regression runs					

8.   **Age of a firm** has significant positive impact on TC&E/TA Ratio for the overall sample as well as on Chemical industry indicating mature firms have easier access to trade credit as a source of finance.

9.   **Dividend Payout** has significant positive impact on TC&E/TA Ratio of Chemical industry but has significant negative impact on TC&E/TA Ratio of Transport industry. The result indicate that Chemical industry FDI Companies borrow more of Short Term Trade Credit when Dividend Payout is high whereas Transport industry follow a conservative approach, do not borrow from even Short Term Debt sources like Trade credits when the Dividend Payout is high.

10.   **Liquidity** is a significant predictor of TC&E/TA Ratio and has significant negative impact on the overall sample as well as on all the three industries

again indicating that greater liquid assets would mean lower preference for Trade Credits & Equivalents as major working capital requirements would be financed out of these liquid assets.

11.   **Net Exports** have no significant impact on TC&E/TA Ratio of overall sample or at industry level analysis.

12.   **Cost of Equity** has significant positive impact on the overall sample but is not a significant Determinant at industry level analysis. The positive impact of Cost of Equity on TC&E/TA Ratio confirms the fact that if the Cost of Equity increases, FDI Companies borrow more from Short Term Debt sources and especially meet their financing requirements by availing short term trade credit.

13.   **Uniqueness** has significant negative impact on TC&E/TA Ratio of the overall sample but is not a significant Determinant of TC&E/TA Ratio at industry level analysis. This result indicates that unique firms may have difficulty to obtain easy trade credit facilities.

14.   **Cost of Borrowing** has significant positive impact on TC&E/TA Ratio of the overall sample but is not a significant Determinant of TC&E/TA Ratio at industry level analysis. The result indicates that as the Cost of Borrowing rises, FDI Companies resort to non interest bearing debt funds like Trade Credit.

7.3.4.3 Results of Multiple Regressions on LTD/TA Ratio

The summary results of multiple regressions conducted on LTD/TA Ratio at firm level analysis and across industries are presented in Table -7.3 and reveal that:

1.   **Size** as measured by Log of TNA and Log of GTFA has significant positive impact on LTD/TA Ratio of overall sample but is not a significant Determinant at industry level. This finding is consistent with the predictions of Tradeoff Theory which says that large firms with tangible assets tend to borrow more.

2.   **Profitability** has significant negative impact on LTD/TA Ratio on the overall sample as well as two major industry groups- Chemical and Machinery industry. This result confirms the prediction of Pecking-Order Theory where highly profitable firms prefer to use internally generated funds out of surplus profit to

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finance their investments firms and hence resort to lower levels of debt in their Capital Structure.

3. **Collateral** indicators measured in terms of fixed assets like NFA/TNA and GFA/TGA have positive significant impact on LTD/TA Ratio of the overall sample as well as on LTD/TA Ratio of all the three industries. (Nfa+Inv+AR/TNA have significant positive impact on LTD/TA Ratio of overall sample as well as on LTD/TA Ratio of Transport industry. The results indicate that Collaterals in the form of tangible fixed assets support Long Term Debt in all the industries again confirming the Maturity Matching Principle. These results also confirm the predictions of both Pecking Order Theory and Trade-Off Theory.

4. **Volatility** has significant positive impact on LTD/TA Ratio on the overall sample as well as on LTD/TA Ratio of Machinery Industry. These results indicate that FDI Companies in India do not hesitate to borrow debt funds even in case of volatile earnings. They seem to have sufficient internally generated reserves and hence do not face risk of bankruptcy.

5. **Growth rate** does not have any significant impact on LTD/TA Ratio either for overall sample or at industry level analysis

6. **Non Debt Tax Shields** has significant negative impact on overall sample as well as on LTD/TA Ratio of Machinery Industry . The results indicate that in case of Machinery industry, greater tax shields would mean lower debt levels in the industry This result is consistent with the prediction of DeAngelo & Masulis (1980)[3]. Surprisingly the results of simple regression on LTD/TA Ratio indicate positive impact of Non Debt Tax Shields on LTD/TA Ratio. "This can be attributed to the omission of an important variable. On account of this omission, regression may give biased estimate", Maddala G.S (2002)[4]. So in this study when we run simple regression, other important variables are omitted; therefore results of multiple regressions are much more reliable.

7. **Debt Service Capacity** has no significant impact on LTD/TA Ratio of overall sample or at industry level analysis.

		Table 7.3			
		Summary of Mutiple Regressions on LTD/TA ratio of FDI companies in India			
Independent Variables	Indicators	Overall sample (140 companies)	Chemical Industry (37 companies)	Machinery Industry (38 companies)	Transport Industry (18 companies)
Size	Log of sales	N.S	N.S	N.S	N.S
	Log of TNA	+VE**	N.S	N.S	---
	Log of GTFA	+VE**	N.S	N.S	---
Profitability	PBT/TNA	–VE**	–VE**	–VE*	N.S
	PBITDA/TGA.	–VE**	–VE**	–VE**	---
Collateral	NFA/TNA	+VE**	+VE**	+VE**	+VE**
	GFA/TGA	+VE**	+VE**	+VE**	+VE**
	(Nfa+Inv+AR)/TNA	+VE**	N.S	N.S	+VE**
	INV/TNA	---	---	---	---
Volatility	COV of PBIT/ TNA	+VE*	N.S	+VE**	N.S
	SD of PBITDA/TGA	N.S	N.S	+VE**	---
Growth rate	CAGR of TNA	N.S	N.S	N.S	N.S
	CAGR of sales	N.S	N.S	N.S	N.S
NDTS	Depr/TGA	–VE**	---	–VE**	---
Debt Service capacity	PBDIT/INT	N.S	N.S	N.S	N.S
Age	Log of age of firm	–VE**	–VE**	N.S	N.S
Dividend payout	Equity Div/PAT	N.S	–VE*	N.S	N.S
Liquidity	CA/CL	N.S	N.S	N.S	N.S
Net Exports	Net exp/Sales	–VE*	–VE**	–VE**	+VE**
Cost of Equity	DIV/SC	–VE**	---	N.S	---
Uniqueness	R&D/Sales	+VE*	–VE**	N.S	N.S
Cost of Borrowing	INT/DEBT	–VE *	–VE**	N.S	N.S
* indicates significance at 5% level, ** indicates significance at 1% level					
Not Significant=(NS), Positive= (+VE), Negative =(–VE)					
A Dash means -- the indicator is not included in final regression runs					

8. **Age of a firm** has significant negative impact on LTD/TA Ratio for the overall sample as well as on Chemical industry. The results indicate that mature well established firms might not have sufficient growth opportunities, hence might not need long term debt funds. They may also have sufficient built in internal reserves and might not need to borrow long term funds. They may borrow Short Term Debt if required. The positive impact of Age on TC&E/TA Ratio (Table 7.2) confirms this result and indicates that as the firm grows in age, its ability to avail Short Term Trade Credit increases. These results support the Pecking Order Theory.

9. **Dividend Payout** has no significant impact on LTD/TA Ratio of overall sample but has significant negative impact on LTD/TA Ratio of Chemical industry which proves that in case of high dividend payouts, FDI Companies in Chemical industry

resort to Trade Credit and Equivalents as a source of finance (Table 7.2) and prefer to borrow less from Long Term Debt Funds.

10. **Liquidity** has no significant impact on LTD/TA Ratio of overall sample or at industry level analysis.

11. **Net Exports** has significant negative impact on the LTD/TA Ratio of the overall sample as well as on LTD/TA Ratio of Chemical and Machinery industry but had significant positive impact on LTD/TA Ratio of Transport industry. Generally net exporters avail lot of tax concessions and other benefits from the government, hence the incentive to obtain long term debt for its benefit of tax deductibility is not there. Hence, Net Exports have a significant negative impact on Long Term Debt Ratio. At the same time, it has significant positive impact on LTD/TA Ratio of Transport industry which indicates that it is a unique feature peculiar to this particular industry. It might be possible that those companies who are Net Exporters in Transport industry require huge investments in assets and hence need more funds to finance these assets, which they borrow from long term sources.

12. **Cost of Equity** has significant negative impact on LTD/TA Ratio of the overall sample but is not a significant Determinant of LTD/TA Ratio at industry level analysis. The results indicate that even if Cost of Equity rises, FDI Companies do not prefer to borrow from Long Term Debt sources.

13. **Uniqueness** of a firm has significant positive impact on LTD/TA Ratio of overall sample. A unique firm which is incurring huge expenditures on research and development needs funds to finance these expenditures and these firms rely on long term debt for their financing requirements. At the same time, Uniqueness has significant negative impact on Long Term Debt Ratio of Chemical industry indicating that unique FDI Companies in Chemical industry would borrow less from Long Term Debt sources. It might also be possible that these unique firms in Chemical industry might be facing difficulty in borrowing from Long Term Debt sources.

14. **Cost of Borrowing** has significant negative impact on LTD/TA Ratio of overall sample as well as on LTD/TA Ratio of Chemical industry. The results indicate that as the Cost of Borrowings rise, companies prefer to borrow less from Long Term Debt Funds and especially meet their financing requirements by availing Short Term Trade Credit (Refer Table 7.2) rather than borrowing from Long Term Debt sources.

7.3.4.4 Results of Multiple regression on TL/TA Ratio

TL/TA Ratio is the broadest debt measure and includes all the Debt Sources, Short Term and Long Debt Sources Including Current Liabilities and Provisions. The summary results of multiple regressions conducted on TL/TA Ratio at firm level analysis and across industries are presented in Table -7.4 and reveal that:

1. **Size** as measured by Log of sales has significant positive impact on TL/TA Ratio of overall sample but was not a significant predictor of TL/TA Ratio of the three selected industry groups. The positive impact on TL/TA Ratio is due to the fact that a major proportion of Total Liabilities come from Short Term Debt Funds, especially Trade Credits and Equivalents and since Size has positive impact on Short Term Debt Funds, especially on Trade Credits and Equivalents (Table 7.2), hence the positive impact even on TL/TA Ratio.

2. **Profitability** has significant negative impact on TL/TA Ratio on the overall sample as well as all the three industry groups confirming that FDI Companies do follow Pecking Order Theory.

3. **Collaterals indicator** - (Nfa+Inv+AR)/TNA has significant positive impact on TL/TA Ratio of overall sample as well as on TL/TA Ratio of Machinery industry and Transport industry. **Collateral** indicator INV/TNA has significant positive impact on overall sample as well as on Transport industry. Since Total Liabilities include all the Debt sources-- both Short Term and Long Term, along with Fixed Assets; Inventories and Accounts Receivable also become important Determinants of TL/TA Ratio. Hence the indicator (Nfa+Inv+AR)/TNA has significant positive impact on TL/TA Ratio.

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4. **Volatility** has significant positive impact on TL/TA Ratio of the overall sample as

well as on TL/TA Ratio of Machinery Industry. This indicates that inspite of fluctuations in profits; FDI Companies continue to borrow. This also indicates that these companies have already built in sufficient reserves in the form of retained profits which they used to repay the loans whenever they have insufficient cash flows.

5. **Growth Rate** as measured by CAGR of Sales and CAGR of TNA has significant positive impact on TL/TA Ratio for the overall sample but is not a significant predictor of TL/TA Ratio at industry level.

6. **Non Debt Tax Shields** has no significant impact on TL/TA Ratio of overall sample or at industry level analysis.

7. **Debt Service Capacity** has no significant impact on TL/TA Ratio of overall sample or at industry level analysis.

8. **Age of a firm** has no significant impact on TL/TA Ratio of overall sample or at industry level analysis.

9. **Dividend Payout** has no significant impact on TL/TA Ratio of overall sample or at industry level analysis.

10. **Liquidity** is a significant predictor of TL/TA Ratio and has significant negative impact on the overall sample as well as on Chemical and Transport Industry. This again might be due to the fact that a major contribution to Total Liabilities comes from Short Term Debt Funds and Trade Credits and hence if there is sufficient Liquidity, the company may need to borrow less from these sources. Hence the negative impact of Liquidity on TL/TA Ratio.

11. **Net Exports** have no significant impact on TL/TA Ratio of overall sample or at industry level analysis.

		Table 7.4			
Summary of Results of Mutiple Regressions on TL/TA ratio of FDI companies in India					
Independent Variables	Indicators	Overall sample (140 companies)	Chemical Industry (37 companies)	Machinery Industry (38 companies)	Transport Industry (18 companies)
Size	Log of sales	+VE**	N.S	N.S	N.S
	Log of TNA	---	---	---	---
	Log of GTFA	---	---	---	---
Profitability	PBT/TNA	–VE**	–VE**	–VE*	–VE**
	PBITDA/TGA	---	---	---	---
Collateral	NFA/TNA	N.S	N.S	---	N.S
	GFA/TGA	---	---	---	---
	(Nfa+Inv+AR)/TNA	+VE**	N.S	+VE**	+VE**
	INV/TNA	+VE**	---	N.S	+VE**
Volatility	COV of PBIT/ TNA	+VE**	N.S	+VE**	N.S
	SD of PBITDA/TGA	---	---	---	---
Growth rate	CAGR of TNA	+VE*	N.S	N.S	N.S
	CAGR of sales	+VE*	---	---	---
NDTS	Depr/TGA	---	---	---	---
Debt Service capacity	PBDIT/INT	---	---	---	---
Age	Log of age of firm	N.S	N.S	N.S	N.S
Dividend payout	Equity Div/PAT	N.S	N.S	N.S	
Liquidity	CA/CL	–VE**	–VE**	N.S	–VE*
Net Exports	Net exp/Sales	N.S	N.S	N.S	N.S
Cost of Equity	DIV/SC	+VE**	+VE*	---	N.S
Uniqueness	R&D/Sales	N.S	N.S	N.S	N.S
Cost of Borrowing	INT/DEBT	–VE **	N.S	N.S	N.S
* indicates significance at 5% level, ** indicates significance at 1% level					
Not Significant=(NS), Positive= (+VE), Negative =(–VE)					
A Dash means -- the indicator is not included in final regression runs					

12. **Cost of Equity** has significant positive impact on TL/TA Ratio of the overall sample and on TL/TA Ratio of Chemical industry. This might also be due to the fact that a major proportion of Total Liabilities come from Short Term Debt and Current Liabilities and when Cost of Equity increases, companies prefer Short Term Debt Funds as observed in Table 7.1 and 7.2. Since increase in Cost of Equity had a negative impact on LTD/TA Ratio (Table7.3), the results confirm the belief that when Cost of Equity increases, FDI Companies in India either resort to Short Term Borrowings or prefer Internal Funds but do not resort to Long Term Debt Funds.

13. **Uniqueness** has no significant impact on TL/TA Ratio of overall sample or at industry level analysis.

14. **Cost of Borrowing** has significant negative impact on TL/TA Ratio of the overall sample but is not a significant Determinant of TL/TA Ratio at industry level analysis.

7.4 Implications of the Study

- The simple regression and multiple regression results indicate that significant differences exist in Determinants of Short Term Debt, Long Term and Total Debt Ratios of FDI Companies in India. Differences in Determinants also exist if the FDI Companies are categorized according to their affiliation of a particular industry.

- The results of multiple regressions of overall sample indicate that Collaterals in the form of Fixed Assets have negative impact on Short Term Debt Ratios but have positive impact on Long Term Debt Ratios. Age has positive impact on Short Term Debt Ratio – TC&E/TA but has negative impact on Long Term Debt Ratio-LTD/TA. Cost of Equity and Cost of Borrowings have positive impact on Short Term Debt Ratios but have negative impact on Long Term Debt Ratio. Uniqueness of a firm has negative impact on TC&E/TA Ratio but has positive impact on Long Term Debt Ratio.

- In case of multiple regressions conducted in industry-wise analysis on STD1/TA Ratio, it is observed that Volatility has positive impact on STD1/TA Ratio of Machinery industry only.

- In case of multiple regressions conducted in industry-wise analysis on TC&E/TA Ratio, it is observed that Profitability has negative impact on TC&E/TA Ratio of Machinery industry only. Size has positive impact on TC&E/TA Ratio of Chemical industry only. Collaterals in the form of Inventories have positive impact on TC&E/TA Ratio of Transport industry only. Volatility has positive impact on TC&E/TA Ratio of Chemical and Machinery industry but has negative impact on TC&E/TA Ratio of Transport industry. Age has positive impact on TC&E/TA Ratio of Chemical industry only. Dividend Payout has positive impact on Chemical industry but has negative impact on Transport industry.

- In case of multiple regressions conducted in industry-wise analysis on LTD/TA Ratio, Profitability has significant negative impact on Chemical and Machinery industry but was not a significant predictor of LTD/TA Ratio of Transport industry. Volatility has significant positive impact on LTD/TA Ratio of Machinery industry only. NDTS has significant negative impact on LTD/TA Ratio of Machinery industry only. Age, Dividend Payout, Uniqueness and Cost of Borrowings have negative impact on LTD/TA Ratio of Machinery industry only.

- In case of multiple regressions conducted in industry-wise analysis on TL/TA Ratio, Collaterals indicator Nfa+Inv+AR/TNA had positive impact on Machinery and Transport industry but not on Chemical industry. INV/TNA had positive impact on TL/TA Ratio of Transport industry only. Liquidity had negative impact on TL/TA Ratio of Chemical and Transport Industry but not on Machinery industry. Cost of Equity has positive impact on TL/TA Ratio of Chemical industry only.

- One of the most important observations is that FDI Companies in India do not prefer to issue equity and consider equity as the last financing choice. They believe in meeting most of their financing requirements through internally generated funds. Another important observation is that FDI Companies in India do not seem to increase their proportion of Long Term Debt under any circumstances as is seen by the declining trends in composition of financing mix. The companies either borrow from Short Term Funds or use internally generated funds but do not increase their proportion of Long Term Debt in their financing mix. They seem to keep their Long Term Debt levels within reasonable limits and also seem to maintain a target leverage range which they try to maintain by either switching to very Short Term Debt funds like Trade Credit or using internally generated funds. This means that the financing behavior of FDI Companies in India confirm to both **Pecking Order Theory** predictions well as **Trade-Off Theory** as these companies prefer internal funds over external funds but at the same time try to maintain their Long Term Debt levels within a target range confirming to predictions of Tradeoff theory,

especially dynamic version of Trade-Off Theory. It can be concluded that both the theories- Trade-Off Theory and the Pecking Order Theory are not mutually exclusive and both seem to in a way to explain the financing behavior of FDI Companies in India.

- A major inference which can be drawn from the study in the context of FDI Companies in India is that the term Capital Structure should not be restricted to the Long Term Debt-Equity Mix alone. The use of variety of Debt Measures in this study has given a new perspective to the term Capital Structure, as it is found out that 'Capital Structure' and 'Financial Structure' policies of FDI Companies in India cannot be differentiated as a major proportion of finance of these companies is provided by Short Term Debt Funds, especially Current Liabilities. If Short Term Debt sources and Non-Interest Bearing Debt sources are not included in study of Capital Structure decision, a proper perspective of actual Determinants of Capital Structure would not be obtained.

7.5 Limitations of the Study

The following are the limitations of the study:

1. Capital Structure of a firm in any country might also be affected by the presence of macroeconomic factors like the tax code, bankruptcy laws, GDP growth, inflation rate, exchange rate, industrial growth, level of exports and imports, forex reserves, efficiency of financial markets, legal and regulatory environment etc. The impact of these factors on Capital Structure of companies in a particular country can be deliberated upon in better way if some comparison can be made of the impact of these factors on Capital Structure of firms belonging to different countries. As macroeconomic factors affecting Capital Structure decisions of FDI Companies in India have not been considered in this study, this might be one of the limitations of the study.

2. The study employs book value debt measures. Market value leverage measures have not been employed in the study due to data limitations which would have provided more inputs.

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3. The Determinants of Capital Structure of FDI Companies belonging to certain industries could not be studied in detail as the number of companies falling in these industry categories was not sufficient enough to allow carrying out multiple regressions as it would have meant insufficient degrees of freedom for conducting multiple regressions.

7.6 Suggestions and Scope for Further Research

1. Further research on Capital Structure can be attempted using a larger database with inclusion of market based Capital Structure leverage measures along with book leverage measures. An important area of further research would be comparison of Determinants of Capital Structure of FDI Companies in India with Determinants of Capital Structure of domestic companies in India which do not have any share of FDI flows. This might provide further insights into Determinants playing an important role in determining Capital Structure of FDI Companies as compared to Determinants of Capital Structure of domestic companies in India.

2. Another area of further research would be comparison of Determinants of Capital Structure of FDI Companies in India with FDI Companies in China and other South East Asian countries which are major attractive FDI destinations. This type of study can also incorporate impact of macroeconomic factors on Capital Structure decisions of FDI Companies from the selected countries.

3. Survey evidence on Capital Structure choice of FDI Companies in India can be conducted on managers of these companies to investigate into reasons of a choice of a particular Capital Structure strategy, if any, and also to find out the effect of corporate governance on Capital Structure.

4. Other measurement techniques like factor analytic model or dynamic panel data measurement models may be applied in further research work on Capital Structure practices.

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