Does Institutional Ownership Influence Earnings management? Evidence from Morocco

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Abstract: The purpose of this paper is to shed light on the effect of institutional ownership on earnings management practices in the Moroccan context where corporate governance standards and investors' legal system protection are poorly implemented. Based on a sample of Moroccan listed companies from 2012 to 2017 and a fixed effect regression model, estimated with robust errors and clustered at the firm levels, our empirical results show that there is no significant relationship between institutional ownership and earnings management by discretionary accruals. However, our additional tests demonstrate a nonlinear inverted-U shaped relationship between institutional ownership and earnings management.

Key Words: **Earnings management, institutional ownership, corporate governance, Moroccan listed companies, discretionary accruals, panel data**.

1.INTRODUCTION

Since the 1980s, the financial landscape has undergone a profound change. In fact, the dual process of deregulation and financial innovation, initially observed in industrialized countries, has led to the development of financial markets and the emergence of a specific type of actor on numerous international stock exchanges, namely institutional investors. The latter are defined by he French Association of Institutional Investors (AF2I) as any investor who manages funds professionally within an institution or on behalf of its clients (e.g. banks, insurance companies, pension funds, etc.).

In the last few years, the economic weight of these institutional investors has become so considerable that their assets exceed the GDP of the EU-15, Japan and the United States collectively. OECD statistics show the evolution of the total assets managed by institutional investors. For example, in the United States, the total volume of financial assets held by institutional investors has grown from 6875.7 billion US dollars in 1990 to 54,540 billion US dollars in 2018. In the European Union region, the leading country in terms of institutional investments is the United Kingdom, where such assets totalled approximately £5,487,253 million in 2018 compared to only $1116.8 billion in 1990[1]. The majority of these assets are held by insurance companies and pension funds. In addition, according to the OECD's Owners of the World's Listed Companies report in 2017, institutional investors' shareholding represents the highest percentage of securities listed on the various international stock exchanges, i.e. 41% of global market capitalization, which is equivalent to $31 trillion (De La Cruz et al., 2019). The largest institutional investors are mutual funds, pension funds, and insurance companies.

This significant rise of institutional investors in the capital of firms has led them to become full-fledged players in governance systems. They are known to be sophisticated investors and demanding in terms of reliable financial information (Healy et al., 1999). In fact, previous studies highlight their role especially in mitigating the opportunistic behaviour of management in terms of accounting policy (e.g. Ajay et Madhumathi, 2015; Mehrani et al., 2017; San Martin Reyna, 2018). Indeed, giving their strategic position, managers can make discretionary accounting choices that can take the shape of "earnings management" (hereafter EM), within the limits allowed by the Accounting Standards, to produce information that meets the capital market expectations and/or maximize their compensations that are frequently tied to their firms' profits (Dechow and Skinner, 2000).

Therefore, the purpose of this study is to investigate whether a high level of institutional ownership has an impact on EM. This study differs from and extends previous research in several respects. First, previous research on the effects of institutional ownership on EM has focused primarily on developed countries. Therefore, the results may not be generalizable to emerging markets given the institutional and economic differences between developing and developed countries. Second, our study is based on the Moroccan context where there is a scarcity of research in this field. To our knowledge, our paper is the first to provide recent results on the effect of institutional ownership on EM. Finally, Morocco represents a unique context that may provide results that differ from the mainstream literature. Indeed, unlike common law countries, such as the United States or the United Kingdom, CG standards and legal investor protection are poorly implemented in developing countries such as Morocco, making controlling shareholders more likely to engage in opportunistic behaviour. Furthermore, listed Moroccan firms are characterized by a unique ownership structure; they are held by a small number of shareholders who are often members of the same family.

The rest of the study is structured as follows: Section 2 discusses the literature and the hypotheses of this study. Section 3 provides the research methodology and data collection procedure employed in this study. In section 4, the empirical results obtained from the regression analyses are presented and discussed. A concluding section presents the limitations and future perspectives of our study.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Earnings Management

The topic of EM[2] has attracted a growing attention since the corporate meltdowns in the wake of the financial scandals of large companies like Enron, WorldCom, Adelphia, and Tyco in the early 2000s.

From an opportunistic perspective, Schipper (1989) defined EM as purposeful intervention in the external financial reporting process, with the intent of obtaining certain self-benefits. Healy and Wahlen (1999) provide a more extensive definition of EM. They state that EM occurs when managers use their judgment in the financial reporting process and in the structuring of transactions to distort financial reports either to mislead some stakeholders about the firm's true economic performance or to influence contractual outcome that depends on reported accounting numbers. In the same vein, Stolowy and Breton (2003) define EM as the use of management discretion in accounting choices or in structuring operations in order to modify the allocation of wealth.

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[1] OECD statistics on institutional investors: <https://www.oecd-ilibrary.org>.

[2] In the accounting literature, different expressions are used to describe manipulation accounts such as earnings management and creative accounting. In our paper, we use the term "earnings management" to refer to all forms of manipulation, with the exception of financial reporting fraud.

While these definitions highlight the diversity of approaches to EM, there are some common aspects that are worth examining. Firstly, EM practices are carried out within the boundaries of the rules and regulations. Secondly, there must be an informational asymmetry in favor of the manager in order for the latter to influence the financial reports. Otherwise, the EM would be easily noticeable and the other stakeholders would be able to correct it rapidly and without cost. Finally, it is assumed that EM practices generate costs and benefits, otherwise there would be no benefit for managers to manage their earnings.

Although EM has long been viewed as an opportunistic act, proponents of the informative approach consider it to be a tool for enhancing financial reporting. Within this framework, a body of research has been able to show that EM can be beneficial to the extent that it improves the informative content of financial statements by providing external users with private information that will enable them to better anticipate the firm's future operating flows (Watts and Zimmerman, 1986). For instance, Subramanyam (1996) finds that the income smoothing technique can improve the persistence and predictability of earnings and that discretionary accruals can convey the future profitability of the firm.

2.2 Institutional ownership and earnings management

Institutional investors participation in listed companies' capital has increased considerably over the years, which has enabled them to become, by force of circumstance, major players on the international financial system chessboard as well as full-fledged players within the governance system.

The growing importance of this type of investors has aroused the interest of several researchers who have studied their behaviour and their impact on EM. In order to determine the relationship between institutional ownership and EM, two hypotheses can be considered: the activism hypothesis and the passivity or delegation hypothesis (Koh, 2003).

The activism hypothesis assumes that institutional investors play an important role in monitoring any discretionary behaviour on the part of management and/or controlling shareholders. Indeed, institutional investors typically trade larger stakes and long investment horizons, and are therefore considered 'active' shareholders who hold both the resources, expertise and stronger incentives to monitor and discipline managers and/or controlling shareholders (Velury and Jenkins, 2006). In contrast, with regard to the passivity hypothesis, institutional investors are rather speculative shareholders seeking short-term gain and adopting a "myopic" investment strategy. Therefore, given their tendency to dispose of their holdings in the presence of poor performance indicators, this can lead managers to adopt opportunistic practices like managing earnings upwards in order to meet institutional investors' expectations and to report favourable results (Koh, 2003).

With respect to EM, empirical findings on the impact of institutional shareholders are mixed. Some studies have documented a negative influence of institutional ownership and, thus, the effective monitoring role of institutional investors (e.g. Jiambalvo, 1996; Jiraporn and Gleason 2007;

Ajay et Madhumathi, 2015; Mehrani et al., 2017; San Martin Reyna, 2018). However, other studies report no relation between institutional ownership and EM (e.g. Bao and Lewellyn, 2017; Sarkar et al., 2008; Siregar and Utama, 2008).

In the Australian context, Koh (2003) and Hsu and Koh (2005) find evidence of a non-linear relationship between EM and institutional ownership, with the positive impact only appearing after a certain institutional ownership threshold (around 50%). The authors argue that this finding is consistent with the idea that a low level of institutional ownership is associated with a short-term orientation of institutional investors, which may encourage managers to manage earnings.

These mixed empirical findings may be in part explained by the differences in institutional contexts. Thus, in order to assess our hypothesis, we suggest that in developing economies, such as Morocco, there are specific factors incentivizing institutional investors to seek accurate earnings information. First, information asymmetry between firm insiders and investors is generally high in developing countries since firms are reluctant to disclose information. Yet, it is believed that compared to other investors, institutional investors are considered to be more competent and sophisticated when it comes to collecting reliable information about earnings expectations and detecting financial misreporting (Jiambalvo et al., 2002). Also, institutional investors, such as insurance companies and banks, face greater ethical and legal responsibilities than individual shareholders. As a result, they tend to concentrate their portfolios on stocks that are considered 'prudent' investments (Del Guercio, 1996). For example, institutional investors tend to choose companies with a stable dividend payment history (Grinstein and Michaely, 2005), and companies with good governance structures to preserve their invested capital and reduce the risk of expropriation of profits (Fang and Zhou, 2012).

Based on the presented arguments, we assume that managers' and/or controlling shareholders' incentives for managing earnings will be mitigated by institutional investors. More formally stated:

H1: Ceteris paribus, earnings management is negatively associated with institutional ownership.

3. RESEARCH METHODOLOGY

3.1 Sample and data collection

To test our hypothesis, we use a sample of Moroccan listed companies on Casablanca Stock Exchange over the period 2012 and 2017. Financial, insurance, and real estate companies were excluded because of their unique financial structures, governance, accounting rules, and financial statement presentation. In addition, companies with missing observations were removed from the sample. As a result, our selection process results in a total of 38 firms, i.e. 228 firm-years observations.

The variables related to institutional ownership, and in general ownership structure of the firms are manually extracted from the firms' annual reports and/or information notes, while the financial and accounting data

are manually collected from the firms' financial statements. The variables related to boards of directors attributes added as control variables are collected through a questionnaire administered to our sample of listed companies. In order to collect firms' annual reports and financial statements, we used the official websites of the Casablanca Stock Exchange (www.casablanca-bourse.com), the Moroccan Financial Markets Authority (www.ammc.ma), and, if available, the institutional websites of the firms in our sample.

3.2 Variables Measurement

3.2.1 Dependent variable

Several researchers have attempted to propose models for detecting and measuring the intensity of EM. We choose to estimate discretionary accruals using the model of Kothari et al. (2005), whose empirical superiority seems to be established by a good number of researchers. This model suggests that when earnings management incentives are associated with firm performance, existing methods for estimating discretionary accruals are biased. This is why Kothari et al (2005) proposed the so-called "performance matched discretionary accruals" method, which has the advantage of adjusting the discretionary accruals of firms by the level of performance as measured by the ROA. The model of Kothari et al (2005) is as follows:

$$\frac{\mathbf{TAAC_{it}}}{\mathbf{TA_{it-1}}} = \alpha_1\left(\frac{1}{\mathbf{TA_{it-1}}}\right) + \alpha_2\left(\frac{\Delta\mathbf{REV_{it}} - \Delta\mathbf{REC_{it}}}{\mathbf{TA_{it-1}}}\right) + \alpha_3\left(\frac{\mathbf{PPE}}{\mathbf{TA_{it-1}}}\right) + \alpha_4\left(\mathbf{ROA_{it-1}}\right) + \varepsilon_{it} \quad (1)$$

Where, TACC = total accruals in year t, calculated as the difference between net income and operating cash flows. TA = total assets at the beginning of year t; ΔREV = change in revenues; ΔREC = change in accounts receivable; PPE = gross property, plant and equipment; ROA= return on assets; i, t = firm and year index.

The Kothari model consists of regressing total accruals (TACC) on three variables: the change in revenues (ΔREV) adjusted for the change in receivables (ΔREC), the level of property, plant and equipment (PPE), included to control the non-discretionary component of depreciation and amortization expense, and the return on assets (ROA). Both variables and the intercept are divided by lagged total assets in order to avoid heteroskedasticity problems. Non-discretionary accruals (NDACC) are the predictions from the ordinary least squares (OLS) estimation of model (1), while discretionary accruals (DACC) are the residuals. We use the absolute value of discretionary accruals (ABSDAC) for our principal regression models.

3.2.2 Independent variable

Following Ajay and Madhumathi (2015), San Martin Reyna (2018) and Shiri et al. (2016), we measured institutional ownership as the percentage of capital held by institutional investors: (Number of shares held by institutional investors/Total number of shares) *100. We have considered as institutional investors, banks,

investment companies, insurance companies and pension funds.

3.2.3 Control variables

The association between institutional ownership and EM is influenced by other relevant variables that should be controlled. The use of control variables is based on the agency theory and the EM previous studies. Thus, 4 control variables related to corporate governance (board size, board independence, CEO duality, and audit committee), 2 ownership structure variables (family ownership, employee ownership), and 3 firm's financial characteristics (firm size, return on assets (ROA), leverage) are introduced in our regression model. Table 1 summarizes the variables used and their measurement.

Table -1: Measurement of variables

Variable name	Measure
Discretionary accruals (ABSDAC)	The absolute value of discretionary accruals using Kothari model.
Institutional ownership (INST)	Percentage of capital held by institutional investors
Board size (BSIZE)	Total number of directors on board
Board independence (BIND)	Ratio of number of non-executive independent directors to total number of board directors
Duality (CEO)	A dummy variable coded 1 when the board chairman and CEO positions are held by one individual, and 0 otherwise.
Audit committee (AUD)	Binary variable that takes the value of 1 if the company has an audit committee and 0 otherwise
Employee ownership (EMP)	Percentage of capital held by employee shareholders
Family ownership (FAM)	Percentage of capital held by family members
Firm size (FSIZE)	Logarithm of total assets
Leverage (LEV)	Total liabilities divided by total assets
Operating performance (ROA)	Net income divided by total assets

3.3 Empirical model

The data collected are a combination of different cross sections (Moroccan firms listed on the Casablanca Stock Exchange) over a period of nine years (2012-2017). Hence, our empirical study based on this dataset is conducted using panel data econometrics. Panel data (or longitudinal data) allows us to account simultaneously for the dynamics of individual behaviours and their possible heterogeneity. It also reduces collinearity between explanatory variables and improves the efficiency of estimators. The model M1 below is used to estimate the extent to which EM is affected or not by institutional ownership (the variables are presented in Table 1):

$$(M1)\ ABSDAC_{it} = \beta_0 + \beta_1 INST_{it} + \beta_i \sum Controls_{it} + \varepsilon_{it}$$

4. RESULTS AND ANALYSIS

4.1 Univariate analysis

Table 2 provides descriptive statistics. First, the average of discretionary accruals (ABSDAC) is 6.36% of assets. This value is comparable to the one found by Zgarni et al. (2016) in the Tunisian context. However, the firms' behaviour in terms of EM is heterogeneous, as this variable has a high standard deviation (SD=5.7%). The results also show that firms are owned on average by 14% of institutional investors with a large dispersion (16%). The observed disparity in institutional ownership can be explained by the presence of family firms that prefer to keep their capital closed and avoid that institutional investors, with significant power and resources, interfere in the management of the firm and the family's business.

With respect to the corporate governance variables, Table 2 shows that, on average, boards are composed of 7 directors, and 28% of them are independent. This proportion remains largely below the threshold recommended by the best governance practice reports, which is around 50%. Our statistics also suggest that 58.33% of the CEOs are also chairs of the board. Moreover, 64.91% of firms have an audit committee. The average of family ownership is 35% and employees hold only 1.2% of firms' capital. Furthermore, we observe that, average firm size, as measured by the logarithm of the total assets, is 22.56. The average level of corporate debt is 41%. Finally, the operating performance as measured by the ROA indicator shows a low average of 8%.

Table -2: Descriptive statistics

Numeric variables	Moyenne	Ecart-type	Minimum	Maximum
ABSDAC	0.063	0.057	0.001	0.338
INST	0.14	0.16	0.00	0.82
BSIZE	7.37	2.65	4.00	15.00
BIND	0.28	0.15	0.00	0.75
FAM	0.35	0.29	0.00	0.95
EMP	0.012	0.014	0.00	0.06
LEV	0.38	0.16	0.06	0.90
ROA	0.06	0.08	-0.23	0.37
FSIZE	20.88	1.37	18.24	24.46
Dichotomous variables	0		1	
CEO	41.67%		58.33%	
AUD	35.09%		64.91%	

Before conducting the multivariate analysis, we calculate the Pearson correlation coefficients (see Appendix 1). The analysis of the correlation matrix leads to some interesting observations. The correlations obtained indicate that the absolute value of discretionary accruals (ABSACCD) is positively and significantly associated with the variables FAM, BIND, CEO, LEV and FSIZE. Moreover, it is possible to note that all the correlation coefficients are lower than 0.7, the limit at which we generally start to have a serious problem of multicollinearity in the sense of Kervin (1992).

At the same time, we use another analysis, namely the variance inflation factor (VIF). The results presented in appendix 1 show very low values of VIF which are below the limit 3. Thus, the statistical properties of the computed variables indicate the absence of substantial multicollinearity problems that could affect the quality of our estimation.

4.2 Multivariate analysis

In panel data analysis (the analysis of data over time), it is absolutely necessary to determine how this model should be specified. The first step consists in confirming the relevance of the estimation in panel data, by testing the homogeneous or heterogeneous specification of the data generating process. In other words, it is a question of knowing whether we can assume that the model to be studied is perfectly identical for all firms or whether there are specificities inherent to each firm. The alternative hypotheses of the specification test are the presence of a perfectly homogeneous structure versus the presence of individual effects justifying the use of panel data. Thus, the results of our Fisher specification test show an F-test that is valid, allowing us to reject the H0 hypothesis: "the absence of individual effects". This confirms the existence of firm-specific effects.

In the presence of these specific effects, the second step is to determine their nature, i.e. fixed or random, by applying the Hausman test. In our case, the probability of the Hausman test is lower than the 5% significance level, which allows us to reject the null hypothesis of no systematic difference in coefficients. Our data thus suggest that the fixed effects model is preferable to the random effects model and more appropriate for the estimation of our model.

We also conducted Breusch-Pagan and de Wooldridge (2002) tests to detect the possible presence of heteroskedasticity and autocorrelation problems. Our results reject the hypotheses of homoscedasticity and absence of autocorrelation of errors. Thus, in the presence of these two issues, we apply our within estimator by adjusting the variance-covariance matrix of the errors ("clustered standard errors"). It should be emphasized that the various tests discussed above as well as our regressions were performed using STATA 15.1 software.

Table 3 presents the results of our "within" regression of the effect of institutional ownership on EM. Our results indicate that institutional shareholders do not seem to deter earnings management practices. Indeed, no significant statistical relationship is observed between the CAPINS and the absolute value of discretionary accruals, however this variable displays a coefficient that is consistent with the expected sign (-). This insignificant relationship indicates that institutional ownership is not as effective as advocated by agency theorists. This finding could be explained by the lack of involvement of this category of shareholders in the Moroccan context. Should the presence of institutional investors in the capital of Moroccan firms be further regulated in order to increase their efficiency? We can also suggest that institutional ownership is not necessarily associated in a linear relationship with EM and that a more detailed analysis is

needed to have a better understanding of the type of association between this variable and EM.

When we investigate the effect of other governance and ownership characteristics, multivariate analysis shows that the corresponding variables are most often positively related to EM. An exception was observed for audit committee, which is negatively related to earnings management. For the other control variables, we observe, consistent with Alves (2012) and Sérgio Almeida-Santos et al. (2013), a positive impact of firm size on EM as measured by absolute discretionary accruals. In addition, we find a negative and significant impact of leverage on EM, suggesting that debt contracts with restrictive covenants represent an effective control system.

4.3. Additional analysis

Several arguments advanced in the literature suggest that there is a non-linear relationship between institutional ownership and earnings management (Koh, 2003; Hsu and Koh, 2005). On the one hand, when institutional investors hold a small share of the firm's capital, they will favor short-term profitability. From this perspective, since these "speculative" investors will be judged each year on the basis of their performance compared to market indexes, they may induce managers to issue earnings management. On the other hand, when institutional investors hold a large share of capital, they have incentives to become actively involved in the firm' management and more broadly in the governance. In fact, with their high ownership, resources, and skills, these investors will be better able to oversee the quality of financial reporting.

Thus, in order to examine the non-linear relationship between institutional ownership and EM, the variable INST2 (square of the percentage of capital held by institutional investors) is introduced into the model M1. A new model is therefore to be tested: M2.

$$(\text{M2}) \; \textbf{ABSDAC}_{it} = \beta_0 + \beta_1 \textbf{INST}_{it} + \beta_2 \textbf{INST2}_{it} \\ + \beta_i \sum \textbf{Controls}_{it} + \varepsilon_{it}$$

The regression results are presented in table 3 (M2). In order to estimate our model M2, we followed the same specification process as the previous model (M1).

In Table 3, the relationship between EM and institutional ownership appears to be nonlinear. Indeed, the coefficient of the variable related to the % of capital held by institutional investors (CAPINS) is positive while that of the squared variable (CAPINS2) is statistically significant with an opposite sign (-). These results thus suggest the existence of an inverted U-shaped relationship between institutional ownership and the absolute value of discretionary accruals in the Moroccan context. In other words, institutional ownership has a positive effect on EM until an inflexion point which corresponds to about 22%[3] of capital owned by institutional investors. These results suggest that as institutional ownership increases, firms

engage in EM, which is consistent with the arguments of short-term oriented institutional investors. However, when their equity ownership exceeds 22%, institutional investors are able to limit the opportunistic behavior of managers and have a negative impact on EM. This negative association appears when institutional investors are more interested in the long-term perspectives of their portfolio companies. As a result, managers' incentives to manage earnings gradually decrease. The "inflection point" estimated here (22%) should not be over-interpreted, as there is no theoretical prediction regarding the specific level of institutional ownership at which this negative effect will occur.

5. CONCLUSIONS

This study has attempted to empirically examine whether institutional ownership deters managers from engaging in earnings management. Thus, using a sample of 38 Moroccan listed companies on the Casablanca Stock Exchange over a period from 2012 to 2017, we observe that institutional ownership has no significant impact on EM by discretionary accruals. Our additional tests demonstrate, however, a nonlinear relationship between institutional ownership and EM. Specifically, our results suggest that as institutional ownership increases, firms engage in greater EM, which is consistent with the arguments of transient (or short-term oriented) institutional investors. On the other hand, when their equity ownership exceeds 22%, institutional investors are able to mitigate the opportunistic behavior of managers and negatively affect EM.

However, certain limitations apply to our study including the size of the sample (38 Moroccan listed companies), which has caused us to be necessarily tentative in generalising our findings. Further, this study used the Kothari et al. (2005) model to measure EM. Although this model is widely accepted and the most developed in the accounting literature, the accuracy of the measurement of EM will nevertheless depend on the capacity of this model to extract discretionary accruals from total accruals. The use of other earnings management proxies would be likely to enrich and strengthen our results. Similarly, the operationalization of the institutional ownership variable could be further refined. In this regard, it would have been interesting to distinguish two categories of institutional investors: Moroccan versus foreign, or speculative versus sophisticated. Finally, in our study, the research question has been narrowed to focus mainly on institutional ownership. We believe that the investigation of other mechanisms such as media coverage, debt policy and the financial market is an interesting avenue for future research.

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[3] We computed this inflection point on Stata 15.1 using the following syntax: nlcom- _b [INS]/(2*_ b[INS2]).

Table -3: - Regression analysis of EM and institutional ownership

	Modèle M1	Modèle M2
INST	-0.059 (1.27)	0.0687* (1.86)
INST2	—	-0.00534** (2.13)
FAM	0.0782*** (2.54)	0.0221** (2.18)
EMP	0.0011 (1.21)	-0.0028* (-1.82)
BSIZE	0.00052 (1.63)	0.00023 (1.33)
BIND	0.0350** (2.13)	0.0492** (2.21)
CEO	0.0174** (2.18)	0.0292*** (2.41)
AUD	-0.0349** (-2.23)	0.0167 (1.58)
LEV	-0.077*** (-2.65)	-0.044** (-2.28)
ROA	0.0116 (-1.44)	-0.0218 (-1.52)
FSIZE	0.0431*** (2.58)	0.0305** (2.21)
Intercepte	-0.131** (-2.11)	-0.251*** (-2.44)
N	228	228
R² ajusté	53%	60%
R within	54%	62%
Prob>F	0.0000	0.000

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Appendix 1: Correlation Matrix and VIF

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	VIF
1.ABSDAC	1											2.58
2.INST	-0.281**	1										2.04
3.FAM	0.168**	-0.426***	1									2.19
4.EMP	-0.077	0.068	-0.455***	1								2.85
5.BSIZE	-0.361***	-0.153**	-0.064	0.084	1							1.66
6.BIND	0.118**	0.533***	0.043	0.441***	0.194***	1						2.31
7.CEO	0.459***	-0.056	0.439***	-0.069	-0.053	-0.092	1					1.89
8.AUD	-0.227**	0.366***	-0.0232	0.078	0.228***	0.085	0.007	1				1.64
9.LEV	0.115**	-0.125**	-0.067	0.117**	-0.073	0.129**	0.328***	-0.124**	1			1.41
10.ROA	0.038	0.044	0.113**	0.223**	-0.055	-0.277***	0.066	-0.083	-0.508***	1		1.24
11.FSIZE	0.324**	0.119**	-0.057	0.402***	0.312***	-0.056	-0.112**	0.369***	0.088	0.036	1	1.77

Note: The value in the brackets is T-value; ***, **, * indicate significance at the level of 1%, 5% and 10%.