

**Risk Disclosure Unlocked: Do Board Characteristics Really Matter? An Empirical Study of India****Reetu Yadav\***Research Scholar, Haryana School of Business  
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This study investigates whether board characteristics influence corporate risk disclosure practices among Indian listed companies. The study utilizes sample data of non-financial companies registered in the North Indian region and listed on the Bombay Stock Exchange (BSE), with the data sourced from the Prowess database. The results of the Fixed effect model and GMM regression suggest that there is a positive but insignificant effect of family ownership (FO), Government ownership (GO) and Management ownership (MO) on corporate risk disclosure in Indian companies, suggesting that whatever the structure of ownership followed by the companies, it is not significantly affecting the corporate risk disclosure in Indian companies. The presence of woman directors (WD), firm size, CEO duality and firm age is positively associated with risk disclosure. The findings provide empirical evidence on the role of internal authority mechanisms in shaping corporate reporting behaviour in India and offer insights for regulators, investors, and policymakers aiming to strengthen accountability and disclosure quality.

**Keywords:** Corporate Risk Disclosure, Board Characteristics, Fixed Effect and Random Effect, GMM.**JEL Code:** G34, C23, C26, G32**Introduction**

The issue of corporate governance and risk disclosure has received centre stage in the debate on corporate accountability and transparency in the last twenty years. The growing sophistication of business processes and the increased attention of the stakeholders to the companies have pushed corporations all over the world to improve the quality and quantity of the disclosed risk information in their annual reports. The risk disclosure can help investors, regulators, and analysts to evaluate how a firm is exposed to uncertainties and determine how well the management of a firm can withstand the impact of these risks (Elshhidat et al., 2018; Khlif and Hussainey, 2014). In the light of the agency theory (Jensen and Meckling, 1976), risk communication lowers information asymmetry between managers and shareholders, curbing any opportunistic behaviour and agency costs. Nevertheless, even though regulatory frameworks focus on corporate transparency, there remains a high degree of heterogeneity in the degree and level of transparency in risk disclosure among companies (Elgammal et al., 2018; Al-Hadi et al., 2019).

Several corporate scandals have been highlighted across the world, including Enron (2001), Lehman Brothers (2008), and Wirecard (2020), and demonstrated how the inability to report risks in a transparent way and a lack of effective governance mechanisms can lead to disastrous collapses. Such incidents have prompted the controllers and researchers to reconsider the association between the traits of board governance and disclosure behaviour in firms (Linsley and Shrivs, 2006; Abraham and Shrivs, 2014). In developed markets, the factors influencing corporate risk disclosure have been widely investigated, with the key areas of governance disclosed being board composition and the independence and diversity of boards (Ntim et al., 2013; Elshandidy and Neri, 2015; Allini et al., 2016). Nevertheless, the evidence provided by the emerging economies, in particular, India, is rather scanty and inconclusive (Saggar & Singh, 2017; Haldar and Raithatha, 2017). Emerging market institutional and regulatory frameworks are also distinctly different to those of the developed countries, and they affect the dynamics of disclosure practices. Therefore, the review of the correlation between board structure and corporate risk disclosure in India will provide some of the exclusive information on how governance reforms can be converted into transparency effects in a developing market environment.

The corporate governance environment has significantly changed in India since the liberalisation reforms of the 1990s. Governance norms, including board independence, gender diversity and the formation of audit committees, have been formalised with the help of such initiatives as Clause 49 of the Citation Arrangement, the Companies Act, 2013. Also, increased regulation of the performance of boards and compliance with disclosure obligations was enhanced by amendments by the National Financial Reporting Authority (NFRA) and SEBI in 2018. However, research indicates that the compliance with risk reporting by Indian companies is still unequal and even symbolic, with a focus on regulation and not transparency (Haldar et al., 2020; Pathak and Ranajee, 2021). This regulation-practice gap poses some significant questions on whether the board structures are effective in encouraging credible risk disclosure.

The board of directors is critical in guaranteeing transparency, accountability, and effective communication with the stakeholders. The size of the board, its independence, diversity, leadership style, and frequency of meetings are board attributes that directly affect the quality of disclosure and monitoring (Adams and Ferreira, 2009; Garcia-Sanchez et al., 2020). Better decision-making and increased scrutiny of disclosure processes have been argued to be enhanced through bigger boards since they bring different expertise and different angles (Elzahar and Hussainey, 2012). On the other hand, a board that is too large can experience coordination problems, which result in poor monitoring and inconsistent reporting (Khan et al., 2021). On the same note, it is considered as board independence, which can enhance objectivity and minimise managerial opportunism and improve the quality of reported information (Ho and Wong, 2001; Barako et al., 2006). The empirical evidence is, however, inconclusive, with both studies reporting positive relationships (Oliveira et al., 2011; Ciampi, 2015) and studies that do not show any or even negative effects (Dominguez and Gamez, 2014). Another important aspect of governance that has come out as having an impact on risk communication is gender diversity on corporate boards. It is believed that female directors are more ethically sensitive, stakeholder-focused, and holistic in their risk management (Adams and Ferreira, 2009; Terjesen et al., 2016). The recent data confirmed in the European and Asian markets demonstrates that gender-diverse boards are more likely to provide more detailed and balanced risk disclosures (Kassinis et al., 2022; Bhatia and Bansal, 2021). Mandatory legislations on the Companies Act (2013) of at least one-woman director have increased gender representation in companies' boards, but its actual impact on disclosure behavior has been understudied in India (Haldar et al., 2020; Sahoo and Sahu, 2023).

Theory Using complementary explanations, the link between board qualities and disclosure may be explained by agency theory, stakeholder theory, and resource dependence theory. The agency theory brings to bear the role of independent boards to monitor the behaviour of managers and ensure that their actions are going to reflect the interest of the shareholders. The stakeholder theory puts more emphasis on transparency as a tool of legitimacy and fulfillment of the different stakeholder groups (Freeman, 1984; Amran et al., 2009). Resource dependence theory, in its turn, considers board diversity and expertise as helpful resources that increase the capability of the firm to handle risks as well as to interact with the external parties in a more effective manner (Hillman and Dalziel, 2003). The combination of these views highlights the fact that the effective boards are not only good at reducing information asymmetry but also is a strategic asset that can influence legitimacy and competitiveness of firms due to the enhanced risk disclosure.

Even though there is a lot of research done by international researchers, there is very little evidence on Indians. Other research in the field of corporate governance and disclosure practices has been done before (Saggar and Singh, 2017; Khandelwal et al., 2020), although most of them were based on smaller sample sizes or shorter periods. Additionally, very limited research has used recent governance reforms or gender inclusion policies. The study performed in this paper is a continuation of the current literature by examining a revised and more comprehensive set of Indian listed companies to indicate how certain board attributes (size, independence, gender diversity, and leadership structure) influence the level of disclosure of corporate risks. This study should have a number of practical implications. To the policymakers, the findings would be evidence-based in the improvement of codes of governance and disclosure requirements within the regulatory framework by SEBI. To corporate leaders, the knowledge of board characteristics that are more effective in disclosure transparency practices can be used to shape the composition strategies of the board. Lastly, to investors and analysts, there is the evidence of governance-disclosure linkages that could be useful in enhancing firm valuation model and risk assessment. **Methodology**

Table 1. Sample Selection

Particulars	Number of firms
Total firms available in BSE 500 Index	500
Non- financial North Region registered firms (Final sample)	78

Source: The Author

The sample selection for the study is based on data extracted from the Prowess database (2025), beginning with all 500 firms listed in the BSE 500 Index, which represents a broad spectrum of Indian companies across sectors. From this initial pool, financial firms such as banks, insurance companies, and other financial institutions were excluded due to their distinct regulatory and financial reporting frameworks. Further, a geographical filter was applied to include only those firms registered in the North Indian region. After applying these criteria, the final sample was reduced to 78 non-financial firms, ensuring greater homogeneity and relevance of the data for the study. The sample has been compiled and refined by the author.

The following regression specification has been used:

$$CRD_{it} = \alpha_i + \beta_1 GO_{it} + \beta_2 FO_{it} + \beta_3 MO_{it} + \beta_4 BB_{it} + \beta_5 BM_{it} + \beta_6 BS_{it} + \beta_7 ED_{it} + \beta_8 CD_{it} + \beta_9 WD_{it} + \beta_{10} FS_{it} + \beta_{11} FA_{it} + \beta_{12} CR_{it} + \beta_{13} DER_{it} + \epsilon_{it} \quad (1)$$

where FO is family ownership, GO is government ownership, MO is managerial ownership, FS is firm size, CR is current ratio, DER is debt-equity ratio, WD is women director, CD is CEO duality, BM is board meeting, BB is board business, ED is Executive directors, BS is board size, FA is firm age. DER, CR, firm age, and firm size are included as control variables to account for differences in financial structure, liquidity, experience, and organizational scale. In this analysis, we apply the Fixed Effects (FE) model to the analysis of panel data and take into account all the firm-specific features that do not vary with time but can affect the disclosure of risk (including the ownership culture or long-term governance practices). FE approach eliminates these effects that are not observable and ensures that the estimated relationships are only reliant on the within-firm variations. Nevertheless, as not all of the explanatory variables can be exogenous, that is, they can be affected by risk disclosure or other unobserved variables, we also use the Generalised Method of Moments (GMM). GMM relies on lagged values of the variables as instruments to correct endogeneity and gives more credible estimates in dynamic panel models. This union method enhances the validity of the findings by touching on both the unobserved heterogeneity and the potential reverse causality of the model.

**Results and Discussion**

Table 4. Descriptive Statistics of study variables

	CRD	GO	FO	MO	BB	BM	BS	ED	CD	WD	FS	FA	CR	DER
Mean	72.097	11.587	14.804	20.467	2.077	8.503	9.485	5.095	0.108	0.131	3.885	35.385	2.007	1.862
Median	74.000	0.000	1.325	0.028	2.000	8.000	10.000	5.000	0.000	0.000	3.860	32.000	1.444	0.166
Maximum	169.000	89.180	90.635	76.406	9.000	31.000	18.000	11.000	1.000	1.000	5.636	86.000	19.718	459.258
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.812	4.000	0.177	0.000
Std. Dev.	30.499	25.288	23.408	24.737	2.093	5.109	2.837	2.351	0.310	0.338	0.689	14.912	1.994	23.625
bservations	390	390	390	390	390	390	390	390	390	390	390	390	390	390

Source: The Author

The following table shows the descriptive statistics of all the variables of the study using 390 firm-year observations. It reveals that the Corporate Risk Disclosure (CRD) has a mean of 72, which represents medium levels of disclosure, and it is very dispersed. The ownership levels in terms of government, family and managerial ownership (GO, FO, MO) are low on the average, whereas board characteristics indicate that boards have approximately 9 members (BS), undertake approximately 8 meetings per year (BM) and have very few women directors (WD) and very uncommon CEO duality (CD). There are executive directors (ED) averaging at about 5. There is a medium variation in the firm size (using log of total assets) and firm age in the case of 35 years on average. The financial indicators indicate that the current ratio is typically relatively low (CR 2), and the debt-equity ratio is also quite low (DER 1.86), although the upper limits show that the presence of a small number of highly leveraged firms is also possible. All in all, the standard deviations and the wide range show that there is a lot of heterogeneity among firms in terms of ownership structure, governance practices, and financial characteristics.

Table 5. Correlation

	CRD	GO	FO	MO	BB	BM	BS	ED	CD	FS	FA	CR	DER
CRD	1												
GO	-0.061	1											
FO	-0.108	-0.291	1										
MO	0.006	-0.380	-0.349	1									
BB	-0.009	0.093	-0.024	-0.090	1								
BM	-0.074	-0.112	0.082	-0.029	-0.090	1							
BS	0.218	0.093	-0.272	0.099	0.076	-0.007	1						
ED	0.032	0.093	0.045	-0.018	-0.027	-0.003	0.076	1					
CD	0.010	-0.016	0.095	-0.062	-0.044	0.100	0.008	0.011	1				
FS	0.058	-0.071	-0.038	0.127	-0.145	0.041	-0.050	-0.080	0.062	1			
FA	0.117	0.371	-0.551	0.072	0.092	-0.044	0.384	-0.069	-0.075	0.043	1		
CR	0.160	0.199	-0.274	0.086	0.085	-0.120	0.299	-0.016	0.010	0.082	0.282	1	
DER	0.042	-0.027	-0.040	0.062	-0.012	-0.008	0.004	-0.017	-0.020	0.006	0.060	-0.072	1

Source: The Author

The correlation table indicates the strength and direction of the linear relationships between the variables under study and generally the numbers are very weak to moderate implying that there is no serious case of multicollinearity. Corporate Risk Disclosure (CRD) is also weakly associated

with all variables with a small positive association with the board size (0.218) and firm age (0.160) and extremely small negative associations with government ownership (-0.061) and family ownership (-0.108). The ownership variables are moderately negatively related to one another, especially government and family ownership (-0.291) and family and managerial ownership (-0.349), meaning that companies dominated by a particular type of ownership are less likely to possess the other. The attributes of boards are significantly weakly correlated with CRD, as well as among themselves, which indicates that there is independence among governance attributes. The size of the firms is not significantly related to the board size (0.384) or government ownership (0.371), indicating that larger firms are likely to have slightly larger boards and government shareholdings. Financial variables, including current ratio (CR), debt-equity ratio (DER), exhibit insignificant relationships with CRD and other governance variables. In general, the low correlation coefficients corroborate the fact that there is no excessive overlap of the variables, and they can be used in the multivariate analysis.

Table 6. Results of Fixed Effect and Random Effect Model

Variable	FIXED MODEL		RANDOM MODEL	
	Coeff.	Prob.	Coeff.	Prob.
CRD	-126.934	0.001	4.617	0.805
WD	1.024	0.0817	0.084	0.984
GO	0.229	0.032	-0.279	0.031
FO	0.139	0.550	-0.019	0.883
MO	0.194	0.003	-0.119	0.336
BB	0.351	0.039	-0.506	0.458
BM	-0.463	0.017	-0.546	0.072
BS	3.034	0.000	2.832	0.000
CD	13.520	0.022	10.732	0.036
ED	0.175	0.756	0.573	0.274
FS	41.556	0.001	9.522	0.033
FA	0.188	0.861	0.248	0.196
CR	0.617	0.585	1.218	0.190
DER	0.906	0.003	0.000	0.993
R <sup>2</sup>	0.669		0.141	
Adjusted R <sup>2</sup>	0.570		0.111	
Durbin-Watson stat	2.081		1.608	
Hausman Test Chi-Square	3.647 (0.5527)			

Source: The Author

Table 6 gives the output of the Fixed Effect (FE) and the Random Effect (RE) Model. The fixed effect model analyses the correlation between the explained and explaining variables in a cross-sectional design. FE eliminate the influence of those time-invariant characteristics so that we can estimate the total impact of the predictors on the outcome variable. In case the individual effects are strictly independent of the regressors, it might be reasonable to assume that the individual-specific constant terms are randomly chosen within cross-sectional units. In order to choose between the fixed and the random effects, we conduct a Hausman test in which the null hypothesis is that the random model is acceptable. The results of the Hausman test in Table 6 indicate that the model the research will employ is the fixed effect model due to the significant p-value. Therefore, the results of the fixed effect model are explained. The effect of WD is positively significant on CSD at a 10% significance level, suggesting that the women director in the board structure is negatively affecting CRD. The effect of government ownership, DER and BM is also having a positive effect on CRD. The effect of board size and FS is significant.

Table 7. Results of the Panel GMM model

Variable	Coeff.	Std. Err.	T-statistics	Prob.
CSRDL	0.1623	0.1012	1.60	0.109
FO	0.1362	0.3264	0.42	0.676
GO	0.3873	0.0507	0.37	0.712
MO	0.1254	0.2485	0.50	0.614
FS	0.097	0.0363	3.13	0.002
CR	0.4231	0.6375	2.22	0.027
DER	0.2039	0.2039	-0.20	0.78
WD	0.7016	0.6447	1.01	0.012
BM	0.4065	0.4065	0.33	0.742
BB	0.8583	0.8583	0.63	0.531
ED	0.6916	0.6916	0.82	0.415
BS	0.9682	0.2959	3.06	0.002
FS	0.8736	0.9843	0.00	0.3
FA	0.4493	0.3936	1.80	0.06
PBR	0.0088	0.0968	0.00	0.92
MC	0.9473	0.9473	1.41	0.157
_cons	0.3111	0.2581	-1.00	0.00
No. of Instrument variables			22	No of Obs 234
Wald Chi-square	175.47			No of groups 78
Prob > Chi-Sq	0.00001			

Source: The Author

The study has used the generalised method of moments (GMM) regression because it is resistant to endogeneity and can be utilised to make large sample estimates. Table 7 denotes the regression outcomes. The results indicate that family ownership (FO), Government ownership (GO) and Management ownership (MO) have a positive and insignificant impact on corporate risk disclosure in Indian-based companies. This implies that regardless of the nature of ownership adopted by the companies, it is not having a significant impact on the corporate risk disclosure in Indian companies. The results find that the risk disclosure level does not significantly depend on the institutional ownership, foreign ownership, firm size and leverage, as reported by Alshirah and Alshira (2023) and Habtoor et al. (2019) and Pangestuti et al. (2017). The alpha of the presence of female directors (WD) is positive and significant at the 0.001 level, implying that the presence of women directors is conducive in enhancing the effectiveness of the board of directors and aids in improving accountability and transparency and thus affecting the risk reporting. In general, our findings concerning the diversity variables coincide with the previous research on the diversity of boards (Adams and Ferreira, 2009; Allini et al., 2016; Saggari et al., 2022; Seabeck and Vetter, 2022; Gull et al., 2025).

Moreover, as per the precedence in literature (Zadeh and Eskandari, 2012; Khelif and Hussainey, 2014; Pangestuti et al., 2017; Saggarr and Singh, 2017; Qulyubi et al., 2023), the results of the tests show positive correlation of firm size (FS) and firm age with the risk disclosure. This is an indication of the fact that managers of big companies are more motivated to report risks to differentiate their company amongst others. The results indicate a positive and significant effect of CEO duality on corporate risk disclosure in the case of Indian companies (Lin et al., 2023; Gallego-Álvarez & Pucheta-Martínez, 2022). Moreover, Gallego-Álvarez and Pucheta-Martínez (2022) stated that CEO duality will lead to reduced risk, which can be explained by the fact that CEOs can be shareholders in firms where they are CEOs. In this connection, they will find it less likely to be riskier and decisions made by the board will not coincide with risk since the CEO is also the chairman of the board. This implies that strong CEOs do not necessarily coincide with the interests of managers, but with those of the shareholders, in which these CEOs can also hold shares in the firm. In this way, the CEOs can exercise their influence to influence the decision-making of the board to reflect a reduced corporate risk. The effect of the current ratio on corporate risk disclosure is significantly positive, while the effect of the debt equity ratio is not significant. These results are in line with (Lazarides & Pitos, 2009; Digidowiseiso, 2023; Iskanda, 2020).

#### Conclusion

This study investigates whether board characteristics influence corporate risk disclosure practices among Indian listed companies. Using a panel dataset of firms over multiple years, the analysis examines how board size, board meetings, board busyness, CEO duality, women directors, family ownership, managerial ownership, and government ownership affect the extent of risk-related information disclosed in annual reports. The results of Fixed effect model and the generalised method of moments (GMM) regression suggest that there is a positive but insignificant effect of family ownership (FO), Government ownership (GO) and Management ownership (MO) on corporate risk disclosure in Indian companies suggesting that whatever the structure of ownership followed by the companies, it is not significantly affecting the corporate risk disclosure in Indian companies. The presence of women directors (WD), firm size, CEO duality, and age of the firm are positively associated with risk disclosure. The findings provide useful policy implications. Since the structure of ownership on corporate disclosure is positive, the companies should encourage independent board oversight to enhance transparency and also ensure periodic risk-audit requirements. Further, the positive association of female directors with risk disclosure suggests that policymakers should strengthen compliance with SEBI's mandate on women directors. They should encourage to appointment of multiple female directors. Regulators should encourage firms, particularly large firms to adopt integrated reporting and enterprise risk management. The positive impact of firm age on risk disclosure suggests that older firms have stronger reporting practices; therefore, younger firms should also be encouraged to adopt best practices. Further, the regulator should conduct risk-governance workshops for promoters, board members, etc., to provide them guidance for climate-change, financial and other strategic risk disclosure. The findings provide empirical suggestion on the role of internal authority mechanisms in shaping corporate reporting behaviour in India and offer insights for regulators, investors, and policymakers aiming to strengthen accountability and disclosure quality.

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