

BOARD CHARACTERISTICS AND TRADE RECEIVABLE MANAGEMENT OF NIGERIAN LISTED CONSUMER GOODS MANUFACTURING FIRMS

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Abstract

The study explored the effect of board characteristics, namely board size, board independence, board gender diversity and board shareholdings, on trade receivables management of Nigerian listed consumer goods manufacturing firms in the period 2012 to 2020. It collected data from the annual reports of a sample of 13 Nigerian listed consumer goods manufacturing firms and utilized accounts collection period as the proxy of trade receivables management. Drawing from agency theory, it formulated four null hypotheses and tested them by estimating Ordinary Least Square Regression Model. Findings revealed that both board size, and board shareholdings have beneficial effect on trade receivables management, while board independence, and board gender diversity have no significant effect on trade receivables management. Based on the findings, it was recommended that Nigerian listed consumer goods manufacturing firms should increase board size and encourage more board shareholdings. It was also recommended that firms should not just appoint non-executive directors and female directors to give impression of board independence and board gender sensitivity, but should seek sizable boards composed of persons with substantial interest in the shares of the entity,

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1. Introduction

Trade Receivables Management (TRM) which is a vital component of working capital management simply refers to the managerial function of planning, organizing, directing and controlling trade receivables. Trade receivables refer to “amounts of money owed to a firm by customers who have bought goods or services on credit” (Van Horne & Wachowicz (2008. p. 250). They arise from credit sales (Kling *et al.*, 2014; Paul *et al.*, 2018). The objective of TRM is to ensure quick and timely collection by using techniques that will not put undue pressures on trade debtors leading to avoidable loss of sales. The ultimate objective is to enhance firm value, taking into account the conflict between liquidity, risk and profitability (Hrishikes, 2002). Prior studies show that TRM has serious consequences on firm value and firm survival. For example, in their separate studies, Akey (2019) and Amponsah-Kwatiah *et al.* (2020) found that average collection period has a positive and significant relationship with return on equity of Ghanaian manufacturing firms. Findings from Yegon *et al.* (2022) suggest that a decline in the accounts receivables collection period would lead to an improvement in the return on assets in Kenya. Olayemi (2021) showed that average collection period of a sample of ten companies in the health and food and beverages sectors listed on the NSE from 2012– 2019, has positive and significant effect on firm performance. Abdulazeez *et al.* (2018), in a sample of six conglomerate companies in Nigeria, found that debtors collection period, creditors payment period and firm size have significant negative relationship with return on investment. Olaoye *et al.* (2019) similarly provided evidence of negative effect of account collection periods on profitability of 30 Nigerian quoted manufacturing firms. Barrot (2016) provides evidence that any reduction in investment in accounts receivables leads to an upsurge in the corporate default probability.

TRM cuts across functions in marketing, sales, production, accounting and finance. It encompasses quite a number of processes among which are granting of trade credits, customer relations, invoicing, monitoring and analysis of payment trends, collections, and reconciling of payments received. Managers exercise considerable discretions in trade receivables management. Managerial discretion could be opportunistic leading to avoidable rise in uncollectible trade receivables and bad debt losses, translating to decrease in wealth of shareholders. This calls for internal corporate governance mechanism for monitoring, advising and controlling managers. The best known internal corporate governance mechanism is the board of directors (hereinafter called board). Companies and Allied Matters Act (2020) validates this move by

making it mandatory for firms to have board of directors. It considers the board the highest governance mechanism and custodian of corporate governance.

Major global corporate collapses and financial crises such as the fall of Enron and WorldCom in the United States, Parmalat in Italy, HIH, Tel in Australia, Intercontinental Bank and Bank PHB in Nigeria, the financial scandal of Cadbury Nigeria Plc, have put serious question mark on the effectiveness of the board to protect shareholders and indeed other stakeholders. It has therefore been contended that it is not sufficient for a firm to have a board. Rather, the board should possess such characteristics necessary to strengthen its oversight functions (Abdullah *et al.*, 2015; Oyedokun, 2019). Consequently, regulators have made numerous reforms to strengthen the governance structure with emphasis on board size, board independence, board gender diversity, board ownership and the composition of various board committees (FRC, 2016; Sarbanes Act, 2002).

There is a plethora of studies of the effect of board characteristics (BODC) on firm performance. To the best of the authors' knowledge, no study has been conducted on the effect of BODC on TRM of Nigerian listed consumer goods manufacturing firms. The major objective of this study, therefore is to empirically examine the effect of BODC on trade receivables of Nigerian listed consumer goods manufacturing firms. This is achieved by analyzing the effect of board size on accounts receivables period of Nigerian listed consumer goods manufacturing firms; the effect of board independence on accounts receivables period of Nigerian listed consumer goods manufacturing firms; the effect of the board gender diversity on accounts receivables period of Nigerian listed consumer goods manufacturing firms; the effect of board shareholdings on accounts receivables period of Nigerian listed consumer goods manufacturing firms. The study is important in the light of the divergent consequences of TRM on firm value and survival, prevalent weak enforcement of relevant laws and docile shareholder activism in Nigeria.

This rest of the paper is organized as follows. Section 2 presents the review of related literature and hypotheses development. Section 3 centers on methodology of the study which includes details data sources, measures and methodology deployed to test various hypotheses. Section 4 provides empirical findings and discussions thereon. Finally, Section 5 presents the concluding remarks.

2. Literature review and hypotheses development

2.1 Conceptual Review

Board

The Companies and Allied Matters Act (2020) mandates every company to establish a board with the authority to exercise all of its powers and perform any of the functions of the company. The board is the highest corporate governance mechanism (FRC, 2016). It is charged with the responsibility of: formulating policies, monitoring, advising and controlling management so as to mitigate agency issues and enhance the wealth of shareholders. Prior studies of the board as the custodian of corporate governance show that the effectiveness of the board depends on the characteristics of the board as well as firm characteristics (Ebiriem, 2014a; Klein, 2002; Li *et al.*, 2012). Such characteristics include, size, independence, frequency of meetings, gender diversity, and shareholding.

Trade Receivable Management

The board performs oversight function on managers in respect of TRM, which includes the managerial functions of planning, organizing, directing and controlling trade receivables. Trade receivables are debts owed the firm as a result of credit sales. One important dimension of TRM is trade receivables period. Trade receivables period is the average number of days that it takes a company to receive payments from its customers it has sold goods on credit (Brigham & Houston, 2019; Van Horne & Wachowicz, 2008). It is usually recommended that firms should strive for shorter receivable collection period. This is because a shorter receivable collection period ensures firms do not encounter serious liquidity problem. Alternatively, a firm with longer receivable collection period must necessarily inject additional capital to finance its trade receivables, increase collection costs and will be highly vulnerable to risk of bad debt, all of which will seriously erode the profitability and impact on shareholders wealth (Wilson, 2008).

2.2 Theoretical Review

Agency Theory

Agency theory underpins this study. Agency Theory explains the behaviour of parties in an agency relationship. Jensen and Meckling (1976) define 'agency relationship as a contract under which one or more persons (the principal(s)) engage another person(agent) to perform some service on their behalf which involves delegating

some decision-making authority to the agent'. Agency Theory suggests existence of conflict of interest between the managers and owners with the managers having the proclivity to exploit their information advantage to pursue their self-interest that are detrimental to the owners. Thus, agency relationship presents agency problems defined by Jensen and Meckling (1976) as the sum of the expenses in monitoring by the principal, the bonding expenditures by the agent and the inevitable residual loss. TRM is characterized by considerable managerial discretion which give rise to agency costs. For example, substantial managerial discretion is used in the estimation of the allowance for uncollectible accounts. Managers can also engage in empire building by adopting excessively lax credit policies that are not aligned to the market practices, thereby giving rise to avoidable bad debts. Separately, McNicholson and Wilson (1988) and Jackson and Liu (2010) provide evidence of use of allowance for uncollectible accounts and bad debt expenses to manage earnings of non-financial firms. Agency theory attempts to provide solution to agency problems by advocating that boards should be established to monitor and control managers so as to align the interest of the managers and shareholders (Fama, 1980).

2.3 Empirical Review

Board Size and Accounts Collection Period

Board size is a crucial aspect of corporate governance. Board size consists of and describes the number of directors of a company. It is expected that the size of the board could have a significant impact on the effectiveness of the board. How board size affects the board effectiveness has centered on the choice between the small board size and the large board size. The National Code of Corporate Governance issued by the Financial Reporting Council (2016) recommends that the board should be of a sufficient size relative to the scale and complexity of the company's operations but with a membership of not less than 8. There appears to be a continuing debate and different opinions concerning which board size is better. It is contended that boards of large size are more prone to poor communication and slow decision making than board with small size (Lipton & Lorsch, 1992; Al-Said, 2021; Dzingai & Fakoya (2017). It is also argued that large boards with large size are easier for CEOs to control unjustly, are highly vulnerable to free-riding problem and incur high cost of coordinating and processing issues (Jensen, 1993; Lipton & Lorsch, 1992). It is however posited that boards of large size enjoy the benefit of pool of diverse skills and problem-solving capabilities which can be deployed to several board committees (Carter *et al.*, 2010). The reverse applies to board of small size.

Empirical evidence of the relationship between board size and firm performance is mixed. Yemack (1996), based on a sample of 452 large US firms between 1984 and 1991, indicated a negative relationship between board size and firm performance measured by Tobin's Q. Nigerian studies such as Ujunwa (2012), Adebayo *et al.* (2013), Dabor *et al.* (2015), and EL-Maude *et al.* (2018) found results supporting Yemack (1996). In contrast, Ilaboya and Obaretin (2015) who studied time series data of 166 firms quoted on the Nigerian Stock Exchange (NSE) from 2005 to 2012 in the Food and Beverages sector, found a positive relationship between board size and corporate financial performance measured by profit after tax. The above analysis leads to the first hypothesis of this study:

HO₁ Board size has no significant effects on accounts receivable period of Nigerian listed consumer goods manufacturing firms.

Board Independence and Accounts Receivables Period

Regulators and agency theorists see board independence as the crucial aspect of board effectiveness and have taken decisive advances to strength it. Board independence describes the ability of non-executive (independent) directors to make decisions concerning particular matters devoid of undue influence of vested interests of other stakeholders of the firm. Corporate governance literature conceptualizes board independence as the proportion of outside directors in the board (Li *et al.*, 2015; Bebchuk & Hamdani, 2017). It is argued that boards with greater percentage of non-executive directors monitor, advise and control managers better than board with greater proportion of executive directors because of their reputational capital, expertise and broader knowledge. In the context of trade receivable management, board independence would likely lead to better monitoring, advising and controlling managers in respect of cash collection procedures and strategies, changes in account collection period and investment in trade receivables and design of appropriate managerial incentives. Consistent with this contention, several studies have reported a positive relationship between board independence and firm value. For example, Okolie and Uwejeyan (2022) found that board independence has significant positive effect on financial performance of Nigerian listed non-financial firms. However, Ogbulu and Emeni (2012), and Garba and Abubakar (2014) documented a significant negative relationship between board independence and improved corporate performance. Masulis and Mobbs (2011) did not find a relationship between a majority of outside independent directors and improvement in firm performance. Negative relationship and absence of relationship could be because the directors

were independent in appearance only. From the above, a second hypothesis is proposed as follows:

HO₂: Board independence has no significant effects on accounts receivables period of Nigerian listed consumer goods manufacturing firms.

Board Gender Diversity and Accounts Receivables Period

Board gender diversity refers to mix of female and male gender on the board. The literature argues that women have better understanding of the market and environment than men, prepare better for board meetings, and have better board meeting attendance than men. Gender diversity enable a board to have broader perspectives of issues before it. These are likely to enhance board effectiveness. Several prior studies provide strong support for a positive relationship between female directors and firm performance (Carter, 2003; Campbell & Minguez-Vera, 2008; Low *et al.* (2015). Yet there are other studies that do not find any significant relationship between female directors and firm performance. Farrell and Hersch (2005) find that increase of number of female directors has no significant effect on return on assets. Adams and Ferreira (2009) document that female directors are effective oversight on board monitoring committees. Similarly, Chukwu *et al.* (2020) document that female representation in the audit committee had a positive effect on market value, but a prior study suggests an insignificant relationship between gender diversity and timeliness of financial reporting (Chukwu & Nwabochi, 2019). Ebirien (2014b) also fails to find any significant and positive relationship between female membership of corporate audit committees and financial reporting quality. Arising from the above, the following hypothesis emerges:

HO₃: Board gender diversity has no significant effect on accounts receivables period of Nigerian listed consumer goods manufacturing firms.

Board Shareholdings and Accounts Receivables Period

Jensen and Meckling (1976), Jensen and Murphy (1990) and Jensen (1993) suggest that director shareholdings as mechanism for aligning the interests of directors with that of shareholders. It is argued that director shareholdings would motivate directors to work effectively and efficiently so as to increase the firm value. However, there is a strong counter argument based on power theory that managers with a considerable stake in a firm may become powerful and entrenched thereby rendering monitoring ineffective (Denis *et al.*, 1997; Morck *et al.*, 1988; Stulz, 1988, Ozkan, 2007). This could be detrimental to corporate performance. Empirical studies

report positive relationship between certain range of board shareholdings and firm performance (Morck *et al.*, 1988; Daily and Dalton, 2004; Davies *et al.*, 2005, Florackis *et al.*, 2009; McConnell & Servaes, 1995). However, Demsetz and Villalonga (2001), Ghazali (2010), and Enkirehi (2016), Himmelberg *et al.* (1999), and Loderer and Martin (1997), fail to document a systematic relationship between executive shareholdings and firm performance. From the above discussion, the fourth hypothesis is formulated thus:

HO₄ Board shareholdings have no significant effects on accounts receivables period of Nigerian listed consumer goods manufacturing firms.

3. Methodology

The study employed ex post factor research design, sourcing secondary data from annual reports of sampled firms over a period from 2012 to 2020. The sample consisted of 13 Nigerian listed consumer goods manufacturing firms. For a firm to form the sample, a consumer goods manufacturing firm must have annual reports throughout the sample period and must have not changed its financial year. From a population of 15 consumer goods manufacturing firms as at 31st December 2020, the study excluded five firms based on the preset criteria.

In order to examine the effect of BODC (independent variables) proxied by board size, board independence, board gender diversity and board shareholding on TRM (dependent variable) measured by accounts receivable period, the study specified the following empirical model:

$$TRM = f(BODC) \quad [1]$$

The model is restated in functional form thus:

$$ACP_{j,k} = \beta_0 + \beta_1 BSZ_{j,k} + \beta_2 BDIN_{j,k} + \beta_3 BGDV_{j,k} + \beta_4 BSH_{j,k} + \epsilon_{j,k} \quad [2]$$

Following prior studies (Abdulazeez *et al.*, 2018; Abubakar & Olowe, (2019; Adıgüzel, (2022) Amponsah-Kwatiah & Asiamah,(2021). the study expanded Model 2 by introducing control variables that have been identified to have an influence on working capital management thus yielding

$$ACP_{j,k} = \beta_0 + \beta_1 BSZ_{j,k} + \beta_2 BDIN_{j,k} + \beta_3 BGDV_{j,k} + \beta_4 BSH_{j,k} + \beta_5 INVT_{j,k} + \beta_6 ROA_{l,k} + \beta_7 CUR_{j,k} + \beta_8 APP_{j,k} + \beta_9 FSZ_{j,k} + \epsilon_{j,k} \quad [3]$$

Where for firm j at year t , the variables are defined and measured as in Table 1

Table 1: Measurement of Variables

Notation	Definition	Measurement
ACP	Accounts receivable period	Accounts receivables/Sales X 365 days
BSZ	Board Size	Number of directors
BDIN	Board Independence	Proportion of non-executive directors
BGDV	Board Gender Diversity	Proportion of female directors
BSH	Board Shareholdings	Number of shares of directors/Total number of shares
INVT	Inventory Turnover Period	Average inventory/average cost of goods sold X 365 days
ROA	Return on Assets	Profit before tax/Total assets
CURT	Current Ratio	Current assets/Current Liabilities
APP	Accounts Payable Period	Accounts payables/Cost of Sales X 365 days
FSZ	Firm Size	Log of total assets
ε	Error Term	
β_0	Intercept	
$\beta_1 \dots \beta_9$	Regression Parameters	

Source: Researchers' Computation, 2022

4. Results and Discussion of Findings

The study analyzed the data with the aid of STATA 12. Table 2 presents the descriptive statistics of variables studied. ACP has a mean value of 28days, a minimum of 3 days and a maximum of 89 days. The mean suggests that on average, sampled firms collected receivables 28 days after dispatching goods to customers. This is smaller than the mean of 40 days the sampled firms took to pay suppliers. The median value suggests that 50% and above have accounts collection period of 22days and above. The standard deviation of 19 which is lower than the mean implies less dispersion of ACP from the mean. The average board size is 10 directors. The smallest board has 7 directors while the largest board has 15 directors. 50% and above of the observations have 10 directors and more. On average, the boards were composed of 71% of non-executive directors. This is consistent with the recommendation of the National Code of Corporate Governance that boards should be composed of greater proportion of non-executive directors to enhance board

independence. The average number of female directors is 2, translating to 16%. Some boards have no female members as indicated by the minimum value. 50% and above of the boards have 2 female director and above with maximum number of female directors standing at 4. On average, directors hold 7% of shares of the sample and there is wide dispersion of director share ownership as suggested by the standard deviation.

Table 2 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Median	Min	Max
acp	117	28	19	22	3	89
bsz	117	11	2.3	10	7	15
bdin	117	0.71	0.14	0.7	0.4	0.92
fdir	117	2	1.07	2	0	4
bgdv	117	0.16	0.11	0.18	0	0.4
bsh	117	0.07	0.17	0.004	9.74e-06	0.75
inv	117	88	51.64	72	17	343
roa	117	0.06	0.09	0.05	-0.20	0.32
cur	117	1.25	1.62	1	0.35	13.52
app	117	40	36	35	6	300
fsz	117	17.77	1.45	18.13	14.37	19.99

Source: Authors' Computation, 2022

The study performed correlation analysis to ascertain the direction and significance of association between a pair of variables Table 3 displays correlation matrix generated from the correlation analysis. Both ACP and BSZ as well as ACP and BSH have negative and significant correlation respectively ($r = -0.2374$; $r = -0.4681$). The correlation between ACP and BDIN is negative but insignificant while ACP and BGDV are passively and significantly correlated. All the correlation coefficients in Table 3 are below 0.8 suggesting absence of severe multicollinearity problem that will pose serious threat to results of regression analysis (Belsley *et al.* 1980) This is affirmed by the variance inflation factors in Table 4 which are below the threshold of 10 (Anderson *et al.*, 2017).

The study tested the formulated hypotheses by estimating Model 3 using OLS and the results are shown in Table 5. Table 5 shows that the study analyzed 117 firm-year observations. To mitigate heteroskedasticity and enhance normality, the study log transformed ACP, BSZ, BSH, INVT, and APP. The p-value of F statistics in Table 5

shows the model has good fit. R-squared of 0.4950 suggests that the independent variables jointly explain about 50% variation in ACP.

Table 3: Correlation Matrix

	acp	bsz	bdin	bgdv	bsh	inv	roa
acp	1.0000						
bsz	-0.2374*	1.0000					
bdin	-0.1540	-0.0430	1.0000				
bgdv	0.4012*	-0.4167*	-0.1688	1.0000			
bsh	-0.4681*	0.2758*	0.0347	-0.2629*	1.0000		
inv	0.3354*	0.1932*	-0.1432	0.0460	-0.0781	1.0000	
roa	0.0597	-0.2449*	-0.2015*	0.2000*	-0.1246	-0.2561*	1.0000
cur	-0.3673*	0.0266	0.1346	-0.2555*	0.0127	-0.1905*	-0.3613*
app	0.2920*	-0.0706	0.0695	0.2137*	-0.3604*	0.1038	-0.0794
fsz	0.0637	0.2399*	-0.3382*	0.1439	0.1395	-0.0778	0.2046*
cur		app	fsz				
cur	1.0000						
app	0.1576	1.0000					
fsz	-0.0815	0.3205*	1.0000				

Source: Authors' Computation, 2022

Table 4: Variance Inflation Factors

Variable	VIF	1/VIF
fsz	1.86	0.538435
bsz	1.61	0.623035
roa	1.54	0.648754
bgdv	1.51	0.662359
cur	1.42	0.706464
app	1.70	0.589270
bdin	1.33	0.753032
inv	1.36	0.734854
bsh	1.43	0.698354
Mean VIF	1.53	

Source: Authors' Computation, 2022

The coefficient on BSZ is negative and significant ($\beta_1 = -0.6558457$, p-value = .043). Therefore, H_{01} is rejected. This implies that board size has significant effect on ACP. As BSZ increases by an additional director ACP decreases by standard deviation (-

0.6558457X28), other things held constant. A reduction in ACP denotes efficiency in TRM. The results support the assertion that large board are blessed with diverse and broad skills and experience necessary for effective monitoring, advising and controlling opportunistic behaviour of managers. It is in agreement with Okoli and Uwejean (2022) that large board has substantial benefits. It however contradicts Lipton and Lorsch (1992) who contended that problems of co-ordination and free-riding inherent in large board outweigh the benefits of monitoring derivable from large board. It is also in conflict with El-Maude *et al.* (2018).

Table 5: Regression Results

acp	Coef.	Std. Err.	t	p-value
bsz	-0.6558457	0.3202291	-2.05	0.043
bdin	-0.318327	0.4696529	-0.68	0.499
bgdv	0.8570917	0.6237964	1.37	0.172
bsh	-1.655196	0.3846607	-4.30	0.000
inv	0.3772175	0.1342887	2.81	0.006
roa	-1.289821	0.7965862	-1.62	0.108
cur	-0.167416	0.0404353	-4.14	0.000
app	0.1230888	0.0939075	1.31	0.193
fsz	0.0564231	0.0519937	1.09	0.280
cons	1.990915	1.245515	1.60	0.113
Model Summary				
Number of obs		117		
F(9, 107)		11.65		
Prob > F		0.0000		
R-squared		0.4950		

Source: Authors' Computation, 2022

Table 5 shows that board independence has a negative effect on ACP ($\beta_2 = -0.318327$). This suggests that as BDIN increases by 1%, ACP declines by 32%, all else remaining constant. However, the inverse relationship is not significant as depicted by p-value of the t statistics (p-value = 0.499). Consequently, H_{02} is accepted. The insignificant effect could be because the non-executive directors were independent only in appearance. There could be other subtle influences not captured by the official definition and operationalization of board independence. From Table 6, it was observed that BGDV recorded a positive coefficient on ACP ($\beta_1 = 0.8570917$). This suggests that as gender diversity increases by 1%, ACP increases by 86%, all else

held constant. However, the effect is not significant (p-value = 0.172). Consequently, H_{03} is sustained. The result is at variance with Adams and Ferreira (2009) who showed that gender diversity enhanced monitoring to the advantage of shareholders. However, the result corroborates Ebirien (2014b) who found that female directors on audit committees did not improve financial reporting quality of Nigerian listed firms. Table 5 reveals that board shareholdings have a negative and significant effect on ACP ($\beta_4 = 1.655196$, p-value = 0.000). This implies board shareholdings helps to mitigate agency issues and motivates directors to manage trade receivables efficiently. Holding other variables constant, a percentage increase in board shareholdings is associated with decrease in ACP by 2days. The result supports Davies *et al.* (2005), Florackis *et al.* (2009), and Jensen and Meckling (1976). It is inconsistent with the South African evidence provided by Lemma *et al.* (2020). Based on the results, H_{04} stands rejected, and it is concluded that board shareholdings have significant effect on ACP. In respect of control variables, while inventory turnover period (IVT) and current ratio (CUR) have significant effect on ACP, ROA, APP and FSZ have no significant effect on ACP.

5. Conclusion and Recommendations

The study analyzed 117 firm-year observations retrieved from the annual reports of 13 consumer goods manufacturing firms in the period 2012 to 2020. It sought to explore the effect of BODC on TRM. Using Ordinary Least Square regression analysis, the study found that board size and board shareholdings have significant effect on trade receivables proxied by accounts collection period. It however, failed to establish that board independence and board gender diversity have significant effect on accounts collection period. It attributed the failure of board independence to enhance TRM to possible existence of subtle influence not captured in official definition and operationalization of board independence. In the case of gender diversity, the study is of the view that some firms might have appointed female directors just to give impression of gender friendliness and gender sensitivity without considering the expertise of such female directors.

The results of the study have implications for policy makers, regulators, firms and researchers. First, the findings highlight the relevance of BODC in mitigating agency costs thereby enriching the literature on determinants of board effectiveness and providing the springboard for further research. Second, firms would find the results

useful in designing incentive plans for directors. Third, policy makers and regulators in introducing further reforms to corporate boards.

Based on the findings, the study recommends that firms should increase board size, take into account their complexities and funding costs. Firms should encourage directors to hold equity in their firms. Firms should not just appoint non-executive directors to satisfy the official definition of board independence without ascertaining the true independence of such director. Firms should also not appoint female directors just to give impression of board gender sensitivity without recourse to competencies. The study suggests future studies should use other proxies of TRM, more refined proxies of board independence and board gender diversity. The samples should be firms from other sectors.

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Competing Interest: The authors hereby declare that there is no competing interest in this manuscript.