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## THE INFLUENCE OF CORPORATE GOVERNANCE ON FIRM PROFITABILITY: A STUDY OF THE FIRMS LISTED ON INDIA'S NSE 500

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### **Abstract**

A robust corporate governance is imperative in creating sound corporate culture of consciousness, lucidity and openness which in turn enables a company's management achieve its objectives in a way that maximizes profits. The given study aims to empirically evaluate the association of firm profitability with various corporate governance mechanisms, for firms traded on the NSE 500. The time period for our study ranges from 2013 to 2020 - using Ordinary Least Squares as the method of estimation. We used two estimates of firm profitability – Return on Assets (ROA) and Net Profit Margin (NPM). The analysis established significant favourable association between ROA and independent directors' as a proportion of the boards, total number of board meetings held, number of board committees and audit committee presence. With respect to NPM, results showed that it was significantly and favourably impacted by the proportion of non-executive directors on the boards, total number of board meetings, total number of board committees prevalent in the company and firm size. However, board size, audit committee presence and independent directors as a proportion of audit committees indicated a negative impact on NPM.

**Keywords:** Corporate Governance; Profitability; Board Characteristics; Audit Committee; India; NSE 500;

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### **1. Introduction**

Corporate Governance (hereafter, CG) is a multifaceted perspective on governance. It primarily aims at enhancing performance of an organization through the accountability of those involved in management. The widely held belief that CG impacts corporate performance and promotes shareholders' interests has sparked global interest. However, given the economical, geopolitical, and societal settings, CG is structured differently in different countries. Corporations in developed countries, for example, possess a diverse

shareholder base and function under robust financial and political structures, as well as a well-established legislative framework and sound CG norms. Political turmoil, on the other hand, may jeopardize enterprises operating in developing countries, ensuing in significant economic disruption and a marked increase in defence spending, culminating in a broadening fiscal deficit.

CG is a broad term that works to realize the goal of the organization and acts as a bridge between the stakeholders as well as the Board of administrators. Today, a company's market existence and profitability are dependent on good CG operations and adherence to regulatory norms. In the CG literature, the most common path is contractual, with the goal of resolving potential conflicts of interest and lowering agency costs. To do this, corporate boards must be reinforced. The importance of the CG mechanism in overcoming the agency problem is broadly accepted, and the influence of CG mechanisms on company performance has been studied empirically.

Mishra and Mohanty (2014) observed favourable corporate performance could result in enhanced corporate values, which could also appeal to investors and other prospective stakeholders. Poor firm performance, on the contrary, could reduce the company stock value. The productivity and efficacy of a firm's actions during a given period are reflected in its performance, which is a result of the firm's formalized endeavours (Kusuma & Ayumardani, 2016). Investors, customers, and other prospective stakeholders judge a firm's credibility based on its performance. For example, a company's financial performance can suggest whether or not it has met its objectives and can be used to make decisions. Investors rely upon these corporate performance indications to determine if they should retain or abandon their investment (Mursalim et al., 2017). It was, however, observed that the findings of studies on company performance and CG characteristics were inconclusive. Amongst the most likely causes of this inconsistency, is the varied proxies employed to measure these characteristics. Because of the various CG proxies, it is challenging to analyse and determine if CG favourably contributes to corporate performance.

The dearth of consistent data substantiated by empirical findings on CG influence on performance, as pointed out by Larcker et al. (2007), is attributable to the difficulties in appropriately quantifying CG. As a result, it is critical to assess the efficiency and influence of CG on company productivity, on a frequent basis. The basic aim of implementing an effective CG structure is to maximize long-term value for shareholders and stakeholders, in turn enhancing firm profitability. Thus, this study proposes to empirically study the association between the internal mechanisms of CG and corporate performance, thereby assessing whether firm performance is favourably impacted by CG.

Thus, in pursuance of the stated objective, the dataset is based off firms, publicly traded on the NSE 500, as on March 31, 2020 for eight financial years, the method of analysis being Fixed Effects Panel Regression. Banks and financial institutions have not been made a part of the dataset, owing to differences in the maintenance of accounting policies and practices.

This paper will thus proceed as follows: The overview of literature will be traced in Section 2, which is divided into six parts, to emphasise upon the association between corporate

performance and each internal mechanism of CG individually; Section 3 highlights the methodology adopted and the sample thus selected, details and justification of the variables used for the purpose of the analysis and thus the methodology employed; Section 4 presents the outcomes generated from the study and its subsequent discussion; The paper is concluded in Section 5.

## **2. Overview of Literature**

### ***2.1 Corporate Governance and Firm Performance***

A high association between CG and stock market returns, as assessed by Tobin's Q, was observed by Gompers, Ishii & Metrick (2003). Managers have a proclivity for appropriating business funds and working on ventures that profit them personally. Good CG minimizes managers' "right to control" over creditors and shareholders, enhancing the possibility that they invest in initiatives with positive valuation. Brown & Caylor's (2004) performance measurements suggest that superior "operational performance" is depicted by organizations that are better managed.

#### *2.1.1 Board Size and Firm Performance*

Two conflicting viewpoints exist in this realm. The first viewpoint suggests boards that are larger prove to favourably impact corporate performance, thereby supporting the premise that increased engagement with the outside environment improves resource accessibility (Jackling and Johl, 2009). These boards encompass the necessary expertise which helps in making more comprehensive, informed and much better decisions. The second viewpoint on the contrary states that a very big board creates problems in coordination and processing. An important perk of having a smaller board is that, with respect to individual directors, it enhances their ability to take better decisions. Larger boards do not seem to be as effective, as claimed by Lipton & Lorsch (1992) and Jensen (1993), and can be controlled by a CEO easily, thereby favouring smaller boards. Yermack, 1996 provided empirical evidence on an adverse relation between size of the board and positive financial ratios like profitability, asset utilization. Furthermore, research also depicts an adverse association between size of boards and profitability. (Eisenberg, Sundgren & Wells, 1998).

#### *2.1.2 Board Independence and Firm Performance*

Mixed results have surfaced in prior researches on the association between director independence and success of a firm. Bhagat & Black (2002) observed no relation between the proportion of outsiders and profitability. The authority to oversee managerial pursuits, assess manager performance, and reward managers, lies with the board. Fama & Jensen (1983) advocated that the directors board is an important internal tool for supervising and controlling senior management. Rosenstein & Wyatt (1990) stated that a firm having an outsider on its boards is rewarded by the market. Brickley, Coles, & Terry (1994) discovered a favourable association between percentage of outsiders and the stock market response, while an inverse association was observed by Anderson, Mansi, & Reeb (2004) between director independence and debt cost. Brown & Caylor (2004) discovered no relation between Tobin's Q and director independence, however they found a linkage between director independence and ROE and profit margin. Indian researches have revealed, boards encompassing a majority

of outside directors tend to favourably impact firms. Because boards in India tend to play a passive role because they are often comfortable with management, external directors are essential. As the proportion of external directors on boards enhances, boards become more independent (John & Senbet, 1998).

#### *2.1.3 Board Meetings and Firm Performance*

Frequency of meetings happens to be a significant indicator of the monitoring capacity and efficacy of corporate boards. The Cadbury Report, under a voluntary CG regime, suggested “an Anglo-American style, namely a unified board of directors composed of executive and non-executive directors who are primarily responsible to the shareholders” (Ntim, Opong & Danbolt, 2011b)<sup>1</sup>. In accordance with a theory, board meeting frequency tests the intensity of the board operations as well as how consistent or efficient its monitoring is (Conger et al, 1998; Vafeas, 1999a). Meetings on a regular basis, give directors ample time to consult, create policy, and evaluate managerial results (Vafeas 1999a). This could assist directors in remaining aware and educated about key developments within the company, putting them in a stronger position to resolve emerging crucial issues in a timely manner (Mangena & Taurigana, 2008). In reality, frequent meeting attendance is a sign of a diligent director (Sonnenfeld, 2002). Furthermore, regular meetings combined with casual sideline communications can help directors shape and reinforce unified bonds, which can improve CG (Lipton and Lorsch 1992). Vafeas (1999a) highlighted those businesses productive in determining appropriate number of board meetings for their organisational setting, would benefit from economies of scale in agency costs, thus improving financial performance of the body corporate.

#### *2.1.4 Board Committees and Firm Performance*

To assist their senior management, companies often appoint experts to operate on one or more committees (Agrawal and Knoeber, 1999). Trans Grid (2005) adds to this insight by stating that board committees play a critical role in CG. They're especially helpful when extensive reviews of specialist areas are necessary. Research indicates, the overall success and efficacy of the board can also be critically impacted by board committees (Madhani, 2019). In terms of structure, ownership, diversity, and performance, board committees and firm performance have also been investigated (Hayes, Mehran and Schaefer, 2004; Carter et al. 2003; and Klein, 2002). Despite widespread public awareness and increased scholarly interest in CG, the links between sizes of the board, board make up, structure of ownership, and performance of firms remain inadequately understood (Hayes et al. 2004).

#### *2.1.5 Audit Committees and Firm Performance*

Presence of an audit committee enables the board of directors to implement sound CG practices. It is responsible for overseeing and managing the accounting process such that the management may give reliable and accurate information to all stakeholders. Because audit committee independence can provide credible accounting information, it is envisaged that audit committee independence will enhance company performance. The Committee's regularity in meetings seems to rise with the company size and percentage of independent directors (Menon and Williams, 1994). If the size and regularity of such meetings can better

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<sup>1</sup><https://www.icaew.com/technical/corporate-governance/codes-and-reports/cadbury-report>

the accounting process, the size and recurrence of audit committee meetings, it is believed, will boost company performance. The number of Audit Committee meetings, however, are very rough indicators of Audit Committee operation that can vary greatly given the nature and size of a business, the extent of the functions of the Audit Committees and, more importantly, the degree and nature of interaction beyond these meetings. The efficiency of both internal and external auditors can be improved by the presence of this committee (Simnett et al., 1993). Once the audit committee is proactive and independent, businesses are far less prone to be victimized by fraud and other reporting discrepancies (Abbott & Parker, 2000). It has been clearly stated in the Cadbury report (1992), that an audit committee's effectiveness requires that significant number of its members must be independent. Board committee effectiveness can be enhanced if its supervisor is independent (Klein 1998). Increased Board independence tend to improve audit quality (Adeyemi and Fagbemi, 2010)

#### *2.1.6 Firm Size and Performance*

Simon (1962) couldn't find a statistically meaningful link between company size and profitability. However, a favourable nexus between profitability and the size of the firm was observed by Hall and Weiss (1967). Shepherd (1972) revealed, on the contrary, that corporate size and profitability have an adverse correlation. Fiegenbaum and Karnani, (1991) stated that the size of a company and its profitability have a favourable affiliation. Similarly, Majumdar (1997) found that bigger companies seem to be more profitable than companies smaller in size. Schneider (1991), contrarily, argues that a company being larger will lower profitability. The reason for such mixed results in this sphere, could be attributed to diverse variables that have been employed by different authors to capture firm size.

### **3. Research Methodology**

#### **3.1 Data collection and period of study**

The sample of our study is based on firms publicly traded on National Stock Exchange's NSE 500 as on March 31, 2020; constructed considering the accounting periods 2012-13 to 2019-20. Data has predominantly been collected from the Prowess database. Given the literature, for some variables we have also had to source data from the company annual reports. A panel data was constructed since greater variability is brought in by a panel data, making it more informative, minimises collinearity, provides greater degree of freedom and thereby enhances efficiency (Hsiao, 2006). The method of analysis is that of Fixed Effects Panel Regression with Ordinary Least Squares (hereafter, OLS) being the method of estimation.

So as to ensure unanimous computations, we excluded all financial institutions and banks from the sample, owing to difference in their nature of accounting practices and policies adopted. The initial sample size for the given study was 500 listed-companies, however, upon excluding banks and financial institutions, the sample size now stands at 415 companies, which upon calculation sums up to 3,320 firm years.

We have a well-diversified dataset, wherein we have 223 companies from the manufacturing, mining and extraction sectors, 47 Public Sector Enterprises, and the remaining 139 companies from the service sectors (comprising 26 engineering and construction, 17 software, 16 diversified and others, 14 transport storage and warehouse, 14 wholesale, 9 retail

sales, 8 television and picture, 7 healthcare, 6 hospitality, 5 production based, 5 telecommunication, 4 consultancy, 3 electricity, 3 publishing and 2 advertising based companies) and 6 Agriculture based companies.

### **3.2 Variables used in the study**

While assessing the relation between CG and performance, “accounting-based performance metrics”, according to Mashayekhi & Bazazb (2008) and Hutchinson & Gul (2004), shows the conclusions of management decisions and are therefore favoured over market-based measures. Thus, coming to Return on Assets, it's among the profitability criteria that assesses a company's ability to profitably utilize its assets over a given time span. As an accounting-based indicator, it also assesses the firm's operational and financial efficiency (Klapper & Love, 2002). It also represents the capability of corporations to efficiently utilize its assets for meeting shareholders' interests (Ibrahim & AbdulSamad, 2011). The next dependent variable, Net Profit Margin, has often been used as an explanatory variable in deciding firm value in earlier research (Cengiz, 2016). Previous studies indicate that historical profit margin is perhaps one of the best predictors of a company's potential to produce higher rates of return in the future. As a consequence, a positive valuation implication of profit margin can be reasonably expected.

#### ***(Insert Table 1: Variable Definition, here)***

Given the independent variables, Adam & Mehran (2002) claimed that, the organization should have a board that is larger size, in order to efficiently monitor. Cheng (2008) claimed that organizations with more board members have less variance in terms of their performance. However, there also exists a viewpoint that a very big board creates problems in coordination and processing (Lipton & Lorsch, 1992; Jensen, 1993). As a result, board size is used as a parameter to evaluate the nature of its impact on performance. With respect to Board Independence, there exists substantial arguments in literature that the prevalence of directors who are independent, on corporate boards assures appropriate competition among insiders, which in turn helps in shareholder value maximization (Fama, 1980). Independent directors tend to cater to the firms' shareholders, by providing them with the necessary monitoring and advisory functions, which in turn proves to be advantageous for the firms in a number of ways (Weisbach, 1988; Byrd & Hickman 1992; Brickley, Coles & Terry, 1994). It was also observed that the firms that indulged in electing more outside directors to their boards, were rewarded by the market (Rosenstein & Wyatt, 1990 and Baysinger & Butler, 1985). Also, Coleman & Biekpe, 2005 provided evidence that significant favourable correlation exists between performance and board independence. Non-executive directors, however, could bring in an array of viewpoints and fruitful suggestions into boardrooms. Since they have the capability to interact with the outside world in an impartial manner, they would more accurately evaluate strategies (Kiel & Nicholson, 2003). Board meeting frequency is also perceived as a significant indicator of the monitoring capacity and efficacy of corporate boards (Lipton & Lorsch 1992; Jensen 1993). Meetings on a regular basis, give directors ample time to consult, create policy, and evaluate managerial results (Vafeas

1999a). Regular meetings combined with casual sideline communications can help directors shape and reinforce unified bonds, which can improve CG (Lipton & Lorsch 1992). The existence of monitoring committees, example, an audit committee, is significantly correlated to factors related with monitoring benefits (John & Senbet, 1998). These committees, together with adequate supervision and regulatory mechanisms, improve the board's performance, resulting in much improved CG and disclosure policies. By minimising inconsistency in information between managers and independent outsiders, audit committees in the Board help mitigate agency problems (Klein, 1998). A sound CG structure relies heavily on an efficient audit committee (DeZoort, Hermanson & Houston 2002). The number and length of Audit Committee meetings, however, are very rough indicators of Audit Committee operation that may vary depending upon the nature and size of a business, as well as the extent of the functions of the Audit Committees and, more importantly, the degree and nature of interaction beyond these meetings. Adeyemi and Fagbemi (2010), advocated that increased Board independence tend to improve audit quality.

### 3.3 Model Specification

The models below were constructed to explore into the impact of CG mechanisms on profitability:

$$ROA = \alpha + \beta_1 BDSIZE + \beta_2 PropID + \beta_3 PropNED + \beta_4 BDMEET + \beta_5 BDCOMM + \beta_6 PrAC + \beta_7 AC\_MEET + \beta_8 PropIDAC + \beta_9 FISIZE + SE$$

$$NPM = \alpha + \beta_1 BDSIZE + \beta_2 PropID + \beta_3 PropNED + \beta_4 BDMEET + \beta_5 BDCOMM + \beta_6 PrAC + \beta_7 AC\_MEET + \beta_8 PropIDAC + \beta_9 FISIZE + SE$$

## 4. Findings and Discussion

### 4.1 Descriptive Statistics

Table 2 summarizes “the descriptive statistics of the variables” that were utilized to construct the ensuing regression models. The table highlights that the mean of the dependent variables, namely ROA and NPM, for the sample as a whole, during 2013–2020, was -0.071 and -0.06, respectively.

*(Insert Table 2: Descriptive Statistics, here)*

Given the dataset, the average BDSIZE was seen to be 10.62; three being the minimum and twenty-three being the maximum. Coming to the “nature of directors”, the mean values in case of PropID and PropNED are 0.473 and 0.715 respectively. In case of BDMEET, the average meetings held during the time period 2013-2020 was 5.67, with the maximum being 16 and minimum zero. The mean BDCOMM prevalent in the sampled firms across the given time period stood at 10.81, with three being the minimum number of committees present in a company and 29 being the highest. For PrAC, taken as a binary, we assumed “a value of 1 if an Audit Committee was present in a company and 0 otherwise”. With a mean of 0.99, Table 2 suggests that, an Audit Committee was prevalent in almost all companies across the sample time frame. Clause 49 states, “A company is required to hold at least 4 audit committee

meetings in a given year”<sup>2</sup> and reflecting a mean of 4.68, the sampled companies seem to be abiding by the requirement. In case of audit committee independence, the mean of 0.743 with respect to PropIDAC, depicts a very encouraging result, highlighting firm strength and hence enhanced performance. Firm size, being a control variable, reflects a mean value of 10.352, ranging from -2.303 to 16.087.

#### 4.2 Correlation Analysis

The Pearson Correlation Matrix between the chosen CG parameters and Profitability is presented in Table 3. Although there’s significant associations among practically all explanatory variables depicted in the table, the correlation coefficients are moderate, therefore multi collinearity doesn’t pose as a problem here. To substantiate this, the Variance Inflation Factor(hereafter, VIF) was also calculated, wherein the VIF value for all variables is less than 2, ranging from 1.094 to 1.677.

Table 3 reveals that both the dependent variables have a significant and favourable association with all the selected independent variables, implying that these CG variables positively associate with the given accounting-based measures. Other than the association of BDMEET and BDCOMM with PropIDAC, all other independent variables, too, have a significant and favourable correlation with each other. As mentioned above, owing to the relatively moderate correlations, multicollinearity does not seem to be a problem here and as a result, the ensuing regression analysis could be carried out using all of the variables chosen. *(Insert Table 3: Pearson Correlation Matrix, here)*

#### 4.3 Regression Analysis

On the basis of the regression equations constructed, the outcomes as per Table 4, wherein ROA is the dependent variable, indicate an R-square of 0.463, and a F value of 5.880, significant at .000. Both of these statistics show that variations in the entire compilation of independent variables can predict a considerable fraction of the variation in financial performance (profitability).

*(Insert Table 4: Tests of Between-Subject Effects for ROA model, here)*

**Results based on ROA Model** – Table 5 and given our regression model, indicate that PropID significantly and positively impacts firm profitability. This result substantiates the observations made by Bhagat & Bolton (2008), Coleman & Biekpe (2005), Rosenstein & Wyatt (1990) and Fama (1980). The surveillance of the firm's performance and its functioning is one of the most essential tasks of independent directors. A strict monitoring system prevalent in the company could help resolve agency issues. As a result, the corporation should employ independent directors to oversee governance, internal control, and risk management, resulting in enhanced firm performance. It was further observed that there exists a significantly favourable association between firm profitability and BDMEET, consistent with the findings of Sonnenfeld (2002), Vafeas (1999a), Lipton & Lorsch (1992) establishing the fact that more discussions and meetings of the directors could mean greater

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<sup>2</sup>[https://www1.nseindia.com/getting\\_listed/content/clause\\_49.pdf](https://www1.nseindia.com/getting_listed/content/clause_49.pdf)



monitoring and attention given to minute details of the firms' operating performance and hence leading to favourable results. If the independent variable BDCOMM increases by one unit then in this situation the dependent variable is increased by 0.699. The result indicate that higher firm profitability is positively related with BDCOMM, in line with the results of Madhani (2019) re-instating the fact the having more board committees attributed to specific areas could improve the functioning of the enterprise, as each committee would possibly possess the necessary expertise and skills to efficiently discharge the function for which they are set up. PrAC also seems to have a significant and favourable relation with ROA, at par with the findings of Hamadany, Mohammed & Hammood (2019). Because they operate as "watchdogs", audit committees substantially impact the financial performance of a company. Companies can avoid misleading financial reporting, wherein the audit committee would indulge in verifying that the financial statements accurately represent the current situation. The control variable FISIZE also has a significant impact on profitability, however here the relationship is negative wherein if FISIZE is increased by 1 unit, ROA will decrease by 0.058, consistent with the findings of Shepherd (1972), Schneider (1991), Becker et al. (2010), as growth in firm size could trigger potential diseconomies of scale (Goddard et al., 2005). We, however, do not find any significance between ROA and PropNED, AC\_MEET and PropIDAC.

*(Insert Table 5: Parameter Estimates for ROA model, here)*

Similarly, the results reflected in Table 6, NPM being the dependent variable, indicate an R-square of 0.391, and an F value of 4.387, significant at the .000, also demonstrating that a considerable degree of variation in financial performance (profitability) might be accounted for by changes in the entire range of independent variables.

*(Insert Table 6: Tests of Between-Subject Effects for NPM model, here)*

**Results based on NPM Model** – Given our regression model, Table 7 highlights that profitability has a significant but negative relationship with BDSIZE, wherein if BDSIZE is increased by 1 unit, NPM will decrease by 0.028. This result finds familiarity with the findings of Hermalin & Weisbach (2008), Barnhart & Rosenstein (1998), and Eisenberg et al. (1998), who provided evidences of the adverse influence of board size on performance. Coordination costs and free rider issues tend to be higher in case of larger boards. Since it is increasingly challenging to schedule board meetings and obtain unanimity, coordination and communication issues occur, leading to delayed and not so productive decisions (Jensen 1993). Once the board size grows above a particular level, redundancies offset the early benefits of having more directors to call upon, resulting in reduced firm performance (Jensen, 1993; Lipton and Lorsch, 1992). Further a significantly favourable association was observed between profitability and PropNED, at par with the findings of Bhagat & Black (2007), Kiel & Nicholson (2003). Non-executive Directors can help firms surmount obstacles and flourish. They're entirely independent, so the information they provide isn't skewed or influenced by corporate politics or personal goals. They usually have a large professional network that they have built up over time, which boosts the company's visibility and, as a result, can help it grow faster and perform better. Similar to the findings from the ROA model, BDMEET and BDCOMM also tend to have significantly

positive impact on NPM, significant at 0.043 and 0.004 respectively. Firm profitability was also found to be significantly associated with PrAC and PropIDAC, however they have an inverse relationship with NPM. As sighted in Table 7 below, if PrAC is increased by 1 unit, NPM will decrease by 3.344 and if PropIDAC is increased by 1 unit, NPM will decrease by 5.492. This could be because, maintaining an audit committee comes at a high cost to the company because the majority of committee members are senior executives, and sustaining them is costly. Another downside of audit committees is with regards to its independence. The audit committee is needed to work independently, however there may be some significant individuals who are suppliers or customers of the business, and this may influence their decisions and, thus the firm's performance. FISIZE significantly and positively impacts profitability, at par with the observation drawn by Serrasqueiro and Nunes (2008); Majumdar (1997); Fiegenbaum and Karnani (1991); Hall and Weiss (1967). Firm size could imply that it is growing and expanding, causing the market to respond favourably. Larger companies are thought to be more efficient and have lesser financial leverage. The convenience with which a company can obtain money will boost its capital. Companies with a huge amount of capital are thought to perform well and boasts of a promising future (Purnomosidi et al, 2014). However, we fail to find any significance between NPM and PropID and NPM AC\_MEET.

*(Insert Table 7: Parameter Estimates for NPM model, here)*

## 5. Conclusion

Analysing CG and its impact on profitability helps us garner insight into how a firm's performance has actually been. This study derives from previous research wherein we assess the influence of CG on profitability of firms publicly traded and listed on the NSE 500 as on March 31, 2020, using OLS as the estimation mode. The Fixed Effects Panel Regression revealed a significant favourable association between ROA and CG parameters, namely PropID, BDMEET, BDCOMM and PrAC. However, a significant but inverse relationship was observed between ROA and FISIZE. With respect to NPM, results showed that NPM is significantly positively impacted by PropNED, BDMEET, BDCOMM and FISIZE. However, NPM was seen to have a significant but inverse relationship with BDSIZE, PrAC and PropIDAC. Thus, given the findings, the current study adds to the pre-existing knowledge, by examining how internal CG mechanisms affect firm performance, with a focus on leading Indian companies. Given the results arrived at, the overall observation deciphered from this study suggest that, good and proper governance; and robust CG parameters significantly and favourably impact firm profitability. The findings of this study provide scope for the academicians to delve deeper and further investigate into this field of study; to investors to guide their investment decisions; for policy makers and regulators to improvise systematic rules and regulations with regards to firm profitability.

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#### **LIST OT TABLES**

*\*Selected papers wherein authors have used these variables as measures examined with CG*

TABLE 1: VARIABLE DEFINITION			
VARIABLE	ABBREVIATION	MEASUREMENT/DESCRIPTION	REFERENCES*
<b>DEPENDENT VARIABLES</b>			
Return on Assets	ROA	Extracted as calculated from the Prowess Database	Chari, Chen & Dominguez (2012); Meador and Kumar (2011); Bhagat and Bolton (2008)
Net Profit Margin	NPM	Extracted as calculated from the Prowess Database	Jiang & Peng (2011); Connolly & Hirschey (2005); Brown & Caylor (2004)
<b>INDEPENDENT VARIABLES</b>			
Board Size	BDSIZE	Total number of directors forming a part of the boards.	Mohamed et al. (2016), Jackling & Johl (2009); Lipton & Lorsch (1992)
Board Independence	PropID	Proportion of Independent Directors on the boards - computed as Total Number of Independent Directors on the board/Total Board Size	Coleman & Biekpe (2005), Brickley, Coles & Terry (1994); Fama & Jensen (1983)
Non-Executive Directors	PropNED	Proportion Non-Executive Directors on the boards - computed as Total Number of Non-Executive Directors on the board/Total Board Size	Bhagat and Black (2007), Kiel & Nicholson (2003)
Board Meetings	BDMEET	Total number of board meetings held each year	Mangena & Taurigana (2008); Sonnenfeld (2002); Vafeas (1999a);
Board Committees	BDCOMM	Total number of board committees prevalent in the company	Madhani (2019); John & Senbet (1998)
Audit Committee	PrAC	Presence of an Audit committee (taken as a binary, wherein if Audit Committee present then 1, else 0)	DeZoort, Hermanson & Houston (2002); Klein (1998);
Audit Committee Meetings	AC_MEET	Total number of Audit committee meetings held each year	Bansal & Sharma (2016); Y. A. Al-Matari et al., (2012); Menon & Williams (1994);
Audit Committee Independence	PropIDAC	Proportion of Independent Directors on the Audit Committee - computed as the Total Number of Independent Directors on the Audit Committee / Audit Committee Size	Bansal & Sharma (2016); Y. A. Al-Matari et al., (2012); Abbott & Parker (2000);
<b>CONTROL VARIABLE</b>			
Firm Size	FISIZE	Natural logarithm of total assets.	Hassan et al., (2017); Aishah et al., (2016);
$\alpha$ = Intercept; $\beta$ = Beta; SE = Standard Error Term			

TABLE 2: DESCRIPTIVE STATISTICS

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	3320	-28.2843	2.6456	-0.0714	1.608809
NPM	3320	-20.8621	2.5831	-0.0587	1.372704
BDSIZE	3320	3	23	10.62	3.55
PropID	3320	0	0.8889	0.47266	0.151461
PropNED	3320	0	1	0.71485	0.162736
BDMEET	3320	0	16	5.67	2.726
BDCOMM	3320	3	29	10.81	3.803
PrAC	3320	0	1	0.99	0.093
AC_MEET	3320	0	15	4.68	2.572
PropIDAC	3320	0	1	0.74335	0.180298
FISIZE	3320	-2.3026	16.0869	10.3526	1.969458

Source: Authors own calculation

TABLE 3: PEARSON CORRELATION MATRIX



		ROA	NPM	BDSIZE	PropID	PropNED	BDMEET	BDCOMM	AC_MEET	PropIDAC	FISIZE	PrAC
ROA	Pearson Correlation	1										
	Sig. (2-tailed)											
NPM	Pearson Correlation	.523**	1									
	Sig. (2-tailed)	.000										
BDSIZE	Pearson Correlation	.123**	.083**	1								
	Sig. (2-tailed)	.000	.000									
PropID	Pearson Correlation	.146**	.086**	.133**	1							
	Sig. (2-tailed)	.000	.000	.000								
PropNED	Pearson Correlation	.166**	.071**	.149**	.453**	1						
	Sig. (2-tailed)	.000	.000	.000	.000							
BDMEET	Pearson Correlation	.123**	.128**	.371**	.155**	.090**	1					
	Sig. (2-tailed)	.000	.000	.000	.000	.000						
BDCOMM	Pearson Correlation	.121**	.082**	.412**	.117**	.061**	.387**	1				
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000					
AC_MEET	Pearson Correlation	.093**	.099**	.330**	.256**	.151**	.492**	.330**	1			
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000				
PropIDAC	Pearson Correlation	.178**	.070**	.063**	.379**	.202**	.018	.009	.113**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.309	.621	.000			
FISIZE	Pearson Correlation	.236**	.254**	.542**	.228**	.188**	.443**	.468**	.438**	.140**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000		
PrAC	Pearson Correlation	.457**	.146**	.265**	.279**	.377**	.195**	.257**	.171**	.374**	.494**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
<b>Variance Inflation Factor (VIF)</b>				1.509	1.472	1.392	1.506	1.426	1.502	1.313	1.094	1.68
**. Correlation is significant at the 0.01 level (2-tailed).												

Source: Authors own calculation

TABLE 4: TESTS OF BETWEEN-SUBJECTS EFFECTS FOR ROA MODEL

<b>Dependent Variable: ROA</b>						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3964.035 <sup>a</sup>	423	9.371	5.88	0.000	0.463
Intercept	218.442	1	218.442	137.054	0.000	0.045
BDSIZE	0.119	1	0.119	0.075	0.784	0.000
PropID	10.874	1	10.874	6.823	0.009	0.002
PropNED	4.008	1	4.008	2.515	0.113	0.001
BDMEET	15.844	1	15.844	9.941	0.002	0.003
BDCOMM	10.183	1	10.183	6.389	0.012	0.002
PrAC	17.019	1	17.019	10.678	0.001	0.004
AC_MEET	1.364	1	1.364	0.856	0.355	0.000
PropIDAC	0.079	1	0.079	0.049	0.824	0.000
FISIZE	4.395	1	4.395	2.758	0.047	0.001
CompanyCode	2160.916	414	5.22	3.275	0.000	0.319
Error	4602.996	2888	1.594			
Total	8582.728	3312				
Corrected Total	8567.031	3311				

a. R Squared = .463 (Adjusted R Squared = .384)

Source: Authors own calculation

TABLE 5: PARAMETER ESTIMATES FOR ROA MODEL

<b>Dependent Variable: ROA</b>							
Parameter	B	Std. Error	t	Sig.	95% Confidence Interval		Partial Eta Squared
					Lower Bound	Upper Bound	
Intercept	-13.691	1.551	-8.827	.000	-16.733	-10.650	.026
BDSIZE	-.004	.014	-.274	.784	-.031	.023	.000
PropID	<b>.713</b>	.273	2.612	.009	.178	1.248	.002
PropNED	-.506	.319	-1.586	.113	-1.132	.120	.001
BDMEET	<b>.040</b>	.013	3.153	.002	.015	.064	.003
BDCOMM	<b>.699</b>	.276	2.528	.012	.157	1.240	.002
PrAC	<b>4.529</b>	1.386	3.268	.001	1.811	7.247	.004
AC_MEET	.013	.014	.925	.355	-.015	.041	.000
PropIDAC	.576	2.591	.222	.824	-4.505	5.656	.000
FISIZE	<b>-.058</b>	.035	-1.661	.047	-.127	.011	.001

Source: Authors own calculation

TABLE 6: TESTS OF BETWEEN-SUBJECTS EFFECTS FOR NPM MODEL

<b>Dependent Variable: NPM</b>						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2443.149 <sup>a</sup>	423	5.776	4.387	0.000	0.391
Intercept	33.508	1	33.508	25.449	0.000	0.009
BDSIZE	6.656	1	6.656	5.055	0.025	0.002
PropID	0.994	1	0.994	0.755	0.385	0.000
PropNED	10.693	1	10.693	8.122	0.004	0.003
BDMEET	5.411	1	5.411	4.109	0.043	0.001
BDCOMM	10.863	1	10.863	8.251	0.004	0.003
PrAC	9.278	1	9.278	7.047	0.008	0.002
AC_MEET	0.005	1	0.005	0.004	0.949	0.000
PropIDAC	7.159	1	7.159	5.437	0.020	0.002
FISIZE	192.177	1	192.177	145.96	0.000	0.048
CompanyCode	1986.82	414	4.799	3.645	0.000	0.343
Error	3802.471	2888	1.317			
Total	6256.359	3312				
Corrected Total	6245.619	3311				

a. R Squared = .391 (Adjusted R Squared = .302)

Source: Authors own calculation

TABLE 7: PARAMETER ESTIMATES FOR NPM MODEL

<b>Dependent Variable: NPM</b>						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2443.149 <sup>a</sup>	423	5.776	4.387	0.000	0.391
Intercept	33.508	1	33.508	25.449	0.000	0.009
BDSIZE	6.656	1	6.656	5.055	0.025	0.002
PropID	0.994	1	0.994	0.755	0.385	0.000
PropNED	10.693	1	10.693	8.122	0.004	0.003
BDMEET	5.411	1	5.411	4.109	0.043	0.001
BDCOMM	10.863	1	10.863	8.251	0.004	0.003
PrAC	9.278	1	9.278	7.047	0.008	0.002
AC_MEET	0.005	1	0.005	0.004	0.949	0.000
PropIDAC	7.159	1	7.159	5.437	0.020	0.002
FISIZE	192.177	1	192.177	145.96	0.000	0.048
CompanyCode	1986.82	414	4.799	3.645	0.000	0.343
Error	3802.471	2888	1.317			
Total	6256.359	3312				
Corrected Total	6245.619	3311				

a. R Squared = .391 (Adjusted R Squared = .302)

Source: Authors own calculation