CORPORATE GOVERNANCE ATTRIBUTES AND CAPITAL STRUCTURE DECISIONS OF FIRMS: AN EMPIRICAL STUDY

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Abstract: The present study attempts to examine the influence of corporate governance attributes on the capital structure choices of firms in India. The study has been conducted on 113 NSE listed companies over a period of five years from 2014 to 2018 using Panel data estimation techniques in the light of existing theories on corporate governance and Capital Structure. In the study, Leverage has been used as proxy for capital structure. Board size, audit meeting and women directors in BODs have been used as independent variables whereas, Return on Assets (ROA) and Firm Growth were employed as control variables. The result demonstrates that woman directors in the BODs and ROA have statistically significant negative correlation with leverage and other variables were found to be insignificant. The empirical results are in consonance with trade-off theory and Pecking order theory. Further, the study inferred that enhancement in the quality of corporate governance mechanism reduces the propensity of using external debt in the capital structure of firms.

Keywords: Corporate Governance; Capital Structure; Board Size; Return on Assets; Leverage.

Introduction

The phenomenon of Corporate Governance Practices gained impetus at the juncture of increased events of scams by resorting to manipulation of Financial Statements and Defalcations of funds and also the collapse of Enron, WorldCom etc. followed by deep-rooted global recession (Lang and Jagtiani, 2010). Claessens (2003) has mentioned that proliferation of scams and scandals, technological upgradation, privatization of markets, mobilization of capital from external

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sources and global financial integration lent currency to this concept. The need for corporate governance was first realized in India with Harshad Mehta's securities scam, 1992 which was followed by a series of scams that shook the investors' confidence to a great extent. The sound and stringent corporate governance practices may exert influence over the strategic decisions of firms like external financing, cost of financing etc. (Agyei and Owusu, 2014). That is why, the synergetic relationship between Corporate Governance and Corporate Capital Structure occupies a unique place in the arena of Corporate Finance as the characteristics of the former has substantial impact on the Corporate Capital Structure dynamism (Arnsfeld and Growe, 2006). Corporate Governance can broadly be defined as the exercise of power of a corporate entity so as to increase the value provided to the organization's various stakeholders. In common parlance, corporate governance mechanism is the process through which corporate entities are instructed and supervised (Cadbury Committee, 1992). Whereas, Corporate Capital Structure signifies the configuration or make up of its capitalization which encapsulates all long-term sources of capital. There should be a prudent decision for fixing up a suitable combination of debt and equity capital in financing the assets of the corporate entities because a strategically arranged capital structure influences the value of a firm to a significant extent. There is no universally recognized capital structure that a company should adopt. However, various theories like Pecking Order theory (Myers and Majluf, 1984), Trade-off theory (Kraus and Litzenberger, 1973), Agency cost theory (Jensen and Meckling, 1976), Market Signal theory (Baker and Wulgler, 2002) have been developed over a period of time to prescribe a choice of capital structure. Nevertheless, a good corporate governance which strives towards wealth maximization of firms may apply their own strategic discretion in finalising the capital structure of firms. The new Companies Act, 2013 has broadened the horizon of Corporate Governance practices in India. The concept of Independent Directors for all listed companies (Clause 149), mandatory constitution of Audit Committee (Clause 177) for listed companies and other prescribed classes of companies etc. were hailed as a welcome move towards more transparency, flexibility, ubiquity, efficiency and efficacy of governance structure of firms. It has been found from various studies that the attributes of corporate governance like size of board, composition of board, outside directors in the board, ownership concentration, Audit committee and its composition, Directors' remuneration, CEO duality etc. have substantial impact over the capital structure choices of firms (Anderson et al., 2004; Bansal, 2005; Abor and Biekpe, 2007).

From the previous literature and empirical evidences, it appears that the association between corporate governance and choice of capital structure has not been completely and

comprehensively explored. Few studies have been conducted in developed countries like USA, UK etc. But after introduction of new companies Act, 2013, very few studies have been conducted in India and other countries when the corporate Governance phenomenon has been redefined and redesigned with more stringency and greater ubiquity.

Thus, the present study will endeavour to bridge the gap of literature by throwing light on the impact of corporate governance characteristics in designing a strategic capital structure of NSE Listed firms in India over a period of five years from 2014 to 2018.

Apart from Introduction, the remaining part of this study has been organised into five sections. Section 2 provides brief review of relevant literature; section 3 covers the objective of the study and formulation of hypotheses; data and methodology and empirical results have been discussed in section 4 and section 5 respectively and finally section 6 exhibits concluding observations and suggestions.

Review of Literature

Existing literature on the linkage between corporate governance mechanism and capital structure choices demonstrates mixed results. The inferences from the important and relevant studies have been enumerated below:

One of the key elements of corporate governance, the board being entrusted with monitoring activities and the highest decision-making organ has the responsibility to codify the rules and regulations and to deliver strategic guidance so as to confirm the growth of firms and maximise the value of the firm (Seikh and Wang, 2012). While investing capital, investors want fair return on their investment and when managers consume the controlling power, they are not expected to act to fulfil the interest of the real owners and thus create agency problem (Jensen and Meckling, 1976). But a well-defined and well-functioning board of directors will tend to monitor the managers and compel the managers to act in favour and maximum welfare of the investors (Nguyen et al., 2017). However, few studies have reported interesting results with regard to board size. In accordance with Adams and Mehran (2003) opined that larger firms enjoy better monitoring ability and thus provides superior decisions. On the contrary, smaller boards were found to be more effective than the larger boards as few board members may get free-trip on the energies of others (Lipton and Lorsch, 1992). With regard to association pertaining to governance mechanism and capital structure, Berger et al. (1997) and Wiwattanakantang (1999) and Anderson et al. (2004); Arping and Sautner (2010); Haque et al. (2011); Jiraporn et al. (2012) asserted that there exists negative correlation between board size and leverage. Using more amount of debt in the capital structure prompts a firm to incur some additional costs. Over-capitalisation with debt enhances the risk of financial crisis (Andrade and Kaplan, 1998), supplicates asset replacement (Jensen and Meckling, 1976) and under-investment (Stulz, 1990). These evil

consequences go against the interest of the shareholders. So, the board of directors tend to depend less on external financing. Conversely, more debt-dependence also enhances the performance pressure on managers owing to fixed interest payment (Jensen, 1986), entices intensive monitoring from creditors end (Diamond, 1991) and thus imposing more restrictions on the managers' discretion. Agency Theory propounded that managers always seek to use sub-optimal level of debt for minimising risks and it is the board which keeps close eye on the maximization of firm value by prompting the managers to utilize optimal amount of debt capital in the capital structure. Wen et al. (2002); Abor (2007); Bokpin and Arko (2009); Morellec et al. (2012); Liao et al. (2015); Cheng et al. (2015) found positive significant association between board size and leverage ratio and thus inferred that a well-organised board shows the propensity to employ more debt in the capital structure with a view to maximise the value of firm. Agnew et al., 2003; Sunden and Surette, 1998 have explained that women directors in the board show their reluctance to debt financing as the female directors are risk-averse in nature. The relative risk propensity of male and female directors significantly influences the financial decision of firms (Schubert et al., 1999). Therefore, gender diversity in board composition has negative impact on the capital structure of firms. Abor and Biekpe in 2007 investigated the impact of independent directors on financing decisions and concluded that firm with more outside directors in the board tends to have highly geared capital structure and this result is also consistent with Alves et al., (2015). The frequency of Audit committee meeting signifies the level of activeness and diligence of the audit committee. The better working of the audit committee suggests maintenance of healthy capital structure. Waworuntu et al., 2014; Ormin et al., 2015 have suggested that there exists significant negative relationship between audit committee meeting and leverage.

Objective of the study and Hypothesis formulation

Given the increasing importance of the association between corporate governance and capital structure and the inconclusive evidence in this regard, the existing study tries to empirically investigate the influence of corporate governance attributes on the capital structure decisions of NSE listed companies in India over a period between 2014 and 2018.

On the basis of the above-mentioned objective and contradictory review of existing literature, the following research hypothesis can be formulated:

H_0: Corporate Governance has negative impact on the choice of capital structure.

Data and Methodology

The present study is purely based on secondary data. A multistage sampling approach has been employed in the design of the study. The study population comprises of 300 NSE-listed public companies by market capitalization as of March 31, 2018, with a sample size of 113

companies chosen for the study. In order to determine the sample, the study ensured the following criteria: 1. The company is listed on the NSE during the (2014– 2018) 2. Financial institutions have been excluded from the analysis due to different financial reporting standards from the rest of the companies. 3. Companies with incomplete data were excluded. 4. Apart from these, the companies with year ending other than 31, march was removed. The study extracted the data on dependent variables and control variables from Prowess IQ database and that of independent variables from companies' annual reports on the National Stock Exchange in India. The study employed a panel estimation technique for testing the formulated hypothesis using statistical software STATA version 12.

Description of Variables

Table 1 shows the brief account of variables used in the study along with their symbol and measurement.

Table 1: Variables Used in the Study

Name of the Variables	Type	Symbol	Measurement
Leverage	Dependent	LEV	LEV is measured by dividing the total debt by the total asset.
Board Size	Independent	BS	Total number of directors on board.
Audit Meeting	Independent	AM	Total number of meetings held in a year.
Women Director	Independent	WD	Proportion of women directors to the total number of directors on board
Return on Assets	Control	ROA	The ratio of PBDITA to total assets
Firm Growth	Control	FG	FG is determined by growth of assets and is computed by the following formula: $(A_t-A_{t-1})/A_{t-1}$

Source: prepared by Authors based on literature survey

Panel Regression Model

The present study employs the panel data analysis which encapsulates both cross-sectional and a time series dimension. Thus, the general form of panel regression model based on the aforementioned variables may be represented as follows:

$LEV_{it} = \beta_0 + \beta_1 (BS_{it}) + \beta_2 (AM_{it}) + \beta_3 (WD_{it}) + + \beta_4 (ROA_{it}) + \beta_5 (FG_{it}) + €_{it}$

[Φορ αλλ, ι= 1 το 113; τ= 1–5 ψεαρσ, β_0 = Χονσταντ τερμ, $\beta_{1.....}\beta_5$ are regression coefficients and € is the residual error term].

Result and Discussion

The study is concerned with the investigations of the effect of corporate governance on capital structure on NSE-listed companies. The study first employed the pooled OLS model and then F-test is applied to decide whether a Pooled Ordinary Least Square regression or panel setting is appropriate assuming the null hypothesis that there is no firm-specific effects. The resultant P-value <0.05, hence, the study concluded that there are significant firm specific effects. Otherwise, ignoring such unobserved heterogeneity may induce omitted variable bias. Since the panel setting is not considered under OLS regression, the number of observations become (113 × 5) = 565.

Then the study employed the Random effect GLS regression taking into consideration the dataset to be panel with 113 firms for 5 years (2014-2018). Since, Probability (Chi2) <0.05, the GLS model cannot be rejected. After that the study applied fixed effect regression model. Since Probability (F) <0.05, the fixed effect model also fits the data. Now in order to compare between fixed effect regression model and random effect GLS regression model, the study further applied Hausmann test. Since, Probability (Chi2) < 0.05, the test rejects the random effect model in favour of fixed effect model.

After declaring the data to be a panel, summary statistics has been exhibited below:

Table 2: Summary Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations	
lev	overall	.1597543	.1680099	.0008552	2.275893	N =	565
	between		.1494755	.0080096	1.08649	n =	113
	within		.0777359	-.1877246	1.349157	T =	5
BS	overall	9.612389	2.476884	3	22	N =	565
	between		2.281022	4.8	18	n =	113
	within		.9842735	4.012389	13.61239	T =	5

AM	overall	|	5.376991	1.712853	3	13	|	N = 565
	between	|		1.449077	3.6	10.8	|	n = 113
	within	|		.9213773	1.576991	9.576991	|	T = 5
		|					|	
WD	overall	|	.1118245	.069084	0	.375	|	N = 565
	between	|		.0515048	0	.2986364	|	n = 113
	within	|		.0462457	-.0848422	.340396	|	T = 5
		|					|	
ROA	overall	|	.0676241	.1487507	-2.797328	.3191568	|	N = 565
	between	|		.1002771	-.6452625	.2969586	|	n = 113
	within	|		.1101934	-2.084442	.6765089	|	T = 5
		|					|	
FG	overall	|	.1342521	.3252476	-.7096099	4.608352	|	N = 565
	between	|		.1418956	-.1050017	.9414639	|	n = 113
	within	|		.2929068	-1.190373	3.862562	|	T = 5

Source: Authors' calculation

Table 2, shows summary statistics for all variables in the sample dataset namely; dependent, independent, and control variables. The results revealed that both the cross sectional and time series properties of data relevant to the selected variables are considered.

Then some diagnostic tests have been conducted to correct the bias. Breusch-Pagan LM test of independence has been performed. The resultant probability <0.05, indicates that there exists a problem of cross-sectional dependence. Then the study also conducted Wooldridge test of autocorrelation. The resultant Probability (F) < 0.05 guarantees the existence of serial correlation or first order autocorrelation. It is to be noted here that, though this study concluded that there is autocorrelation, but it is not a major issue since this study considers a very small panel of only 5 years. Normally, serial correlation test is mainly applied to macro panels with long time series of 20-30 years (Torres-Reyna, 2007). After that, Modified Wald test for groupwise heteroskedasticity has been performed. Since, Probability (Chi2) < 0.05, the study

hardly can accept the assumptions of homoskedasticity. Finally, the study applied Harris-Tzavalis unit root test. Here, P < 0.05 shows that the dependent variable is stationary at level signifying no unit root problem.

After conducting all the diagnostic tests, finally the study applied the robust estimation technique in order to rectify the estimation bias and the result is demonstrated below.

Table 3: Robust Fixed-Effect Regression Results

Fixed-effects (within) regression — Number of obs = 565
Group variable: company — Number of groups = 113

R-sq: within = 0.5115 — Obs per group: min = 5
between = 0.4034 — avg = 5.0
overall = 0.3890 — max = 5

F(5,112) = 19.85
corr(u_i, Xb) = 0.2405 — Prob > F = 0.0000

(Std. Err. adjusted for 113 clusters in company)

leverage	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
BS	-.0004915	.0026586	-0.18	0.854	-.0057591	.0047761
AM	.0004712	.0034014	0.14	0.890	-.0062682	.0072105
WD	-.1654816	.0676923	-2.44	0.016	-.2996051	-.031358
ROA	-.5059058	.0562533	-8.99	0.000	-.6173646	-.3944471
FG	.007226	.0100758	0.72	0.475	-.0127379	.0271898
_cons	.2136915	.0323789	6.60	0.000	.1495369	.2778461

sigma_u | .1236127
sigma_e | .06103188
rho | .80400463 (fraction of variance due to u_i)

Source: Estimated by the Authors

Table 3 represents regression outcome with leverage for measuring capital structure reported that board size has positive insignificant relationship with leverage and audit meeting has also positive insignificant relationship with leverage. Women director has negative but significant relationship with financial leverage decision, it demonstrates that increasing female director represents board members can reduce external borrowing and enables improved corporate governance and monitoring, which reduces risk-taking propensity and overconfidence in choices (Adams &Ferreira 2009). From the perspective of trade-off theory suggests that a more risk-averse manager tends to seek for a greater debt-to-equity ratio to maximise the benefits of the tax shelter. A risk-averse executive rather strives for a smaller leverage ratio to keep default risk to a minimum. Return on asset has a negative and significant impact on leverage, suggesting that increase profitability intend to decrease borrow fund for listed Indian firms. This result has been supported by pecking order theory and consistent with (Chen, 2004; Boateng et al., 2017). Lastly, firm growth has positive insignificant influence on leverage.

Conclusion and Suggestion

The purpose of this study investigates the influence of corporate governance on leverage decision on NSE-listed public companies in India. The study used a multistage sampling approach for the study and employed a panel data regression model of 113 companies with 565 firm-year observations for the period from 2014 to 2018. This study defines a theoretical approach that can help to clarify the relationship between capital structure and governance practices and it also develops a more specific framework for empirical studies. Several theories explains that why firms choose their capital structures in order to determine how hypotheses are relevant and applicability has depended on firm level ingredients with varying conclusions. The empirical results revealed that board size has positive insignificant impact on leverage decision in listed firms. Audit meeting has also positive and insignificant relationship with leverage. Women director has negative sign affected by applying financial leverage decision in Indian firms, demonstrating that increasing female director can reduce borrowed money and enables to improve corporate governance and reduce risk taking and overconfidence in alternative choices. This result has been supported by trade-off theory. The control variables namely; ROA has negative significant relationship with financial leverage decision, showing that increasing profitability tend to reduce borrowed money in Indian firms. Lastly firm growth has positive insignificant relationship with leverage decision. These empirical results have some implication for wide range of stakeholders, policy makers and academician could be understood by analysis highlighted between corporate governance and capital structure. The results support in view that improve corporate governance quality decrease financial leverage in

listed firms and highlights focusing on improving governance mechanism in Indian listed firms, especially under unfavourable external present situation in stock market faces, public companies improve their corporate management to enhance efficiently, innovative and decrease the dependence on debt financing. Such steps decrease the risk of insolvency, bankruptcy and financial distress. The study also suggests that it is challenging to make the financial leverage of enterprises helpful for performance in a short time given the potential values that enhance corporate governance quality. Consequently, increasing corporate governance quality is a long-term battle that requires perseverance. These policy implications are significant for both publicly traded companies and the government agencies oversee this public firms. The study has also considered a few significant limitations, such as the small sample size of 113 companies, which only included NSE-listed companies by market capitalization, and the exclusion of unlisted companies and other listed companies that were unable to meet the criteria for the sample, which raises the issue of generalisation and makes it unlikely that conclusions will be drawn. It has also developed a strategy for future investigations that will make use of primary studies to provide a more comprehensive understanding of corporate governance and financial leverage. Future research may examine the components that have an impact, including internal audit practises, primary data, and various mediating factors that might be extended further for making enquiries regarding the relationship between corporate governance and capital structure.

Conflict of Interests

The authors declare that there are no conflict of interests that are directly or indirectly related to this research work.

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