BUSINESS AND FINANCIAL RISK: A STUDY ON FMGC COMPANIES IN INDIA

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Abstract *The paper is an attempt to analyse the Business Risk and Financial Risk and its effect on profitability of well known FMCG companies (HUL, Nirma, Dabur and Marico) in India. The secondary data for analysis is retrieved from Capitaline database for ten years period from 1995-96 to 2005-06. The study aims to measure Business risk with the help of FTTR and DOL and Financial Risk with the help of DFL and DER and total risk with the help of DOL and DFL. The study also explores effects of profitability i.e. Profit before interest and tax margin (PBITM), Return on capital employed (ROCE) and Return on Net-Worth (RONW) to the firm's performance. The study measure the relationship between the Business Risk and Financial Risk by using Pearson's simple correlation technique and to test such coefficients by 't' test. The study of the interrelation between the business risk associated with all the companies and their operating earning capability does not confirm to the generally accepted rule that higher the degree of business risk greater the profitability.*

Keyword: *Business Risk, Financial Risk, FMCG Companies, Degree of Operating Leverage, Degree of Financial Leverage.*

INTRODUCTION

In every aspect of our life risk exists. Whether it is investing, driving or just walking down the street every person exposes himself or herself to risk. 'Risk' means possibility of unpleasant happening. Risk can be defined as "an abstract concept expressing the possibility of unwanted outcomes" (Tom Gilb). Risk means a situation when the probabilities of occurrence of different states of nature are known. Risk is not a static concept. It may vary from situation to situation and can be measured and compared. The degree of risk attached to and event is generally linked to the likelihood of the occurrence of that event. The higher the probability of the actual outcome being different from the expected outcome, the higher is the risk associated to the event.

The degree of risk is dependent on the level of information. It is dependent on several factors that how quickly and how well the organization collects the information in order to face the risk. Accordingly to Webster's dictionary 'Risk' is the possibility of something unpleasant happening or the chance of encountering loss or harm. From other point of view risk means uncertainty of future cash return of present's investment. Thus, risk arises at the time of evaluation of investment.

The total risk associated with a firm can be broadly divided into two components viz. business risk and financial risk. Business risk is the risk associated with the operation of the firm. It is inherent in the firm's investments. It arises out of fluctuation of the firm's expected return on total fund invested. There are several factors that affect the business risk of a firm such as (i) firm-specific factors, (ii) industry specific factors and (iii) economy specific factors. Financial risk is the risk associated with the financing decision of the firm. In other words financial risk is the risk that arises out of the possibility of failing to meet the fixed financial commitment or contractual obligation and possibility of fluctuation in income available to owner's equity. Therefore, we can say that financial risk exists if the firm uses fixed charge bearing capital in its capital structure. If the company continuously getting lever itself, all other things being unchanged then there must be a probability that the company fail to meet its contractual obligation goes up also (Sur, Das & Dey, 2006, p.53).

There are several measures of business risk. The most common measures of business risk are (i) fixed assets to total assets ratio (FTTR) (Ferri & Jones, 1979, p.638) and (ii) degree of operating leverage (DOL) (Lev, 1974, p. 628). FTTR shows the extent of total fund invested in fixed assets. The higher the FTTR the greater is the degree of business risk arising out of the larger part of the expenses being fixed in nature resulting in higher level of break even point (Mallik & Mallik, 1985, p.45). DOL signifies the ability of the company to use fixed operating costs to magnify the effects of changes in sales volume on its operating profit. The higher the proportion of fixed operating costs to magnify the effects of changes in sales volume on its operating profit. The higher the proportion of fixed operating cost to total operating

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cost, the higher is the value of DOL (Solomon & Pringle, 1978,p. 441). The higher the value of DOL the greater is the degree of business risk associated with the company. It can also be measured with the help of operating profit ratio (Chakraborty, 1981, p.112) or 'coefficient of variation' of operating profit. The higher the value of the coefficient, the greater is the business risk.

Financial risk can also be measured through various methods. The most important measures of financial risk are (i) debt-equity ratio (DER) and (ii) degree of financial leverage (DFL). Debt-equity ratio is the most significant of leverage ratios at it gives it one stroke the composition of the long term funds of the firm in terms of the stake of the owners and outsides in the business. Generally, it indicates the relative claims of long-term creditors and owners against the fixed assets of a company. A high ratio indicates large outside borrowings and consequently a large outside stake in the business. The higher the value of the DER for a company, larger is the financial risk and vice-versa. DFL reflects a company's ability to use fixed financial charges to magnify the effects of changes in earnings before interest and tax (EBIT) on its earning per share (EPS)(Gitman, 1976, p.84). The higher the proportion of fixed charge bearing capital to capital employed by a company, the higher is the value of DFL and greater is the degree of financial risk associated with the company. The difference between the total risk and the business risk of a company can also be considered as a measure of the extent of financial risk (Barges, 1963, p.17). Under this approach the total risk of a company is measured by the 'coefficient of variation' of the net earnings available to equity share holders or return on equity (ROE) and the business risk is measured in the same way as stated above. The wider the difference between these two coefficients, the greater is the degree of financial risk.

The way in which business and financial risk is measured can have significant impact on its profitability. At decision making stage when we want to maximize profitability we have to consider not minimize the total risk associated with the company. Contrary, we have not to focus entirely on minimization of risk because it consequently reduces the potential profitability of the company. Therefore, for the achievement of entity objectives, the company should manage risk to be within its risk appetite.

REVIEW OF LITERATURE

In 2006 Sur, Das and Dey conducted a study on Business and Financial risk- a study of Hindalco Industries ltd. The period of the study was 1996-97 to 2005-2006. In this study they showed that financial risk emanates from the financing decision of the company. Such research paper studied the risk pattern and risk-return position of Hindalco Industries Ltd.

Mallik, A and Mallik, U (1985) made a study on Risk analysis and measurement from published financial statement – a case study. In this study they showed that the higher the fixed assets to total assets ratio, an indicator of business risk, the greater is the degree of business risk arising out of the larger part of the expense being fixed in nature resulting in higher level of break even point.

D.Sur (2007) conducted a study on NTPC Ltd relating to Business and Financial risk in the pre and past liberalization period- a comparative analysis. In this study it has been seen that the way in which business and financial risks are managed have significant impact on profitability of the company. He also showed that the achievement of entity objectives, the company should manage risk to be within its risk appetite.

B.Lev (1974) made a study on the association between the operating leverage and risk. In this study he showed that degree of operating leverage is an important measure of business risk. He also argued that there is a positive association between business risk and degree of operating leverage.

E. Solomon, and J.J. Pringle, (1978) in his book '*An Introduction to Financial Management'* argued that the higher the proportion of fixed operating cost it is difficult to magnify the effects of changes in sales volume on its operating profit. He also argued that the higher the proportion of fixed operating cost to total operating cost, the higher is the value of DOL.

A. Barges, (1963) in his book '*The Effect of Capital Structure on Cost of Capital'* suggested that financial risk can also be finding out by differentiating the business risk and total risk. He also opined that the higher the proportion of fixed charge bearing capital to capital employed by a company, the higher is the value of DFL and greater is the degree of financial risk associated with the company.

OBJECTIVES OF THE STUDY

The present study is made to make an in-depth study of the four well-known companies in Indian FMCG producing industry in respect of their financial performance during the period from 1996-97 to 2005-06. The objectives of the study are as under.

(1) To analyze the business risk with the help of FTTR and DOL of each of the four companies under study.

(2) To analyze the financial risk with the help of DFL and DER of each of the four companies under study.

(3) To measure the total risk of each of the four companies by multiplying DOL and DFL.

(4) To measure the profitability of the selected companies by computing profitability ratios namely, operating

profit ratio or profit before interest and tax margin (PBITM), return on equity (RONW), Return on capital employed (ROCE).

(5) To measure the liquidity of the selected companies by using liquidity ratio namely current ratio.

(6) To measure the relationship between several measures of business risk and that of financial risk in each of the companies under study by using Pearson's simple correlation technique and to test such coefficients by 't' test.

(7) To measure the degree of relationship between selected measures of business risk with PBITM and that between measures of financial risk with return on equity (RONW) in each of the companies under study by using Pearson's simple correlation technique and to test such results by 't' test.

RESEARCH METHODOLOGY OF THE STUDY

(1) Sample Design: The study is based on first moving consumer goods companies in Indian customer friendly product industry. In this study purposive sampling procedure has been followed. In this study four well known companies have been selected. The companies in our study are as under

(1)Nirma Ltd.

(2)Dabur India Ltd.

(3)Marico Ltd.

(4)Hindustan Unilever Ltd.(HLL or HUL).

(2) Collection of Data: The study is based on secondary data only. For the purpose of the study, secondary data have been collected from Capitaline 2007, official data bank, Capital Market Publishers (I) Ltd., Mumbai. Editing, classification and tabulation of the data collected from the above mentioned sources have done as per the requirement of the study.

(3) Analysis of Data: In order to analyze these data the techniques of financial statement analysis like ratio analysis, simple mathematical tools like percentage, average, ratios and certain statistical techniques like mean, standard deviation, coefficient of variation, Karl Pearson's simple correlation analysis, simple regression analysis etc have been used. For measuring the significance of the simple correlation coefficient, 't' test has been applied.

ABOUT THE COMPANIES:

Nirma Ltd.(NL): Incorporated as a private limited company Nirma was converted into a deemed public and then to a public limited one in Nov'93. NL has a leadership presence in detergents, soaps and personal care products. It engaged into manufacture of industrial products like soda ash, linear alkyl Benzene (LAB), Alfa olefin sulpohonates (AOS), fally acid, Glycerine sulphuric Acid etc. During 2004-05 the company planned to set up coke ovens having total capacity of 150000 NT.

Dabur India Ltd. :- Dabur India Ltd. (DIL) is one of the leading name in Indian FMCG producing industry. It was established by S.K. Burman in 1984. In India the company's business is carried out by three divisions like consumer care division, consumer health care division and Dabur foods Ltd.

Hindustan Unilever Ltd. :- Hindustan Unilever limited(HUL) is the India's largest FMCG producing compoany, touching the lives of two out of three Indians with over 20 district categories in Home and Personal care products and foods & beverages. HUL's brands are Lifebuoy, Lux, Surf Excel, Rin, Wheel, Fair & Lovely, Ponds, Sunslik, Clinic, Pepsodent, close-up, Lakeme, Brooke Bond, Kissan, Kwality, walls etc. Such products are manufactured over 40 factories across India.

Marico Ltd. :- Marico Limited (M L) is a leading Indian group in FMCG producing company in the global Beauty and Wellness space. Marico's products and services in hair care, Skin care and Health Foods generated a turnover of about Rs. 15.6 billion during the year 2006-07. Its brands are Parachute, Saffooa, Sweekar, Hair & Care, Nihar, Shanti Mediker, Revive, Manjal, Keya, Aromatic, Camelia etc. Marice's branded products are also present in Bangladesh, other SAARC countries, the middle east and Egypt.

FINDINGS OF THE STUDY

For measuring the degree of business risk associated with selected companies, two common measures, namely fixed assets to total assets ratio (FTTR) and degree of operating leverage (DOL) have been used in Table-A. For identifying the nature of trend in both FTTR and DOL series during the period under study linear trend equations have been fitted and for identifying whether such slopes of the trend statistically significant or not, 't' test has been applied.

(i) Table-1 shows that there was a fluctuating trend in FTTR of Nirma Ltd. during the period under study. It varied between 0.25 in 1996-97 and 0.88 in 2001-02 under study period. The mean value of FTTR was 0.69. The company changed its policy regarding the fixed assets investment during the second half of the study period. The linear trend fitted to the FTTR series during the study period exhibits an upward trend and the slope was found to be statistically insignificant at 0.01 level.

The FTTR of DIL fluctuated between 0.29 in 1996-97 and 0.48 in 2003-04 during the period under study. The mean

Table 1: Analysis of Business risk of NL, DIL, ML, HUL.

Year	Nirma Ltd.		Dabur India Ltd.		Marico Ltd.		HUL	
	FTTR (Times)	DOL (Times)	FTTR (Times)	DOL (Times)	FTTR (Times)	DOL (Times)	FTTR (Times)	DOL (Times)
1996-97	0.25	1.15	0.29	2.32	0.40	2.45	0.49	2.04
1997-98	0.55	1.15	0.38	3.11	0.50	2.89	0.50	1.92
1998-99	0.41	1.11	0.38	3.66	0.55	3.38	0.43	1.90
1999-2000	0.77	1.09	0.40	3.57	0.64	3.53	0.41	1.76
2000-01	0.77	1.11	0.41	2.99	0.68	3.20	0.39	1.77
2001-02	0.88	1.10	0.37	3.50	0.67	3.16	0.33	1.71
2002-03	0.87	1.13	0.35	2.93	0.42	2.87	0.34	1.80
2003-04	0.88	1.14	0.48	2.45	0.43	2.93	0.40	2.10
2004-05	0.77	1.18	0.47	2.93	0.32	3.06	0. 59	2.14
2005-06	0.73	1.26	0.40	2.70	0.56	2.76	0.50	2.34
	Average of FTTR = 0.69 Average of DOL = 1.14 FTTR = 0.401 + 0.052t (3.065) DOL = 1.093 + 0.008t (36.127) (1.814)		Average of FTTR = 0.39 Average of DOL = 3.02 FTTR = 0.329 + 0.012t (10.784) (2.381) DOL = 3.193 – 0.032t (9.854) (-0.615)		Average of FTTR = 0.52 Average of DOL = 3.02 FTTR = 0.549 - 0.005t (6.136) (-0.382) DOL = 3.033 – 0.002t (13.363) (-0.048)		Average of FTTR = 0.44 Average of DOL = 1.95 FTTR = 0.428 + 0.002t (7.290) (0.192) DOL = 1.771 + 0.032t (13.723) (1.544)	

Figures in the Parentheses indicate't' values.

** Significant at 0.01 level.

Source: Complied and computed from Capitaline, 2007, official data bank, Capital Market Publishers (I) Ltd., Mumbai.

value of FTTR was 0.39. It implies that the company changed its policy regarding investment in fixed assets in the year 2003-04 and 2004-05. The positive growth of FTTR series was noticed during the study period and the slope was found to be statistically insignificant at 0.01 level.

The FTTR of ML varied between 0.32 in 2004-05 and 0.68 in 2001. It indicates that the company changed its policy regarding investment in fixed assets in the second half of the study period. The linear line fitted to the FTTR series during the study period exhibits a downward trend and the slope was found to be statistically insignificant at 0.01 level.

In case of HUL, FTTR showed a fluctuating trend during the period under study. It varied between 0.033 in 2001-02 and 0.59 in 2004-05. The mean value of FTTR was 0.44. The investment in fixed assets to that in total assets was higher in the year 2004-05. The linear trend fitted to the FTTR series during the study period shows an upward trend and the slope was found to be statistically insignificant at 0.01 level.

A fluctuating trend in DOL of NL was noticed during the period under study. It varied between 1.09 in 1999-00 and 1.26 in 2005-06. The mean value of DOL was 1.14. It is observed from the trend to the DOL series of NL during the study period that there was a positive growth in the DOL was noticed and the slope was found to be statistically insignificant at 0.01 level.

In case of DIL, DOL exhibited a fluctuating trend during the study period. It fluctuated between 2.32 in 1996-97 and 3.66 in 1998-99. The mean value of DOL incase of DIL was 3.02. It is clear that the company changed its investment policy in the second half of the study period. The linear line fitted to the DOL series of DIL during the study period shows a decreasing trend and the slope was found to be statistically insignificant at 0.01 level.

The DOL of ML varied between 2.45 in 1996-97 and 3.53 in 1999-2000. The mean value of DOL in ML was 3.02. It is observed from the trend to the DOL series of ML during the study period that it reflects a downward trend and the slope was found to be statistically insignificant at 0.01 level.

In case of HUL, DOL fluctuated between 1.71 in 2001-02 and 2.34 in 2005-06 whereas the mean of DOL was 1.98. The company changed its operating leverage in the second half of the study period. The linear line fitted to DOL series

of HUL apologized an upward trend considering the period under study and the slope was found to be statistically insignificant at 0.01 level.

In Table-2 the business risk of NL has also been measured by the coefficient of variation (CV) of the operating profit ratio (OPR). In this table, three major components of business risk, namely capital turnover risk, cost structure risk and liquidity risk have also been assessed by the CV of capital turnover ratio (CTR), that of cost structure ratio (CSR) and that of current ratio (CR) respectively.

The CV of OPR of NL, DIL, ML, and HUL were 0.16, 0.24, 0.12 and 0.23 respectively. It indicates that the degree of business risk associated with ML is higher than that of other companies taken for computation, during the period under study.

The CV of CTR of NL, DIL, ML and HUL were 0.25, 0.33, 0.20 and 0.24 respectively. It exhibits that ML maintained a lower level of risk of not securing a stable turnover by utilizing long-term funds. In that category NL Ltd. came next, then HLL or HUL and at last DIL.

The CV of CSR of NL, DIL, ML and HUL were 0.06, 0.03, 0.02, and 0.04 respectively. It indicates that lower volatility in the cost structure of the company was found in DIL during the study period. In the consequence of volatility in the cost structure, NL registered the first place.

The CV of CR of NL, DIL, ML and HUL were 0.21, 0.27, 0.08, and 0.12 respectively. It implies that ML won the first place in respect of short-term debt paying capability of the company, and then came HLL or HUL (0.12) and then NL (0.21).

(ii) For measuring the financial risk associated with the selected companies two common measures, namely debt-equity ratio (DER) and degree of financial risk (DFL) have been used in Table III. For identifying the nature of trend in both DER and DFL series during the period under study linear trend equations have been fitted and for identifying whether such slopes of the trend statistically significant or not, 't' test has been used.

Table-3 shows that the DER of NL fluctuated between 0.24 in 2005-06 and 1.15 in 1999-00. On an average it was 0.69. In the first half of the study period this ratio was to high whereas a decreasing trend was noticed in the second half of the study period. It was due to the dependence on owners' equity. The linear line fitted to DER of NL series during the period under study reflected an upward trend and the slope was found to be statistically insignificant at 0.01 level.

In case of DIL, DER ranged between 0.09 in 2005-06 and 1.17 in 1996-97 (or 1997-98). The mean value of DER was 0.66. A significant decreasing trend was noticed through out the study period. It shifted towards owners' equity. A negative growth trend was also noticed from the linear line fitted to the DER of DIL. and the slope was found to be statistically significant at 0.01 level.

The DER of ML varied between 0.02 in 1999-00(or 2000-01 or 2001-02) and 0.58 in 2005-06. A fluctuating trend was noticed throughout the study period. The mean value of DER was 0.16. During first half the company shifted towards owners' equity but in second half it shifted towards

Table 2: Measurement of Business risk of NL, DIL, ML, HUL

Year	Nirma Ltd.				Dabur India Ltd.				Marico Ltd.				HUL			
	OPR (%)	CTR (%)	CSR (%)	CR (%)	OPR (%)	CTR (%)	CSR (%)	CR (%)	OPR (%)	CTR (%)	CSR (%)	CR (%)	OPR (%)	CTR (%)	CSR (%)	CR (%)
1996-97	14.05	1.67	0.68	1.77	10.56	1.70	0.85	1.77	8.97	4.16	0.90	1.51	10.5	5.75	0.86	1.11
1997-98	14.76	1.39	0.71	1.71	9.21	1.63	0.88	1.81	9.21	4.59	0.91	1.92	10.99	5.21	0.83	1.05
1998-99	14.99	1.24	0.69	1.34	8.19	1.64	0.89	1.69	9.04	4.46	0.93	1.89	12.39	4.78	0.83	1.04
1999-00	18.66	0.85	0.65	0.95	8.49	1.71	0.89	1.72	7.13	4.46	0.93	1.78	14.76	4.37	0.80	0.94
2000-01	15.38	1.01	0.67	1.13	10.18	2.09	0.84	1.81	8.26	3.76	0.90	1.61	16.79	3.76	0.77	0.96
2001-02	17.34	1.12	0.62	1.25	8.78	1.90	0.87	1.73	9.12	3.33	0.92	1.62	20.13	2.94	0.75	1.02
2002-03	11.37	0.98	0.64	1.25	9.25	2.36	0.84	1.59	8.24	3.70	0.91	1.72	14.86	2.88	0.77	0.94
2003-04	20.69	0.88	0.58	1.37	10.54	3.72	0.81	1.27	7.70	4.50	0.91	1.70	1373	3.05	0.81	0.90
2004-05	18.00	0.88	0.63	1.48	13.37	3.28	0.84	0.79	8.51	3.35	0.91	1.55	14.12	5.06	0.81	0.82
2005-06	16.22	0.94	0.65	1.86	16.11	2.92	0.82	0.79	10.90	2.09	0.88	1.58	14.12	4.66	0.83	0.74
Coefficient Of Variation (S.D to A.M)	0.16	0.25	0.06	0.21	0.24	0.33	0.03	0.27	0.12	0.20	0.02	0.08	0.23	0.24	0.04	0.12

Source : Complied and computed from capitaline, 2007, official data bank, Capital market Publishers(I) Ltd, Mumbai.

debt capital which increases DER. The linear line fitted to DER of ML series during the period under study reflected a downward trend and the slope was found to be statistically insignificant at 0.01 level.

In case of HUL, DER fluctuated between 0.03 in 2005-06 and 0.75 in 2003-04. The mean value of DER in case of HUL was 0.20. During first half the company shifted towards owners' equity but in second half it shifted towards debt capital which increases DER and at last the company shift to more owners' equity resulting in lowest degree of financial risk as compared to other years during the period under study. HUL registered an upward trend from the linear line fitted to the DER of HUL. It shows a positive growth and the slope was found to be statistically insignificant at 0.01 level.

Table-3 also exhibits that the DFL of NL ranged between 1.02in 1996-97 and 1.26 in 2001-02. The average value of DFL of NL was 1.12. The DFL was higher in the first half and lower in the second half of the study period. A negative growth in relation to DFL series of NL was noticed during the study period and the slope was found to be statistically insignificant at 0.01 level.

In case of DIL a completely decreasing trend was noticed during the study period except the year 2000-01. It signifies that the degree of financial risk was lower during the second half of the study period as compare to the first half. It varied between 1.02 in 2005-06 and 1.06 in 1996-97. The linear line fitted to DFL series of DIL during the period under study depicts downward trend and the slope was found to be statistically significant at 0.01 level.

Table-3 shows that DFL of ML fluctuated between 1.02 in 2002-03 and 1.30 in 1996-97. The average value of DFL was 1.102. It indicates that the company maintained a balanced financial risk throughout the years under consideration. A negative growth in DFL of ML. was noticed during the period under consideration and the slope was found to be statistically significant at 0.01 level.

In case of HUL, DFL fluctuated between 1.00 in 2001-02 (or 2000-01) and 1.08 in 2003-04. The mean value of DFL was 1.02. During the first half of the study period company registered much lower financial risk as compared to the next half of the study period. The linear line fitted to DFL of HUL series during the period under study shows a negative growth and the slope was found to be statistically insignificant at 0.01 level.

(iii) For measuring the total risk associated with NL, DIL, ML,

Table 3: Analysis of Fimancial risk of NL, DIL, ML, and HUL.

Year	Nirma Ltd.		Dabur India Ltd.		Marico Ltd.		HUL	
	DER (Times)	DFL (Times)	DER (Times)	DFL (Times)	DER (Times)	DFL (Times)	DER (Times)	DFL (Times)
1996-97	0.51	1.02	1.17	1.06	0.41	1.30	0.19	1.04
1997-98	0.72	1.05	1.17	1.48	0.16	1.22	0.15	1.02
1998-99	0.84	1.14	1.16	1.46	0.05	1.12	0.12	1.01
1999-2000	1.15	1.17	1.00	1.30	0.02	1.11	0.06	1.01
2000-01	1.05	1.24	0.71	1.31	0.02	1.08	0.04	1.00
2001-02	0.74	1.26	0.54	1.28	0.02	1.07	0.02	1.00
2002-03	0.68	1.14	0.40	1.16	0.04	1.02	0.30	1.03
2003-04	0.56	1.08	0.22	1.06	0.05	1.03	0.75	1.08
2004-05	0.36	1.07	0.15	1.03	0.18	1.03	0.35	1.01
2005-06	0.24	1.04	0.09	1.02	0.58	1.04	0.03	1.00
	Average of DER = 0.685 Average of DFL = 1.121 DER = 0.954 - 0.049t (5.424) (-1.725) DFL = 1.123 - 0.0003t (18.566) (-0.031)		Average of DER = 0.661 Average of DFL = 1.27 DER = 1.445 - 0.143t (22.35) (-13.737) DFL = 1.631 – 0.066t (58.687) (-14.644)		Average of DER = 0.153 Average of DFL = 1.102 DER = 0.095 + 0.105t (0.690) (0.471) DFL = 1.249 – 0.0267t (39.314) (-5.210)		Average of DER = 0.201 Average of DFL = 1.02 DER = 0.074 + 0.0231t (0.481) (0.930) DFL = 1.021 – 0.00012t (56.478) (-0.042)	

Figures in the Parentheses indicate't' values.
** Significant at 0.01 level.
Source: Complied and computed from Capitaline, 2007, official data bank, Capital Market Publishers (I) Ltd., Mumbai

Table 4: Analysis of Total Risk of NL DIL, ML, and HUL.

Year	Nirma Ltd. DTL (Times)	RNOW (%)	Dabur India Ltd. DTL (Times)	RNOW (%)	Marico Ltd. DTL (Times)	RNOW (%)	HUL DTL (Times)	RNOW (%)
1996-97	1.17	39.47	3.71	24.11	3.19	29.60	2.12	47.17
1997-98	1.21	36.87	4.60	21.03	3.53	33.80	1.96	54.57
1998-99	1.27	30.56	5.34	16.86	3.79	34.27	1.92	56.40
1999-2000	1.28	31.30	4.64	19.12	3.92	27.15	1.78	57.09
2000-01	1.38	23.09	3.92	22.76	3.46	29.12	1.77	59.35
2001-02	1.39	14.52	4.48	17.06	3.38	26.84	1.71	52.82
2002-03	1.29	16.21	3.40	20.93	2.93	29.12	1.85	61.14
2003-04	1.23	16.15	2.60	29.78	3.02	32.74	2.27	54.61
2004-05	1.26	16.23	3.02	48.79	3.15	37.04	2.16	64.05
2005-06	1.31	12.32	2.75	48.12	2.87	39.87	2.34	61.39
Average	1.279	------	3.846	------	3.324	------	1.988	--------
	DTL = 1.231 + 0.0878t (1.178) Total risk = cv of RONW (TR) = 0.43 Business risk = cv of OPR (BR) = 0.16 Financial risk = (TR)-(BR) (FR) = 0.27		DTL = 5.065 – 0.222t (11.304) (-3.068) Total risk = cv of RONW (TR) =0.45 Business risk =cv of OPR (BR) = 0.24 Financial risk=(TR)-(BR) (FR) = 0.21		DTL = 3.739 - 0.0754t (18.918) (-2.367) Total risk = cv of RONW (TR) = 0.14 Business risk = cv of OPR (BR) = 0.12 Financial risk = (TR)-(BR) (FR) = 0.02		DTL = 1.812 + 0.032t (12.529) (1.374) Total risk = cv of RONW (TR) = 0.08 Business risk = cv of OPR (BR) = 0.23 Financial risk = (TR)-(BR) (FR) = (-)0.15	

Figures in the Parentheses indicate't' values.

** Significant at 0.01 level.

Source: Complied and computed from Capitaline, 2007, official data bank, Capital Market Publishers (I) Ltd., Mumbai.

HUL, degree of total leverage (DTL) has been ascertained in Table IV. In this table for identifying the nature of the trend in DTL series among different selected companies during the period under study linear trend equations have been fitted and the slopes whether best fitted or not 't' test have been applied.

Table-4 exhibits that the DTL of NL ranged between 1.17 in 1996-97 and 1.39 in 2001-02. The average DTL of the company was 1.28. However the linear trend fitted to the DTL series witnesses an upward trend which was not found to be statistically significant at 0.01 level.

The analysis of DTL of the company shows that the total risk associated with the company increased during the first half of the study period. During the second half of the study period DTL of the company decreased.

Table-4 also shows that the DTL of DIL fluctuated between 2.60 in 2003-04 and 5.34 in 1998-99. The mean value was 3.85. The linear line fitted to the DTL series exhibits a downward trend which was not found to be statistically significant at 0.01 level.

Such analysis of DTL of DIL depicts that the total risk associated with the company fluctuated during the period under study. In case of ML. DTL varied between 2.87 in 2002-03 and 3.92 in 1999-00. The average value of DTL of ML was 3.32. The linear equation fitted to DTL of the company depicted a decreasing trend which was statistically insignificant at 0.01 level.

The total risk associated with ML fluctuated from one year to another year. No such drastic change was noticed during the period under study in respect of DTL. During first few years an increasing trend was noticed but after that it decreased then increased and at the end of the study period DTL reduced to the lowest.

The DTL of HUL depicted a fluctuating trend during the study period. It fluctuated between 1.71 in 2001-02 and 2.34 in 2005-06. The mean value of DTL of HUL was 1.99. However, the linear line fitted to DTL of the company shows an increasing trend which was also statistically in significant

at 0.01 level.

A decreasing trend of the total risk associated with HUL was noticed during the first half of the study period. During the second half of the study period DTL increased. It implies that the total the total risk associated with the company increased during the last half of the study period.

The total risk of different companies taken here for computation has been measured by the coefficient of variation (CV) of the return on equity (ROWN). The difference between the CV of RONW of the companies and that of OPR has been worked out to measure the financial risk.

Total risk (i.e. the CV of RONW) associated with NL, DIL., ML., and HUL were 0.43, 0.45, 0.14 and 0.08. The financial risk (i.e. the difference between CV of RONW and CV of OPR) associated with NL, DIL, ML., and HLL or HUL were 0.27, 0.21, 0.02, and (-)0.15. It implies that the total risk of HLL or HUL was lowest where as the same was highest in case of DIL On the other hand the financial risk of NL was highest and same was lowest incase of HLL or HUL (-) 0.15.

(iv) In Table-5 it has been attempted to evaluate the degree of association between the business risks and financial risks associated with four selected companies [i.e. NL, DIL, ML, and HUL] through the selected measures of business and financial risks taking into account of their magnitudes by applying Pearson's simple correlation coefficient.

It is a well known fact that business risk of any company remains uncontrollable whereas financial risk is controllable. As the business risk is uncontrollable so greater emphasis should be given to control the financial risk. Therefore, it is desired that a company having higher degree of business risk should maintain lower degree of debt-equity ratio in order to keep the financial risk within the controllable limit. Theoretically, there should be negative relationship between business risk and financial risk.

In case of NL, out of four correlation coefficients two were positive and two were negative and out of which one was found to be statistically significant at 0.05 level. It indicates that a positive association between business and financial risk with the company was observed. It also fails to conform to the theoretical argument.

Out of four correlation coefficients of DIL two were positive and two were negative and out of which one was found to be statistically significant at 0.05 level. It signifies that the business risk and financial risk of the company was positively associated which fails to establish the theoretical argument.

In case of ML four correlation coefficients were negative and out of which one was found to be statistically significant at 0.05 levels. It depicts that the business risk and financial risk was negatively associated with the company. It holds the theoretical argument.

Out of four correlation coefficients of HLL three were positive. It showed a clear positive association between business risk and financial risk. It totally fails to conform to the theoretical argument.

(V) In Table-6 an attempt has been made to evaluate the relationship between the operating profitability of the company and each of the selected measures of business risk and on the other hand that between the owners' profitability and each of the selected measures of financial risk by using the Pearson's simple correlation coefficient. For this purpose operating profit ratio (PBITM) and Return on equity (RONW) have been selected for operating profitability and owners' profitability indicator respectively.

Theoretically, there should be a high degree of positive relationship between business risk and operating profitability. Similarly, there is a generally accepted principle that owners' profitability and financial risk should maintain a high degree of positive relationship.

In case of NL the correlation coefficients between PBITM and business risk were either negative or had low degree of positive association and also found to be statistically insignificant at 5% level. Similarly, the correlation coefficients between RONW and financial risk were either negative or had low degree of positive association and found to be statistically insignificant at 5% level. The correlation coefficient between PBITM and business risk measures and that between RONW and measures of financial risk fail to establish the generally accepted theoretical principle.

The correlation coefficient between PBITM and indicator of business risk of DIL was either negative or had very low degree of positive association and also found to be statistically insignificant. Similarly, the correlation coefficient between RONW and financial risk measures of the company was either negative or had low degree of positive association and found to be statistically insignificant. Hence, the correlation coefficients between PBITM and measures of business risk and that between RONW and indicator of financial risk do not conform to the theoretical argument.

In case of ML Ltd. the correlation coefficients between PBITM and business risk measures and that between RONW and indicator of financial risk were negative and out of which one correlation coefficient between PBITM and measures of business risk was found to be statistically significant at 0.05 level. Therefore, the correlation coefficients between measures of business risk and PBITM and that between measures of financial risk and RONW fail to establish the generally accepted theoretical principle.

The correlation coefficient between PBITM and business risk measures of HUL was either negative or had very low degree of positive association and also found to be

Table 5: Analysis of Correlation between Business and Financial Risk of NL,DIL, ML. and HUL.

Pearson's Simple Correlation Coefficient between	Nirma Ltd.	Dabur India Ltd.	Marico Ltd.	HUL.
FTTR and DER	0.067	(-) 0.596	(-) 0.233	0.059
FTTR and DFL	0.478	(-) 0.723*	(-) 0.074	(-) 0.082
DOL and DER	(-) 0.857	0.352	(-) 0.695*	0.325
DOL and DFL	(-) 0.693*	0.193	(-) 0.363	0.228

* Significant at 0.05 level.

Source: Complied and computed from Capitaline, 2007, official data bank, Capital Market Publishers (I) Ltd., Mumbai.

Table 6: Analysis of Correlation between operating profitability and Business Risk and that between Owners' profitability and Financial risk of NL,DIL, ML. and HUL.

Pearson's Simple Correlation coefficient between	Nirma Ltd.	Dabur India Ltd.	Marico Ltd.	HUL
FTTR and OPR	0.383	0.068	(-)0.751*	0.308
DOL nd OPR	(-) 0.017	(-) 0.466	(-) 0.496	(-) 0.541
DER and RONW	0.390	0.614	(-) 0.117	(-) 0.717
DFL and RONW	(-) 0.252	(-) 0.196	(-) 0.271	(-) 0.691*

* Significant at 0.05 level.

Source: Complied and computed from Capitaline, 2007, official data bank, Capital Market Publishers (I) Ltd., Mumbai.

statistically insignificant. On the other hand, the correlation coefficients between RONW and financial risk measures of the company were negative but out of which one was found to be statistically significant at 0.05 level. Hence, the correlation coefficients between measures of business risk and PBITM and that between RONW and financial risk indicator do not conform to the theoretical argument.

In Table-6 an an effort has been made to measure the extent of relationship between the operating profitability of the company and each of the selected measures of financial risk by computing Karl Pearson's simple correlation coefficient. To test the significance of such coefficient t-test has been applied. For this purpose, Operating Profit Ratio (OPR) and Earning Return on net worth (RONW) have been used as the operating profitability and owner's profitability measures respectively. Table-6 shows that the correlation coefficient between OPR and FTTR were 0.383, 0.068, (-) 0.751 and 0.308 in case of NL, DIL, ML and HUL respectively. Out of such correlations only in case of ML it was found to be statistically significant at 5% level. On the other hand the correlation coefficients between OPR and DOL in case of NL, DIL, ML and HUL were (-) 0.017, (-) 0.466, (-) 0.496, (-) 0.541 respectively. It implies that almost in all cases a negative relationship between business risk and profitability were found. Theoretically, it is expected that there should be a high degree of positive association between business risk and operating profitability. But the above two correlation coefficients do not conform to the expected result. Table VI also discloses that the correlation coefficient between DER and RONW in case of NL, DIL, ML and HUL were 0.390, 0.614, (-) 0.117, (-) 0.717 respectively. Similarly the correlation coefficients between DFL and RONW in case of NL, DIL, ML and HUL were (-) 0.252, (-) 0.196, (-) 0.271 and (-) 0.691 respectively. These findings reveal that the association between financial risk associated with the companies and their owner's profitability were negative in almost all cases as well as insignificant at 5% level. The generally accepted principle in this regard is that high financial risk should be compensated by high risk premium, i.e., high owner's return. However, the correlation results fail to conform to the accepted principle.

CONCLUSION

All the companies in this study are private limited company. Therefore, there was very much chance of increasing the business risk of the companies originated from each and every factor as revealed in the analysis of business risk components.

ML registered a high degree of business risk as compared to others whereas the said company maintained a lower level of financial risk by not securing the stable turnover by utilizing long term funds. The lower volatility in the cost structure was noticed in DIL whereas the same was highest in case of NL and ML. also registered its first place from liquidity risk point of view.

In order to minimize the financial risk more emphasis on owner's equity was given by all the companies under study. During the first half of the study period all the companies registered a lower degree of financial risk. But in the second half of the study period only in case of ML the shift from

owners' equity to debt-capital was noticed. From the overall point of view, there was a tendency of all the companies to maintain a lower level of financial risk during the second half of the study period as compared to the first half, except in ML and HUL. These companies maintained a moderate degree of financial risk throughout the study period. It signifies that high financial risk was not at all compensated by high risk premium, i.e. high owners' return throughout the study period especially in case of DIL and NL. The considerable fluctuating trend in the business and financial risk associated with all the companies resulted also a fluctuating trend in the total risk structure during the study period.

The study of closeness between the selected measures of business risk and financial risk associated with all the companies except in ML provides strong evidence of positive association between business and financial risk. All the companies under study except in ML maintained a 'high-high' combination of business risk as against the theoretical best of 'high-low' throughout the study period. Theoretically, there should be a high degree of positive association between return and risk. But in this study the correlation coefficients signify negative relationship between them in almost all the companies under study implying that high risk was not at all compensated by its high risk premium i.e. high return during the study period.

The study of the interrelation between the business risk associated with all the companies and their operating earning capability does not conform to the generally accepted rule that higher the degree of business risk greater the profitability. The empirical result of the study on the relationship between financial risk and owners' profitability as found in the analysis of correlation between DER and RONW and that between DFL and RONW also mismatches with the generally accepted principle that higher the degree of financial risk higher the risk premium.

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