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Financial Leverage in Textiles Industry: A Comparative Study

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ABSTRACT

The present research paper has been made an attempt to measure, analyze and compare the financial leverage in terms of EBIT/EBT relationship and Debt-Equity ratio among Indian and Chinese Textiles industry. In order to achieve the objectives, ten companies from Indian textiles industry and ten companies from Chinese textiles industry were selected. Financial data of the selected companies have been used as secondary data to carry out the research and these data were retrieved from annual reports of respective companies and database software. One way ANOVA has been used to test the inter-firm and intra-firm result. Results of one-way ANOVA for inter-firm comparison confirm that Indian textile companies have significant difference in D-E ratio but have insignificant difference in EBIT/EBT ratio. On the other hand, the financial leverage of Chinese companies was significantly different. To make comparison between two nations' textile industry t test has been used and results reveal that Indian and Chinese companies are significantly not different in respect of financial leverage. Study confirms that the industry is able to provide sufficient cover for interest expenses as well as for financial risk. Study concludes that most of the sample companies are using less debt-equity than to ideal ratio. Hence, textiles companies should employ more debts to attain the advantage of trading on equity.

1. INTRODUCTION

Business cannot be run without arranging funds. Funds are not only required for establishment only, but for expansion, diversification, and other purposes also. A choice has to be made for arranging these funds from various sources. These sources may be broadly classified into two groups – owners' funds and outsiders' funds. Generally short-term finance sources are excluded from sources of funds. Debt, preference shares, equity shares and retained earnings are very common sources of funds. Debt and preference shares are fixed charge bearing sources of funds and equity shares and retained earnings are variable charge bearing source of funds. When both of these sources are used in combination, firm is said to be leveraged. Companies with debt funds in their capital structure are said to be financially leveraged. Use of debt funds involves funds bearing fixed charges in the form of interest and that interest is deductible for tax purpose. Financial leverage is measured as EBIT/EBT relationship, Debt Equity ratio, Debt Ratio, Equity Ratio, Interest Coverage Ratio, etc. The present study measures financial leverage in terms of first two.

Indian textile industry is one of the oldest industries in the Indian economy, dating back to several countries. The industry is extremely varied, with hand-spun and hand-woven textiles sectors at one end of the spectrum, while the capital-intensive sophisticated mills sector on the other end. It contributes 2% to India's GDP, 12% to export revenue and holds 5% of the global textile trade.

Chinese textile industry is the largest and biggest cloth manufacturer and exporter of the world and contributes 7% to China's GDP. It has six main sub industry sectors. Cheap labour, easily availability of man power, area, government policy and large domestic market these reasons move global textile industry in China.

Both the countries are fast growing economy in the world and having a significant share of the textiles industry of the world. The selected industry what capital structure have and what financial risk bears, therefore, the present study attempts to make a comparison between these two.

2. REVIEW OF LITERATURE

Some important studies were reviewed and has been presented below-

(Ali, 2011) examined the determinants of leverage and found size, non-debt tax shields and tangibility were positively correlated with leverage ratio while growth and profitability negatively associated with leverage ratio.

(Azhagaiah & Sathia, 2012) studied about corporate leverage of 25 Indian textile companies listed under BSE and found significant growth rate in all three leverages.

(Chandani & Ahmed, 2021) observed the effect of corporate governance and financial leverage on the efficiency in terms of ROA and ROE of listed companies in Pakistan. Study found that corporate governance has positive correlation with a company's performance while FL and firm's performance does not have significant correlation.

(Javeed & Tabassam, 2018) measured the impact of financial leverage on firm's financial condition. Ten years data of listed Pakistani textile companies were analyzed and found positive relationship between FL and financial position (ROA, Sales Growth and NPM) and negative relationship between FL and ROE.

3. NEED OF THE STUDY

Since India and China both are developing and fast-growing economy in the Asia as well as in the world. Researcher could make effort to study the financial leverage in textile industry in a particular country but comparative study has not been carried out between these two countries' textile industry so far. So, there is a research gap exists and present study makes an effort to fulfill this gap.

4. OBJECTIVE OF THE STUDY

The present paper has following objectives:

1. To measure and analysis of financial leverage of Indian and Chinese textile companies.

2. To compare financial leverage of Indian and Chinese textile companies.

5. RESEARCH HYPOTHESES

Following hypotheses have been proposed for the study:

H_{01}: There is no significant difference among financial leverage of Indian textile companies.

H_{02}: There is no significant difference among financial leverage of Chinese textile companies.

H_{03}: There is no significant difference among financial leverage of Indian and Chinese textile companies.

6. RESEARCH METHODOLOGY

To carry out the research following methodology

Table 1: Detailed Research Methodology

Description	Indian Sample Companies	Chinese Sample Companies
Sample Size	10	10
Period of the study	5 financial year (2013-14 to 2017-18)	5 calendar year (2015 to 2019)
Type of data	Financial data as secondary data	Financial data as secondary data
Source of data	Annual reports o f selected companies and ACE Equity Software	www.aastocks.com, www.gurufocus.com, www.reuters.com, www.stockopedia.com, and www.yahoofinance.com

(Source: Own work)

has been adopted-

Ten Indian companies and ten Chinese companies have been selected from textile sector. Since Indian companies' financial data are for five financial years but Chinese companies' data for five calendar years, so to facilitate comparison between Indian and Chinese sample companies, financial data of Chinese sample companies were assumed to occur in uniform order (assuming occur evenly every month) and accordingly converted into financial years. Hence four financial years could be formed i.e. from 2015-16 to 2018-19.

Statistical Tools: Mean and coefficient of variation have been used as descriptive statistics. To compare the difference in financial leverage of various companies and of various years, one-way ANOVA has been used. To compare the difference in financial leverage of selected companies of the two countries *t* test has been administered.

7. RESULTS AND DISCUSSION-

The study measures financial leverage in terms of EBIT/EBT relationship and Debt-Equity ratio.

Relationship between EBIT and EBT

This concept shows the relationship between Earnings before Interest and Tax (EBIT) and Earnings before Tax (EBT). The formula for financial leverage under this method is:

$$DFL = \frac{EBIT}{EBT} \quad or \quad \frac{EBIT}{EBIT - Interest}$$

Relationship between Debt and Equity

This ratio shows the relationship between company's total debt and total equity. Total debt includes both long term debt and those short-term debts which do not occur in the day-to-day operations of the company. Total equity includes paid up equity share capital and retained earnings. The formula for financial leverage under this method is:

$$DFL = \frac{Debt}{Equity}$$

Table 2 presents the financial leverage (EBIT-EBT relationship) of Indian sample companies of textile industry.

Table 2: Financial Leverage (EBIT/EBT) of Indian Textile Industry

S. N.	Company Name	2013-14	2014-15	2015-16	2016-17	2017-18	Mean	C. V. (%)
1	Arvind Ltd.	1.87	1.94	1.88	1.75	1.50	1.79	9.89
2	Bombay Dyeing Ltd.	8.44	-2.21	-2.80	12.09	1.40	3.39	195.27
3	Garware Technical Fibres Ltd.	1.33	1.17	1.10	1.05	1.07	1.14	9.82
4	KPR Mill Ltd.	1.54	1.38	1.20	1.17	1.13	1.28	13.43
5	Raymond Ltd.	2.58	2.25	2.55	3.29	1.86	2.51	20.90
6	Rupa & Company Ltd.	1.24	1.23	1.18	1.09	1.06	1.16	6.98
7	Safari Industries (India) Ltd.	11.31	1.56	1.27	1.25	1.09	3.30	136.05
8	Swan Energy Ltd.	16.11	6.63	174.93	12.62	1.79	42.42	175.11
9	Trident Ltd.	1.79	2.23	1.63	1.32	1.30	1.65	23.04

10	Welspun India Ltd	3.27	1.38	1.22	1.30	1.25	1.68	52.80
	Industry Average	**4.95**	**1.76**	**18.42**	**3.69**	**1.34**	**6.03**	**64.34**
	Inter-firm Comparison	ANOVA		F	1.469	**P-Value**		**0.192**
	Intra-firm Comparison	ANOVA		F	0.813	**P-Value**		**0.523**

(Source: Own computation)

Table 2 discloses that financial leverage (EBIT / EBT) ranges between 1 and 42 for different firms for different years. All the sample companies have reported a positive leverage for all the years. This tells that all the companies are operating at a level of EBIT which is higher than the financial break-even level. The highest leverage was observed for Swan Energy in the year 2015-16 as 174.9 and average leverage of the company is also the highest amongst the sample companies as 42.41. The average leverage for the industry comes to be 6.03 which is quite high looking at average leverage of other companies. This is due to inclusion of abnormally high leverage of Swan Energy Ltd.

One way ANOVA for inter-firm comparison shows the calculated value of F is 1.469 with a p value of 0.192. Thus, there is no significant difference among leverage ratio of different firms. Further, one way ANOVA for intra-firm comparison also revealed that the calculated value of F is 0.813 with a p value of 0.523. Thus, there is no significant difference among financial leverage over the years. So, it can be concluded that both the hypotheses of no significant difference among leverages of different firms and of different years could not be rejected at 5% level of significance.

Table 3 displays the leverage using debt-equity approach for Indian textile industry along with inter-firm and intra-firm comparison.

Table 3: Financial Leverage (Debt-Equity Ratio) of Indian Textile Industry

S. N.	Company Name	2013-14	2014-15	2015-16	2016-17	2017-18	Mean	C. V. (%)
1	Arvind Ltd.	1.12	1.25	1.48	1.06	0.88	1.16	19.28
2	Bombay Dyeing Ltd.	8.78	3.95	7.60	2.18	2.56	5.01	59.87
3	Garware Technical Fibres Ltd.	0.23	0.14	0.12	0.19	0.26	0.19	29.76
4	KPR Mill Ltd.	1.02	0.75	1.08	0.50	0.36	0.74	42.51
5	Raymond Ltd.	0.97	1.04	1.23	1.28	1.53	1.21	18.08
6	Rupa & Company Ltd.	0.40	0.39	0.52	0.26	0.31	0.38	26.25
7	Safari Industries (India) Ltd.	4.40	0.43	0.64	0.41	0.32	1.24	142.6
8	Swan Energy Ltd.	1.31	1.64	1.90	0.89	0.98	1.34	31.89
9	Trident Ltd.	2.01	1.77	1.41	1.03	1.03	1.45	30.22
10	Welspun India Ltd.	2.73	2.15	1.65	1.38	1.26	1.83	33.09
	Industry Average	**2.30**	**1.35**	**1.76**	**0.92**	**0.95**	**1.46**	**43.36**
	Inter-firm Comparison	ANOVA		**F**	6.909	**P-Value**		**0.00**
	Intra-firm Comparison	ANOVA		**F**	1.271	**P-Value**		**0.295**

(Source: Own computation)

It is found from the results of textile industry that the overall debt-equity ratio of this industry ranges between 0.12 and 8.78. The average leverage for the industry came to be 1.46 with a CV of 43.36%. The highest average debt equity ratio of 5.01 was observed for Bombay Dyeing Ltd. the company also has the highest D-E ratio for the entire sample in the year 2013-14, followed by 7.60 in the year 2015-16. Garware Technical Fibres Ltd. has the least average D-E ratio of 0.19 and in almost all the years the ompany is using less than half amount of debt than quity

wan energy emerged as the riskiest company due highest leverage (EBIT/EBT) but when its debt-quity ratio is observed, it is revealed that the ompany has not much debt over the years as ompared to other companies in the sample. The eason for such discrepancy is that the company's EBIT is very less as compared to its interest xpenses and hence after deducting interest from EBIT. EBT reduced substantially, which led to ncreased leverage (EBIT/EBT).

Results of one-way ANOVA revealed that for inter-firm comparison, the calculated F value is 6.909 with a p value of 0.00. Thus, there is significant difference among leverages of different firms. On the other hand, the calculated value of F for intra-firm comparison is 1.27 with a p value of 0.295. Thus, there is no significant difference among leverages of different years.

Table 4 presents the financial leverage (EBIT-EBT relationship) of Chinese sample companies of textile industry.

Table 4: Financial Leverage (EBIT/EBT) of Chinese Textile Industry

S. N.	Company Name	2015-16	2016-17	2017-18	2018-19	Mean	C. V. (%)
1	Black Peony (Group) Co. Ltd.	1.23	1.19	1.21	1.14	1.19	3.28
2	Huafang Co. Ltd.	2.06	4.10	5.96	3.08	3.80	43.77
3	Huafu Fashion Co. Ltd.	1.46	1.27	1.22	1.25	1.30	8.28
4	Jiangsu Sunshine Co. Ltd.	1.47	1.55	1.85	1.39	1.56	12.98
5	Kam Hing International Holdings Ltd.	1.94	1.56	1.61	1.84	1.74	10.64
6	Lu Thai Textile Co. Ltd.	1.02	1.02	1.03	1.07	1.03	2.18
7	Shijiazhuang Changshan Beiming Tech. Co. Ltd.	1.18	1.62	1.72	2.10	1.65	23.01
8	Sunvim Group Co. Ltd.	1.20	1.12	1.18	1.20	1.18	2.98
9	Weiqiao Textile Co. Ltd.	1.44	1.41	1.50	1.35	1.43	4.39
10	Xinglong Holding (Group) Co. Ltd.	0.64	1.67	3.21	0.70	1.56	77.18
Industry Average		**1.36**	**1.65**	**2.05**	**1.51**	**1.64**	**17.98**
Inter-Firm Comparison		ANOVA	**F**	5.622	**P Value**		**0.000**
Intra-Firm Comparison		ANOVA	**F**	0.947	**P Value**		**0.428**

(Source: Own computation)

t is found from the results that on an average the hinese textile industry is having a leverage of 1.64 ith a low C. V. of 17.98%. Huafang Co. Ltd. is howing highest average leverage of 3.80. The value f leverage is increasing continuously till 2017-18. was also found that the company is earning ncreasing amount of EBIT and incurring increasing mount of interest till 2018-19. The C. V. is low hich is showing less fluctuation in leverage.

he result of one-way ANOVA for inter-firm omparison reveals that the calculated F value is 622 with a p value of 0.00. Thus, the null hypothesis of no significant difference among various firms' financial leverage is rejected at 5% level of significance. One way ANOVA for Intra-firm comparison finds the calculated value of F is 0.947 with a p value of 0.428. Thus, there is no significant difference among financial leverage over the years and null hypothesis for intra-firm comparison is accepted.

Table 5 displays the leverage using debt-equity ratio for Chinese sample companies of textile industry along with inter-firm and intra-firm comparison.

Table 5: Financial Leverage (Debt-Equity Ratio) of Chinese Textile Industry

S. N.	Company Name	2015-16	2016-17	2017-18	2018-19	Mean	C. V. (%)
1	Black Peony (Group) Co. Ltd.	1.07	0.98	1.06	1.05	1.04	4.03
2	Huafang Co. Ltd.	1.57	1.51	1.05	1.05	1.29	21.76
3	Huafu Fashion Co. Ltd.	1.26	1.16	1.07	1.38	1.22	11.09
4	Jiangsu Sunshine Co. Ltd.	1.02	0.99	0.90	0.83	0.93	8.93
5	Kam Hing International Holdings Ltd.	0.94	0.94	0.91	1.02	0.95	4.90
6	Lu Thai Textile Co. Ltd.	0.13	0.15	0.19	0.25	0.18	30.62
7	Shijiazhuang Changshan Beiming Tech. Co. Ltd.	0.71	0.83	0.79	0.86	0.80	8.56
8	Sunvim Group Co. Ltd.	1.21	0.92	0.93	1.16	1.05	14.24
9	Weiqiao Textile Co. Ltd.	0.55	0.56	0.34	0.15	0.40	48.93
10	Xinglong Holding (Group) Co. Ltd.	0.55	0.55	0.67	0.70	0.62	12.97
	Industry Average	**0.90**	**0.86**	**0.79**	**0.85**	**0.85**	**5.23**
	Inter-Firm Comparison	ANOVA	F	27.537	**P Value**		0.000
	Intra-Firm Comparison	ANOVA	F	0.141	**P Value**		0.935

(Source: Own computation)

It is found that average D-E ratio for the industry is 0.85 with a low C. V. of 5.23%. Huafang Co. Ltd. has the highest average leverage of 1.29 with a C. V. of 21.76%. The company showed continuous increasing trend in both total debt and equity but the equity has increased at a rate more than that of total debt. Lu Thai Textiles Co. Ltd. has the lowest average D-E ratio in the sample i.e. 0.18. The company also has the lowest D-E ratio for each of the years in the entire sample. This shows that the company has used low amount of debt as compared to equity. For remaining companies average D-E ratio has been less than 1. Also, the C. V. value is quite low indicating little fluctuations in D-E ratio over the years.

It is found from inter-firm comparison that the calculated F value is 27.537 with a P value of 0.00. Thus, significant difference exists among vari firms' D-E ratio at 5% level of significance. Further, intra-firm comparison results reveal that the calculated value of F is 0.141 with a P value of 0.935. Thus, significant difference does not exist among the measures of D-E Ratio over the years.

Comparison among Financial Leverage of Indian and Chinese Sample Companies

In this section, comparison of financial leverage has been done between Indian and Chinese Sample Companies. There is a mismatch between years for which their data have been collected. Three common years could be found for both Indian and Chinese sample companies i.e. 2015-16, 2016-17 and 2017-18. Hence comparison has been made using these three years only.

Table 6: Comparison among Financial Leverage of Indian and Chinese Companies

Financial Leverage	Indian Sample Companies					Chinese Sample Companies					t	p Value
	2015-16	**2016-17**	**2017-18**	**Mean**	**C. V. (%)**	**2015-16**	**2016-17**	**2017-18**	**Mean**	**C. V. (%)**		
EBIT/EBT	18.42	3.69	1.34	7.82	118.37	1.36	1.65	2.05	1.69	20.45	1.15	0.370
D-E Ratio	1.76	0.92	0.95	1.21	39.63	0.90	0.86	0.79	0.85	6.39	1.29	0.325

(Source: Own Computation)

EBIT/EBT Relationship

Table 6 presents Textile sector in India has the average leverage of 7.82 and also has high fluctuations as is evident from the high value of C. V. (118%). Thus, Indian textile sector is riskier than the Chinese textile sector. High average leverage shows that if there is a decrease in EBIT by 20%, then there will be a decrease in EPS by 156.4% (20% * 7.82). This poses a great financial risk on this sector to cover interest expenses. The hypothesis testing results showed that the calculated value of t is 1.147 with a p value of 0.370. Hence there is no significant difference among the financial leverage of Indian and Chinese sample companies.

Debt-Equity Ratio

Table 6 reveals that the average D-E ratio for Indian textile sector is 1.21, lower than the ideal ratio 2:1, higher than the average D-E ratio for Chinese textile sector. Chinese industry shows decreasing trend in D-E ratio over the years. Hypothesis testing results reveal that *t* statistics as 1.29 with a p value of 0.325 and accept the null hypothesis. It can be concluded that there is no significant difference among the Debt-Equity ratios of Indian and Chinese sample companies.

8. CONCLUSION

The present study attempts to measure and compare the financial leverage of textile companies. Only five years results of the selected companies have been used to fulfill the research gap. EBIT/EBT ratio shows higher fluctuations in Indian textile industry than Chinese industry which confirms great financial risk. The results of D-E ratio show that only one firm has higher ratio than the ideal ratio and nine firms were trading their businesses on thick equity. The study concludes that the Indian and Chinese textile companies are significantly not different in respect of financial leverage.

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