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IMPACT OF CAPITAL STRUCTURE ON FIRM PERFORMANCE: A STUDY OF FMCG COMPANIES IN INDIA

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Abstract :

This study examined the impact of capital structure on firm performance of some selected FMCG companies in India. The annual financial statements of six manufacturing companies listed on the Indian stock exchange ranging from 2018-2021 were used for this study. A firm's capital structure is typically expressed as a debt-to-equity or debt-to-capital ratio. The study used fixed effect regression model to test the significant impact of capital structure on firm's performance, Hence, return on asset (ROA), return on equity (ROE) and earnings per share EPS were used as proxies for firms performance while equity ratio and debt ratio as indicators for capital structure, the finding reveal that capital structure has positive significant effect on financial performance of selected firms in India. A firm can adopt a capital mix of either 100% equity and zero debt or 100% debt with zero equity or any combination of both.

Keywords: *Capital Structure, Performance, Equity, Fixed Effect Model, Debt Ratio, Equity Ratio.*

Introduction :

Capital structure refers to the amount of debt and/or equity employed by a firm to fund its operations and finance its assets. Debt and equity capital are used to fund a business's operations, capital expenditures, acquisitions, and other investments. There are trade-off's firms have to make when they decide whether to use debt or equity to finance operations, and managers will balance the two to find the optimal capital structure. Capital structure is the particular combination of debt and equity used by a company to finance its overall operations and growth.

Equity capital arises from ownership shares in a company and claims to its future cash flows and profits. Debt comes in the form of bond issues or loans, while equity may come in the form of common stock, preferred stock, or retained earnings. Short-term debt is also considered to be part of the capital structure. Firm performance is an economic category that reflects the ability of firms in using human resources and material resources to achieve the targets of the firm.

1. **Capital structure and its theories :** A company has to decide the proportion in which it should have its own finance and outsiders finance particularly debt finance, based on the proportion of finance, weighted average cost of capital (WACC) and value of a firm are affected. There are four approaches to this, viz. net income, net operating income, traditional and M&M approach
2. **The net income approach** : was proposed by David Durand in 1952. This approach states that firm can increase its value or lower the cost of capital by using debt capital. He was in favour of financial leverage decision. According to him, a change in financial leverage would lead to a change in the cost of capital. In short, if the ratio of debt in the capital structure increases, the weighted average cost of capital decreases and hence the value of the firm increases.
3. **The Net operating income approach :** Durand also provided the Net operating income approach which is opposite of the net income approach and says that the weighted average cost of capital (WACC) remains constant. It believes in the fact that the market analyses a firm as a whole and discounts at a particular rate which has no relation to debt-equity ratio. If tax information is given, it recommends that with an increase in debt financing WACC reduces and the value of the firm will start increasing.
4. **The Traditional approach :** The traditional approach states that the cost of capital is a function of the capital structure. It believes in an optimal capital structure which implies that at a particular ratio of debt and equity, the cost of capital is at minimum and the value of the firm is maximized.
5. **Modigliani and Miller approach :** is a capital structure approach named after Franco Modigliani and Merton Miller. The Modigliani-Miller theorem (M&M) states that the market value of a company is correctly calculated as the present value of its future earnings and its underlying assets, and is independent of its capital structure.

   At its most basic level, the theorem argues that, with certain assumptions in place, it is irrelevant whether a company finances its growth by borrowing, by issuing stock shares, or by reinvesting its profits. Developed in the 1950s, the theory has had a significant impact on corporate finance.
6. **Pecking order theory :** Pecking order theory proposes that companies prioritize their sources of financing from internal financing to equity according to the law of least effort or of least resistance, preferring to raise equity as a financing means of last resort.

   Pecking order theory suggests that firms will initially rely on internally generated funds i.e. undistributed earnings, where there is no existence of asymmetry they will turn to debt if additional funds are needed and will issue equity to cover any remaining capital requirements.

   This theory was popularized by Myers and Majluf (1984)
7. **Agency cost Theory :** The Agency cost Theory propounded by Hunsaker (1999). An agency cost is a type of internal company expense, which comes from the actions of an agent (the manager) acting on behalf of a principal (the equity holders). Agency costs typically arise in the wake of core inefficiencies, dissatisfactions, and disruptions, such as conflicts of interest between shareholders and management. Agency cost that include fees associated with managing the needs of conflicting parties are called agency risk.

Review of Literature :

1. Abor (2005), evaluated the relationship between capital structure and profitability of listed firms on the Ghanaian stock exchange during a five year period (1998- 2002) and found that there exists a significantly positive relationship between short term debt to total asset (SDA) suggesting that profitable firms use more short term debt to finance their operations. The results also showed a negative relationship between the ratios of long term debt to total assets (LDA) and return on equity ROE and a positive relationship between total debt DA and profitability ROE, suggesting that firms depend more on debt financing.
2. Kumar, (2015) made a study entitled "Capital Structure and its Impact on Profitability". The study has made with the objectives of identifying the relationship between profitability and capital structure of SME Data collected from some secondary sources studied from 2008 to 2013 and it is concluded that the capital structure varies substantially among the SME there is significant relationship between Debt to total funds and ROE. There is no relation or there is insignificance between debt to total funds and ROCE.

Research Methodology :

This study aims to find if there is an Impact of Capital structure on firm Performance evidence from selected FMCG firms listed in Indian stock exchange.

Objective of the Study :

The main objective of this study is to determine the effect of capital structure on corporate performance of Indian firms.

1. To determine the effect of capital structure on return on assets.
2. To identify the impact of capital structure on return on equity.
3. To determine the effect of capital structure on earnings per share.

Hypotheses :

The following hypotheses were formulated for this study.

Ho1: capital structure has no significant impact on return on assets.

Ho2: capital structure has no significant impact on return on equity.

Ho3: capital structure has no significant impact on earnings per share.

Limitations of the Study :

- The time span of the study is limited from 2018-2021.
- Multivariate Regression model was used since the study had more than 1 independent variables.
- The findings were based on secondary data collected from annual reports of the respected companies.
- The study faced time constraint.
- The study is limited to the Selected FMCG companies the findings may differ if selected companies or sector is altered.

Capital Structure (independent variable) :

1. Debt Ratio (DR) = Total Debt/Total Assets
2. Equity Ratio (ER) = Total shareholders' equity/total assets

Firm Performance (dependent variables) :

1. Return on Equity (ROE) = Net Income/ avg Shareholder Equity
2. Return on Assets (ROA) = Net Income /avg Total Assets
3. EPS (EPS) = Net Income- Preferred dividends/Avg. Outstanding shares

Data collection :

Data for this study is collected from annual financial statements of firms listed in the capital market. Ratios of firms are calculated manually for the period of 2018-2021 for the selected 6 companies.

Companies selected for this study are-

1. ITC LTD
2. Hindustan Unilever LTD
3. BRITANNIA Industries LTD
4. Emami LTD
5. Avanti Feeds LTD
6. CCL products (India) LTD

Results and Discussion :

Correlation analysis :

Correlation is concern describing the strength of relationship between two variables. In this study the correlation co-efficient analysis is under taken to find out the relationship between capital structure and financial firm performance. It shows the degree of relationship that exists between capital structure and firm performance.

Table 1

Correlation Table

	EPS	ROA	ROE	Debt ratio	Equity ratio
EPS	1				
ROA	0.619428551	1			
ROE	0.614239438	0.877613943	1		
Debt ratio	–0.263035816	–0.405427955	–0.275272777	1	
Equity ratio	–0.309712534	–0.314091318	–0.6564861	–0.375495105	1

The Table above shows the relationship between Performance variables (ROA, ROE, and EPS) and capital structure variables DTR and EQR. Therefore, debt ratio DTR and return on assets ROA has a positive semi strong relationship of 40%, DTR and return on equity ROE has a positive semi strong relationship of 27% while DTR and earnings per share EPS has a negative relationship of 26%. Secondly, equity ratio EQR and ROA has a positive semi strong correlation of 31%, EQR and ROE has a negative strong relationship of 65% respectively while EQR and EPS has a negative weak relationship of 3%.

Table 2

Panel Fixed Effect Regression Model for ROA

Dependent Variable : ROA
Method: Panel Least Squares
Date : 01/09/22 Time : 20:23
Sample : 2018 2021
Periods included : 4
Cross-sections included : 6
Total panel (balanced) observations : 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	0.629983	0.097285	6.475634	0.0000
DEBT_ RATIO	–0.127168	0.197193	–0.644892	0.5281
EQUITY_RATIO	–0.601758	0.130052	–4.627067	0.0003

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.867486	Mean dependent var	0.213213
Adjusted R-squared	0.809511	S.D. dependent var	0.081856
S.E. of regression	0.035726	Akaike info criterion	-3.564664
Sum squared resid	0.020422	Schwarz criterion	-3.171979
Log likelihood	50.77596	Hannan-Quinn criter.	-3.460484
F-statistic	14.96313	Durbin-Watson stat	2.241270
Prob(F-statistic)	0.000006		

The above table shows that 86.7% of the systematic variation in return on equity is explained by the two independent variables of debt ratio and equity ratio. The adjusted-R^2 value of 80.9% shows the degree of freedom after adjusting for error. The F value of 14.963 is statistically significant at 5% level. Here The Durbin-Watson value of 2.24 indicates that there is no autocorrelation. This reveals that there is a significant relationship between debt ratio, equity ratio and return on assets.

Table 3

Panel Fixed Effect Regression Model for ROE

Dependent Variable : ROE
Method : Panel Least Squares
Date : 01/09/22 Time : 20:24
Sample : 2018 2021
Periods included : 4
Cross-sections included : 6
Total panel (balanced) observations : 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	1.550440	0.185500	8.358157	0.0000
DEBT_RATIO	–0.394499	0.376002	–1.049192	0.3097
EQUITY_ RATIO	–1.750235	0.247978	–7.058014	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.930233	Mean dependent var	0.336343
Adjusted R-squared	0.899710	S.D.dependent var	0.215108
S.E. of regression	0.068122	Akaike info criterion	–2.273843
Sum squared resid	0.074249	Schwarz criterion	–1.881159
Log likelihood	35.28612	Hannan-Quinn criter.	–2.169664
F-statistic	30.47644	Durbin-Watson stat	1.998194
Prob(F-statistic)	0.000000		

The above table shows that 93% of the systematic variation in return on equity is explained by the two independent variables of debt ratio and equity ratio. The adjusted-R^2 value of 89% shows the degree of freedom after adjusting for error. The F value of 30.476 is statistically significant at 5% level. Here The Durbin-Watson value of 1.99 indicates that there is no autocorrelation. This reveals that there is a significant relationship between debt ratio, equity ratio and return on equity.

Table 4
Panel Fixed Effect Regression Model for EPS

Dependent Variable : EPS
Method : Panel Least Squares
Date : 01/09/22 Time : 20:22
Sample : 2018 2021
Periods included : 4
Cross-sections included : 6
Total panel (balanced) observations : 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	5.660680	10.40694	0.543933	0.5940
DEBT_ RATIO	40.07487	21.09450	1.899778	0.0756
EQUITY_ RATIO	13.83964	13.91210	0.994791	0.3346

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.866746	Mean dependent var	18.12000
Adjusted R-squared	0.808447	S.D. dependent var	8.732105
S.E. of regression	3.821763	Akaike info criterion	5.780502
Sum squared resid	233.6940	Schwarz criterion	6.173187
Log likelihood	–61.36603	Hannan-Quinn criter.	5.884682
F-statistic	14.86729	Durbin-Watson stat	2.582471
Prob(F-statistic)	0.000006		

The above table shows that 86% of the systematic variation in earnings per share is explained by the two independent variables of debt ratio and equity ratio. The adjusted-R^2 value of 80% reveals the degree of freedom after adjusting for error. The F value of 14.867 is statistically significant at 5% level. Here The Durbin-Watson value of 2.582 which is not in between 1.546 and 2.454. Hence there is no conclusive autocorrelation between the independent variables. This reveals that there is a significant relationship between debt ratio, equity ratio and earnings per share.

Findings & Conclusion :

The study shows that capital structure has positively significant relationship on ROA, ROE and EPS but ROE is a better measure of firm performance than ROA and EPS.

A high ROE could mean a company is more successful in generating profit internally. However, it doesn't fully show the risk associated with that return. A company may rely heavily on debt to generate a higher net profit, thereby boosting the ROE higher.

This study examined the impact of capital structure on firm performance of some selected FMCG companies in India. Six FMCG companies listed on the National stock exchange of India ranging from 2018-2021 were used for this study to determine the relationship between Performance variables (ROA, ROE, and EPS) and capital structure variables (DTR and EQR).

A firm can adopt a capital mix of either 100% equity and zero debt or 100% debt with zero equity or any combination of both. Equity financing is less risky in the sense of cash flow commitments, but results in a weakening of ownership and earnings whereas debt capital creates an obligation or liability with low-cost and high risk. It is a very important component of corporate finance.

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