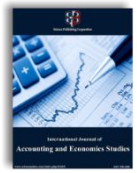
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Research paper



The determinents of accruals based earnings management :case of listed Moroccan companies

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Abstract

This article aims to identify the determinants of accruals based earning's management in Moroccan listed companies. On one hand, it examines the relation between discretionary accruals as the measure of earning's management and what literature documents as incentives to this practice, in particular, politico-contractual motivations, the avoidance of losses and earnings decreases and growth opportunities. On the other hand, it investigates whether corporate governance mechanisms may constrain management's opportunistic behaviors. The empirical results provide evidence that managers manipulate earnings in the presence of losses and, that growing firms is more likely to engage in earning's management. In terms of constraining factors, our findings indicate a negative relation between discretionary accruals and both institutional and concentrated ownership. Thus, we suggest that these shareholders play an effective role on monitoring managers.

Keywords: *Corporate Governance; Discretionary Accruals; Earnings Management; Earnings Thresholds; Ownership Structure.*

1. Introduction

In last decades, earning's management has captured the spotlight, as a result of financial scandals and the lack of transparency in financial reporting. Schipper (1989, p. 92) was the first to define this practice. She assumes that it is "a purposeful intervention in the external financial reporting process with the intent of obtaining some private gain." Another common definition of earning's management is the one developed by Healy and Wahlen (1999, p. 368) as the followings "Earning's management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either misleads some stakeholders about the underlying economic performance with the company or to influence contractual outcomes that depend on reported accounting numbers."

Several studies (Dechow 1994, Burgstahler & Dichev 1997, Teoh & Wong 1998, McNichols 2000, 2002, Jeanjean 2001, Bergstresser & Philippon 2004, Dechow & Schrand, 2004, Chesney & Gibson 2005, Dechow *et al.* 2010) provide evidence that managers manipulate earnings under different circumstances and for multiple reasons. This practice has received a considerable attention because of the important role that earnings play in measuring performance rather than other's accounting numbers (Dechow 1994). They are also considered by managers as the most important metric to outsiders (Graham *et al.* 2005).

This study is a contribution in earning management literature, as it is one of the firsts to examine the determinants of this practice in Moroccan context. To do this, we provide literature review and hypotheses development in section 1, research methodology is described in Section 2, and the last section is devoted to data analysis and empirical results.

2. Theoretical framework and hypotheses development

2.1. Earnings management incentives

The literature documents several earning's management incentives, in particular, those related to the politic-contractual theory and the avoidance of losses and earnings decreases. Some studies emphasis other incentives such as growth opportunities.

2.1.1. Political contractual incentives

The politico-contractual theory proposes a fundamental framework of earning management incentives (Watts & Zimmerman 1986). It suggests three assumptions about the managerial discretionary behavior: debt contracts, managerial compensation, and political cost.

- Debt contracts

The debt assumption refers to the debt covenants in the United States. These are conditions formulated by lenders to maintain certain ratios, calculated using accounting numbers, at acceptable levels. To avoid violating these conditions, managers may be more likely to increase reported earnings. Several empirical studies have provided evidence consistent with this assumption in United States (Defond & Jiambalvo 1994, Gu *et al.* 2005), but also in other environments where there are no contractual clauses as: Switzerland (Cormier *et al.* 1998), France (Jeanjean 2001, Saada 1995), and Tunisia (Shabou & Boulila Taktak 2002). Jeanjean (2001) argues that even in the absence of debt covenants, highly indebted firms may manage earnings in order to justify their financial policies. An opinion that we share, and we also adopt in

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Moroccan context where contractual clauses are lacking. Thus, we propose the following hypothesis:
H 1: There is a positive relation between debts level and earnings management.

- Managerial compensation contracts

Under this assumption, managers manipulate earnings to increase their compensation. Thus, they choose to account for methods bringing future profits to the current period. This is especially true in firms that advocate performance-based compensation systems. This assumption will not be examined in the empirical analysis because of the lack of information about Moroccan manager's compensation.

- Political cost

Watts and Zimmerman (1986) assume that large firms are more prone to wealth transfer trough political costs. Indeed, they are more faced to political pressures such as tax laws and labor regulations. This may provide incentive to the managers to reduce reported earnings. To do this, they use accounting techniques that aim to defer the current benefit to future periods. Thus, we assume a negative relation between our earnings management proxy and the firm size.
H 2: Firm size is negatively associated with earnings management.

2.1.2. Thresholds incentives

The thresholds' incentives are based on the observation of discontinuities in the distribution of reported earnings around certain targets, in particular, zero (Hayn 1995, Burgstahler & Dichev 1997, Degeorge *et al.* 1999, Dechow *et al.* 2003, Burgastahler *et al.* 2006). Hayn (1995) assumes that managers manipulate earnings to avoid losses in order send a positive signal to the market. Thus, incentives to manage earnings are stronger when they are close to zero. We assume the following:
H3: Managers are more likely to manipulate earnings in the presence of losses.
The zero earnings are not the only threshold reported by the literature. Other's targets are also emphasized such as the previous earnings. Indeed, executives have more incentives to manage earnings in order to sustain last year performance. This leads to the following hypothesis:
H4: Managers are more likely to manipulate earnings to avoid earnings decreases.

2.1.3. Growth opportunities

Some previous studies (Skinner & Sloan 2002, Myers & Skinner 2006) show that firms with strong growth opportunities have more incentives to manage earnings upwards. They assume that managers choose to manipulate earnings when they fail to meet analysts' expectations. By doing so, they try to avoid possible negative market reactions to their failure. Another reason for managing earning in growing companies is that documented by Graham's survey (2005). He reports that the interviewed executives believe that future performance allows them to mitigate the effects of past earning management decisions. This leads to the following hypothesis:
H 5: Firms with strong growth opportunities are more likely to manage earnings positively.

2.1.4. Performance

Some studies (Dechow 1995, Shabou & Boulila Taktak 2002, Mard 2004, Burgastahler *et al.* 2006, Zhong *et al.* 2007, Jiang *et al.* 2008) find that low (high) performance is associated with a higher level (lower) of earning's management. They argue that managers try to hide poor performance by managing earnings. Consistent with these studies, we assume the following:
H 6: There is a negative relationship between the firm performance and earnings management.

2.2. Constraints to earnings management

Earning management is not without constraints. Prior research (Peasnell *et al.* 2000, Klein 2002, Bergstresser & Philippon 2004, Cornett *et al.* 2006) provides evidence that corporate governance attributes have a constraining effect on earning's management. The literature places particular emphasis on the structure ownership, as well as the monitoring role of board of directors as. External auditing is also emphasized as a constraint of earning's management.

2.2.1. Ownership structure

Ownership structure is largely documented in literature as one of the corporate governance mechanisms used to constrain earning's management. In this section, we well study three types of ownership structure that we believe appropriate to Moroccan case: concentrated, institutional and managerial ownership.

- Concentrated ownership

According to Jensen and Meckling (1976), concentrated ownership is one of the mechanisms for dealing with agency conflicts. They believe that it aims to align the interests of shareholders and managers. This point of view is not unanimously supported by researchers. While some authors find negative relationship between earnings management and concentrated ownership (Fan & Wong 2002, Ali *et al.* 2008, Alves 2012), others suggest the opposite (Zhong *et al.* 2007). Some studies (Bozec 2004, Mard & Marsat 2012) find that the relationship between concentrated ownership and earnings management change from negative to positive sign depending on the number of shares held by the major shareholder. Having regard to those mixed opinions, we assume the following:
H 7: Concentrated ownership has a significant effect on earning's management.

- Institutional ownership

Institutional shareholders are largely considered to be sophisticated investors, able to constrain managerial opportunistic behavior (Jiambalvo *et al.* 1999). Several prior studies (Bushee 2000, Chtourou *et al.* 2001, Park & Shin 2004, Bergstresser & Philippon 2004, Cornett *et al.* 2006) provide evidence of a negative correlation between institutional ownership and earnings management.Consistent with these researches, we hypothesize that:
H 8: There is a negative relationship between earnings management and institutional ownership.

- Managerial ownership

According to Jensen &Meckling (1976), managers may act for their personal interests to the detriment of shareholders. They argue that managerial ownership serves to align shareholders' interests with those of managers. It aims to dissuade managerial opportunistic behaviors. Warfield *et al.* (1995) provide evidence that the managerial shareholding reduce their incentives to manipulate earnings. Klein (2002) document, as well, a negative relation between it and earning's management, but he observes that this latter is positively related to the executives sits on the board's compensation committee. On the other hand, some studies find the opposite results. Bergstresser and Philippon (2004) observe that companies with high managerial ownership present high discretionary accruals. Other studies (Ali & Saleh 2008, Alves 2012) confirm a positive relation between managerial ownership and earning's management. This leads to propose the following hypothesis:
H 9: Managerial ownership has significant effect on earnings management.

2.2.2. The board of directors

Due to its overseeing and monitoring function, the board of directors plays an important role to limit earning's management. Several studies provide evidence to support this view (Chtourou *et al.* 2001, Klein 2002, BenAyed Koubaa 2010). They report, indeed, a negative relationship between board size and earning's manage-

ment. Following these studies, we assume that larger boards are associated with lower levels of earning's management.
H 10: There is a negative relationship between earnings management and board size.
The effectiveness of the board of directors is also measured by its independence. Thus, according to the agency theory, the chief executive officer duality (meaning the same person assume the position of board chairman and chief executive) is likely to increase the manager's opportunistic behavior. Consistent with this theory, we present the following hypothesis:
H 11: There is a positive relation between earnings management and the chief executive officer duality.

2.2.3. External audit

Many studies (Becker *et al.* 1998, Cormier *et al.* 1998, Caramanis& Lennox 2008, Francis 2009) document that a higher external audit quality is consistent with low levels of earning's management. Auditing quality is, largely measured, by the belonging of the auditor to one of the prestigious audit firms (Big Four, Five, Six ... depending on the period to the study and the context). Consequently, we propose the following hypothesis:
H 12: A high-qualityexternal audit is negatively associated with earning management.

3. Research methodology

Before presenting empirical results, it is appropriate to emphasis first the way in which the sample was formed and the data collection method. In addition, we define also independent variables and we present the tested model.

3.1. Sample selection and data collection

Our sample is drawn from Moroccan listed companies, over the period 2010-2015. The main criterion for sample selection is the availability of annual reports, as well as information on governance corporate. Thus, only those enterprises whose data are available throughout the study period are included in the sample. And like previous works, we have eliminated financial institutions. The latter's are excluded because of the specific nature of their accounting system. So, our final sample is composed of 252 firm-year observations, with 42 firms of the 76 Moroccan listed companies.

3.2. Earnings management measurement

The first step in measuring earnings management is to calculate total accruals. They correspond to the difference between cash flows from operation and the net income. This subtractive method is considered, by Collins and Hribar (2002), more relevant than the additive method (calculating all total accruals components). The total accruals are then obtained according to the following formula:

Total Accruals = Net Income - Operating Cash Flow

The second step is to determine discretionary accruals, capturing manager's opportunistic behaviors. Indeed, only one part of the total accruals is concerned by earnings management, the other part is the result of a sincere application of accounting principles. Therefore, total accruals are divided into two components: non-discretionary (or normal) accruals, which are normally generated by accounting rules and discretionary accruals (abnormal) detecting earnings management (Healy 1985).
In order to discern discretionary accruals, different models are designed for this purpose (Healy 1985, Deangelo 1986, Jones 1991, Dechow *et al.* 1995, Kothari *et al.* 2005). The modified Jones model is by far the most widely used throughout the literature, although it is criticized for disregarding performance, which is significantly correlated with non-discretionary accruals (Dechow 1995, Kasznick 1999). Given these criticisms, we have opted, in this study, for the Kothari *et al.* (2005) model, proposing a new version of the Jones model that includes the Return On Asset, ROA (Net income on assets) as an indicator of performance. Thus, normal accruals are determined from the estimated values of the following regression:

$$TA\ it\ /ASSETS\ it\ -1 = \alpha\ (1/\ ASSETS\ it\ -1) + \beta 1\ (\Delta REV\ it\ -\Delta REC\ it\ /\ ASSETS\ it\ -1) + \beta 2\ (PPEit\ /\ ASSETS\ it\ -1) + \beta 3\ (ROA\ it) + \varepsilon\ it$$

Where:
TA it: Total Accruals;
ASSETS it -1: Total assets of firm i at the end of year t -1;
ΔREV it –ΔREC it: Change in revenues of firm i in year t less change in accounts receivable scaled by total assets it -1;
PPE: Gross property, plant and equipment of firm i at the end of year t scaled by total assets it -1;
ROA it: Return On Assets of firm i at the end of year t;
α; β1 ; β2 ; β3 : Estimated parameters ;
ε it: The residual.
Discretionary accruals are determined as the difference between total accruals, which are the observed values and normal accruals forecasted from the model. The prediction error represents the portion of discretionary accruals. Consistent with Klein (2002) Davidson *et al.* (2005) and Ben Othman and Zeghal (2006), we use the absolute value of discretionary accruals.

2.3. The tested model and dependents variables

In order to test the validity of the research hypotheses, we will estimate the following model:

$$AEM_{it} = \alpha + \beta 1\ SIZE_{it} + \beta 2\ DEBT_{it} + \beta 3\ INST_{it} + \beta 4\ CONCENT_{it} + \beta 5\ MANAG_{it} + \beta 6\ BRDSIZE_{it} + \beta 7\ DUAL_{it} + \beta 8\ AUD_{it} + \beta 9\ LOSS_{it} + \beta 10\ DECREASE_{it} + \beta 11\ GROWTH_{it} + \beta 13\ PERFORM_{it} + \varepsilon_{it}$$

Where:
Earnings management proxy (AEM): is the absolute value of discretionary accruals estimated by the Kothari *et al.* (2005) model. We use the absolute value to take count of both income increasing and income decreasing, consistent with Ben Othman and Zeghal (2006) Cornett *et al.* (2006) and Wang (2006).
The firm size (SIZE): measured by the natural logarithm of total assets as Cormier*et al.* (1998), Klein (2002), Gu *et al.* (2005), Ben Othman and Zeghal (2006).
Leverage (DEBT): measured by long-term debts divided by total assets. This measure is also adopted by Bushee, (2000), Barton (2001), Davidson *et al.* (2005), Gu*et al.* (2005), Chen *et al.* (2010), Farooq and El Jai (2012).
Institutional ownership (INST): is a dummy variable equal to 1 if a firm has an institutional ownership above the sample mean and zero otherwise.
Concentrated ownership (CONCENT): is a dummy variable equal to 1 if the main shareholder holds more than 50% of shares and 0 otherwise.
Managerial ownership (MANAG): is a dummy variable equal to 1 if the CEO holds more than 10% of shares and 0 otherwise.
The board size (BRSIZE): calculated as the total number of the board members.
CEO Duality (DUAL): is a dummy variable equal to 1 in the case of CEO duality and 0 otherwise.
External Audit (AUD): is a dummy variable coded 1 if auditor belongs to the Big 4 and 0 otherwise. This measure is also used by Becker *et al.* (1998) Jeanjean (2001) and Francis *et al.* (2009).

Zero earnings threshold (LOSS): is dummy variable equal to 1 pre-managed earnings are negative and 0 otherwise. The pre-managed earnings are measured by the current earnings lagged by total asset minus discretionary accruals.
Decreasing earnings threshold (DECREASE): is dummy variable equal to 1 if the difference between pre-managed earnings and previous reported earnings is negative and 0 otherwise. This variable is lagged by total assets.
Growth opportunities (GROWTH): measured by sales change divided by total assets.
Performance (PERFORM): measured by cash flow from operations divided by total assets. This measure is also used by Sun *et al.* (2011)

Table 1: Summary of Independents Variables and the Predicted Relationships with the Dependent Variable

Variables	Measures
SIZE	The natural logarithm of total assets
DEBT	Ratio of long-term debts / total assets
CONCENT	Dummy variable equal to 1 if the main shareholder holds more than 50% of shares and 0 otherwise
INST	Dummy variable equal to 1 if a firm has an institutional ownership above the sample mean and zero otherwise.
MANAG	dummy variable equal to 1 if the CEO holds more than 10% of shares and 0 otherwise
BRDSIZE	The total number of the board members
DUAL	Dummy variable equal to 1 in the case of CEO duality, and 0 otherwise
AUD	Dummy variable coded 1 if auditor belongs to the big 4 and 0 otherwise
LOSS	Dummy variable equal to 1 if pre-managed earnings are negative and 0 otherwise
DECREASE	Dummy variable equal to 1 if the difference between current earnings reduced of discretionary accruals and previous reported earnings is negative and 0 otherwise
GROWTH	Sales change / total assets
PERFORM	Cash flow from operations divided by total assets

4. Empirical results

Our empirical analysis is presented as follows: first, we emphasis descriptive statistics of the independent variables. Secondly, we present the Spearman correlations of independent variables, and last we highlight the results of the multivariate analysis.

4.1. Descriptive statistics

Descriptive statistics show that the absolute value of discretionary accruals represents an average of 0.061 of total assets. Those results seem close to the finding of Ben Othman and Zeghal (2006) in Canadian context (0.068). About 36% of companies have, on average, institutional ownership above the sample mean and in 42% of them; managers hold more than 10% of shares. More than 67% of companies have concentrated ownership.
The board of directors is, on average, composed of about 8 members, and in more than 60% of firms, the chief executive is also the board chairman. In terms of external audit, 61 % of our sample chooses audit service provided by an auditor belonging to the big 4 audit companies. The level of leverage has a mean of 10.60% of total assets, indicating that listed Moroccan companies are not highly indebted. In terms of the growth indicator, it shows positive growth opportunities with a mean of 3.25% of total asset and about 10% as a mean performance. 24% of our firm's sample has negative pre-managed earnings and 57% of them have a negative change in current pre-managed earning compared to last year earnings.
To test the normality of the data distribution, we use the skewness and kurtosis test. Variables are assumed normally distributed if their test score is within the range of ±1.96 in small samples and ±2.58 in large samples greater than 200 observations (Ghasemi & Zahediasl, 2012). The test shows that many of our sample variables are normally distributed. In statistics, it is common to use parametric tests when data is normally distributed and non-parametric tests in the opposite case.

Table 2: Summary of Descriptive Statistics

Variable	Obs	Mean	Std, Dev,	Min	Max	Skewness	Kurtosis
AEM	252	0.0613731	0.0556959	0.0001557	0.3391062	1.641637	6.687347
SIZE	252	9.131203	0.5980945	7.908432	10.55468	0.2042833	2.527879
DEBT	252	0.1060183	0.1412466	0	0.8629767	1.795597	6.612516
INST	252	0.3611111	0.4865873	0	1	0.5783149	1.334448
CONCENT	252	0,6785714	0,4679543	0	1	0.6785714	0.4679543
MANAG	252	0.4206349	0.4946434	0	1	0,3215368	1,103386
BRDSIZE	252	7.757937	2.966099	3	15	0.2980301	2.292466
DUAL	252	0.6269841	0.4845687	0	1	-0.525155	1.275788
AUD	252	0.6111111	0.4884682	0	1	-0.4558423	1.207792
LOSS	252	0.2460317	0.4315544	0	1	1,179335	2,390832
DECREASE	252	0.5753968	0.4952663	0	1	-0,3050758	1,093071
GROWTH	252	0.032558	0.1443611	-0.5254265	1.179933	1.948489	21.09782
PERFORM	252	0.1007048	0.1277813	-0.2044233	0.5237122	0.6134402	3.543281

4.2. Correlations analysis

The correlations analysis allows measuring the links between the independents variables. A strong correlation may indicate a multicollinearity problem. We have chosen the spearman non parametric test of correlation as some of our model independents variables are not normally distributed. The table 3 below presents the correlation matrix of the model variables. It shows that multicollinearity is not observed in our study since all correlations do not exceed 50% overall.

A negative correlation is highlighted between earning's management and the company's size. This is consistent with Watts and Zimmerman's (1986) prediction that large firms are more likely to manage earnings in order to limit wealth transfer to outsiders. In terms of ownership structure, the matrix of correlation shows a significant negative effect of both institutional shareholding and concentrated ownership on one hand and a positive relation between discretionary accruals and managerial shareholding, on the other hand, Growth opportunities are positively correlated with the AEM variable, showing that growing firms have more incentives to manage earnings. A positive correlation is also detected between discretionary accruals and the LOSS variable. This mean

that those firms are likely more to manage earnings in the presence of losses.

The correlation matrix shows also a significant positive correlation between the firm size and institutional ownership that indicates that large firms have more institutional shareholders. On the opposite, they are less owned by managerial shareholders as propose the negative correlation between the both variables. Moreover, a negative correlation between the board size and the CEO duality suggests that large boards are more likely to choose the separation between the board chairman and the chief executive, assumed to enhance the board independence.

These results will be explored in more detail using multiple regressions. Indeed, the partial correlations allow studying separately the link between two variables, without taking into account the others. Nevertheless, it is rather appropriate to carry out the analysis while simultaneously taking into account the interactions between the different variables, hence the usefulness of multiple regression analysis.

Table 3: Spearman's Correlation Coefficients

	AEM	SIZE	DEBT	INST	CON-CENT	MANAG	BRDSIZE	DUAL	AUD	LOSS	DE-CREASE	GROWTH	PER-FORM
AEM	1.0000												
SIZE	-0.1403*	1.0000											
	0.0260												
DEBT	-0.0187	0.2025*	1.0000										
	0.7677	0.0012											
INST	-0.1531*	0.2991*	0.2771*	1.0000									
	0.0150	0.0000	0.0000										
CON-CENT	-0.1338*	0.1184	-0.3121*	-0.2432*	1.0000								
	0.0338	0.0606	0.0000	0.0001									
MANAG	0.1719*	-0.4485*	0.1312*	-0.3059*	-0.1709*	1.0000							
	0.0062	0.0000	0.0374	0.0000	0.0065								
BRDSIZE	-0.0885	0.4822*	-0.0211	0.3548*	0.0987	-0.4350*	1.0000						
	0.1615	0.0000	0.7390	0.0000	0.1180	0.0000							
DUAL	0.1224	-0.1984*	0.1868*	-0.1205	-0.0213	0.4245*	-0.2011*	1.0000					
	0.0523	0.0015	0.0029	0.0560	0.7361	0.0000	0.0013						
AUD	-0.0963	0.4353*	0.0338	0.2947*	-0.0784	-0.4251*	0.3275*	-0.1272*	1.0000				
	0.1272	0.0000	0.5931	0.0000	0.2147	0.0000	0.0000	0.0437					
LOSS	0.2695*	-0.0327	0.1231	-0.0458	-0.0409	0.0172	-0.0768	-0.0547	-0.0168	1.0000			
	0.0000	0.6057	0.0510	0.4689	0.5184	0.7861	0.2242	0.3869	0.7907				
DE-CREASE	-0.0332	-0.0712	-0.0409	-0.1063	0.0620	0.0652	-0.1009	0.0679	-0.0759	0.4348*	1.0000		
	0.6003	0.2599	0.5183	0.0921	0.3269	0.3027	0.1101	0.2833	0.2297	0.0000			
GROWTH	0.1615*	-0.1619*	-0.0098	-0.1210	0.0043	0.0898	-0.0386	0.1365*	-0.1494*	0.0532	0.0063	1.0000	
	0.0102	0.0100	0.8764	0.0551	0.9463	0.1551	0.5416	0.0303	0.0176	0.4004	0.9202		
PER-FORM	-0.0389	0.0868	-0.2944*	0.0993	0.0451	-0.3417*	0.2200*	-0.1391*	0.1664*	-0.2196*	0.0284	-0.0437	1.0000
	0.5392	0.1696	0.0000	0.1158	0.4756	0.0000	0.0004	0.0273	0.0081	0.0004	0.6535	0.4900	

* indicates significance at the 5%.

4.3. Multiple regression analysis

First, we have determined discretionary accruals according to the Kothari *et al.* (2005) model on panel data. Then we have estimated the linear regression model of the variable AEM (absolute value of discretionary accruals). The first question that arises when using panel data is to verify if there are individual effects, or it is more appropriate to use pooled regression. Thus, we have estimated the fixed-effect model, allowing, under the Stata software, to run a specification test in this purpose. The Fisher statistic of this test is F (41, 198) = 2.07 with a probability of Prob> F = 0.0005. Hence, we can reject the null hypothesis of homogeneity, and we accept the alternative hypothesis of individual heterogeneity. The next step is to define the nature of the model effects as fixed or random. To choose between the both models, we used the Hausman test. Under the null hypothesis of this test, the random effect model is more appropriate. The test result is shown as follows: the chi-square statistic is equal to 17.39 with a probability of 13.54. So we cannotreject the null hypothesis, and we adopt the random model. Then, we have estimated the random effect model on panel data of the absolute value of discretionary accruals. As the Breusch-Pagen test of heterosexuals shows that it is a problem in our model, we have chosen to cluster around the standard error on the level of the firm to correct it.

The results from the regression reveal several lessons: first, we found a negative relationship between earning's management and institutional ownership as documented by previous studies (Jiambalvo *et al.* 1999, Bushee 2000, Chtourou *et al.* 2001, Park & Shin 2004, Bergstresser & Philippon 2004, Cornett *et al.* 2006). These findings seem to support the notion that institutional shareholders are a monitoring device that constrains managerial opportunistic behaviors. We believe that this role is due to their efficient access to information and a considerable experience in the field of finance.

Inconsistent with the enrichment hypothesis of the main shareholder (Shleifer & Vishny 1986), we found evidence that concentrated ownership is negatively related to earning's management. Those findings are consistent with several previous studies (Ali *et al.* 2008, Alves 2012). Furthermore, our results show a significant positive relationship between growth opportunities and earning's management. This confirms that growing firms have more incentives to manage earnings as shown by prior studies (Dechow 1995, Burgastahler *et al.* 2006, Zhong *et al.* 2007, Jiang *et al.* 2008)

As expected, we find evidence that Moroccan listed companies manipulate earnings in the presence of losses. Indeed, we document a positive association between negative earnings and discretionary accruals. Those results are consistent across several studies finding (Burgstahler & Dichev 1997, Degeorge *et al.* 1999, Dechow *et al.* 2003). On the other side, we observe a negative association between earnings decreases and earning's management. This unexpected result may have been caused by the choice of the absolute value of discretionary accruals as a measure of earning's management instead of directional accruals.

For the other variables, no significant relationship with the discretionary accruals is observed. Thus, inconsistent with Becker *et al.* (1998), Caramanis and Lennox (2008) and Francis (2009), we find no evidence that a higher audit quality may reduce manager's incentives to manipulate earnings. We fail, also, to provide evidence to support assumptions of the politico-contractual theory as no significant relation is observed between both debts and firm size, and discretionary accruals.

The managerial ownership show insignificant relation with discretionary accruals. Thus, no effective effect is detected between those shareholders and earnings management.

Regarding the size board and the duality, no significant relation between those variables and discretionary accruals is observed. Thus, we cannot confirm that they affect earnings management behaviors.

Table 4: Regression with AEM as Dependent Variable

AEM	Coef.	Z	P>z
SIZE	-0.0095541	1.29	0.198
DEBT	-0.0196278	0.42	0.677
INST	-0.0169564	1.98	0.047**
CONCENT	-0.0186789	1.98	0.048**
MANAG	-0.0019485	0.16	0.876
BRDSIZE	0.0000389	0.03	0.980
DUAL	0.0080814	0.70	0.481
AUD	0.0032307	0.36	0.720
LOSS	0.0470745	4.51	0.000***
DECREASE	-0.0219171	3.03	0.002***
GROWTH	0.0622671	1.94	0.052*
PERFORM	0.0040993	0.12	0.906
_CONS	0.1615578	2.35	0.019
R2 Within	15.71%		
R2 Between	31.91%		
R2 overall	10.20%		
F test	Wald chi2 (12) = 44.88Prob> F = 0.0000		

*, **, *** Significant at the level of 10%, 5% and 1% respectively.

5. Conclusion

The purpose of this study is to analyze accounting earnings management determinants in listed Moroccan companies. Several conclusions are drawn from it. Our results indicate that both institutional and concentrated ownership limit earnings management practice in Morocco. Thus, we found significant negative relationships between these shareholders and discretionary accruals. We observed also a positive relation between growth opportunities and earning's management. This is consistent with the notion that growing firms is more likely to manage earnings. Moreover, we find a positive association between losses and earning's managements.

There are limits to this study. On the methodological side, focusing on accruals based, earning's management excludes real activity's manipulations (earning's management through sales manipulation, reduction of discretionary expenditures and overproduction) as documented by other works (Roychowdhury 2006, Cohen &Zarowin 2008). In terms of explanatory variables, it seems that some other's corporate governance mechanisms deserve to be studied, such as the audit committee monitoring and the independent board directors.

References

[1] Ali, S.M., Salleh, N.M., Hassan, M.S., (2008). Ownership structure and earnings management in Malaysian listed companies: the size effect. Asian Journal of Business and Accounting, vol.1, no.2, pp 89-116.

[2] Alves, S. (2012). Ownership structure and earnings management: evidence from Portugal. Australasian Accounting Business and Finance Journal, 6 (1) 57-74.

[3] Barton J., (2001). Does the use of financial derivatives affect earnings management decisions? Working Paper, Emory University, Goizueta Business School.

[4] Becker, C. L., DeFond, M L., Jiambalvo, J., Subramanyam, K.R. (1998). The effect of audit quality on earnings management. Contemporary Accounting Research 15 (1): 1-24. https://doi.org/10.1111/j.1911-3846.1998.tb00547.x.

[5] BenAyed Koubaa, H., (2010). L'impact des mécanismes interne de gouvernement de l'entreprise sur la qualité de l'information comptable. La Place de la dimension européenne dans la comptabilité le contrôle et l'audit, Strasbourg, France.

[6] Ben Othman, H., Zeghal, D., (2006). A study of earnings-management motives in the Anglo-American and Euro-Continental accounting models: The Canadian and French cases. The International Journal of Accounting 41, pp.406-435.https://doi.org/10.1016/j.intacc.2006.09.004.

[7] Bergstresser, D., Philippon, T., (2004). CEO incentives and earnings management. Working paper, Harvard Business School and NYU Stern School of Business.

[8] Boulila Taktak, N., Shabou, R., (2002). Les déterminants de la comptabilité créative: étude empirique dans le contexte des entreprises tunisiennes. Association Francophone de Comptabilité, Tome 8, pp. 5-24.

[9] Bozec, Y, Laurin C., (2004). Concentration des droits de propriété, séparation entre participation au capital et contrôle des votes et performance opérationnelle des sociétés: une étude canadienne. Finance, contrôle, stratégie, Vol. 7, No. 2, pp. 123-64.

[10] Burgstahler, D., Dichev I., (1997). Earnings management to avoid decreases and losses. Journal of Accounting and Economics, vol. 24, pp. 99-126.https://doi.org/10.1016/S0165-4101(97)00017-7.

[11] Burgstahler, D., Hail, L., Leuz, C., (2006). The importance of reporting incentives: earnings management in European private and public firms. The Accounting Review 81, 983–1016.https://doi.org/10.2308/accr.2006.81.5.983.

[12] Bushee, B.J., Noe, C.F., (2000). Corporate disclosure practices, institutional investors, and stock return volatility. Journal of Accounting Research 38: 171–202https://doi.org/10.2307/2672914.

[13] Caramanis, C., Lennox, C., (2008). Audit effort and earnings management. Journal of Accounting and Economics 45, pp. 116-138.https://doi.org/10.1016/j.jacceco.2007.05.002.

[14] Chen, H., Tang, Q., Jiang, Y. and Lin, Z., (2010).The role of international financial reporting standards in accounting quality: evidence from the European Union.Journal of International Financial Management & Accounting 21: 220-278. https://doi.org/10.1111/j.1467-646X.2010.01041.x.

[15] Chesney, M. Gibson, R., (2005). Stock options and managers incentives to cheat. De Boeck Superieur, Finance et Bien Commun, No 22, pp. 11-13https://doi.org/10.3917/fbc.022.0011.

[16] Chtourou, M. S, Bédard, J., Courteau, L., (2001). Corporate governance and earnings management. Working paper, Laval University, pp. 1-41;

[17] Cohen, D. A., Dey, A., Lys, T., (2008). Real and accrual based earnings management in the pre and post Sarbanes–Oxley periods. The Accounting Review, 83(3), pp.757-787.https://doi.org/10.2308/accr.2008.83.3.757.

[18] Collins, D., Hribar, P., (2002). Errors in estimating accruals: implications for empirical research. Journal of Accounting Research 40, 105–135https://doi.org/10.1111/1475-679X.00041.

[19] Cormier D., Magnan M., Morard B., (1998). La gestion stratégique des résultats : le modèle anglo-saxon convient-il au contexte suisse ? Comptabilité Contrôle Audit 4 (l), p. 25-48.https://doi.org/10.3917/cca.041.0025.

[20] Cornett, M. M, Marcus, A. J, Saunders, A., Tehranien, H., (2006). Earnings management, corporate governance, and true financial performance. SSRN Working Papers, pp. 1-28.

[21] Davidson, R., Goodwin-Stewart, J., Kent, P., (2005). Internal governance structures and earnings management. Accounting and Finance, Vol 45, pp. 241-267https://doi.org/10.1111/j.1467-629x.2004.00132.x.

[22] DeAngelo, L., (1986). Accounting numbers as market valuation substitutes: a study of management buyouts of public stockholders. The Accounting Review 61, pp.400-420.

[23] Dechow, P. M., Richardson, S. A., Tuna, I. (2003). Why are earnings kinky? An examinationof the earnings management explanation. Review of Accounting Studies 8 (2/3): 355-384.https://doi.org/10.1023/A:1024481916719.

[24] Dechow, P., Schrand, C., (2004). Earnings quality. The Research Foundation of CFA Institute.

[25] Dechow, P., Ge, W., Schrand, C., (2010). Earnings quality and earnings management. Journal of Accounting and Economics 50, pp .344-401

[26] Dechow, P.M., (1994). Accounting earnings and cash flows as measures of firm performance the role of accounting accruals. Journal of Accounting and Economics 18, pp.3-42.https://doi.org/10.1016/0165-4101(94)90016-7.

[27] Dechow, P.M., Sloan, R.G., Sweeney, A.P. (1995). Detecting Earnings Management. The Accounting Review, Vol. 70, No. 2, pp. 193-225

[28] Defond, M., Jiambalvo, J., (1994). Debt-covenant violations and manipulation of accruals. Journal of Accounting and Economics, vol. 17, pp. 145-176.https://doi.org/10.1016/0165-4101(94)90008-6.

[29] Degeorge, F., Patel, J., Zeckhauser, R., (1999). Earnings management to exceed thresholds. Journal of Business, vol 72, No 1, pp. l-35.https://doi.org/10.1086/209601.

[30] Fan, J. P. H, Wong, T. J (2002), Corporate ownership structure and the informativeness of accounting earnings in east Asia, Journal of Accounting and Economics, Vol 33, pp.401-425.https://doi.org/10.1016/S0165-4101(02)00047-2.

[31] Farooq O., El Jai, H., (2012). Ownership structure and earnings management: evidence from the Casablanca stock exchange. International Journal of Finance and Economics, issue 84, pp. 95-104.

[32] Francis, J. R., Yu, M. D., (2009). Big four office size and audit quality. The accounting review84 (5): 1521-1552.https://doi.org/10.2308/accr.2009.84.5.1521.

[33] Ghasemi, A. and Zahediasl S., (2012). Normality tests for statistical analysis: a guide for non-statisticians. International Journal of Endocrinology and Metabolism 10(2), pp.486-489.DOI: 10.5812/ijem.3505.https://doi.org/10.5812/ijem.3505.

[34] Graham, J.R., Harvey, C.R., Rajgopal, S., (2005). The economic implications of corporate financial reporting. Journal of Accounting and Economics 40, pp.3-73.https://doi.org/10.1016/j.jacceco.2005.01.002.

[35] Gu Z., C.W. Lee, Rosett, J., (2005). What determines the variability of accounting accruals?Review of Quantitative Finance and Accounting, 24, pp 313-334.https://doi.org/10.1007/s11156-005-6869-1.

[36] Gunny, K., (2005). What are the consequences of REM? Working paper, Haas School of Business, University of California.

[37] Hayn, C. (1995). The information content of losses. Journal of Accounting and Economics 20(2): 125-153. https://doi.org/10.1016/0165-4101(95)00397-2.

[38] Healy, P.M., (1985). The impact of bonus schemes on the selection of accounting principles. Journal of Accounting and Economics, pp. 85-107.https://doi.org/10.1016/0165-4101(85)90029-1.

[39] Healy, P., Whalen J., (1999). A review of the earnings management literature and its implications for standard. Accounting Horizons, vol. 13 N. 4, pp. 365-383.https://doi.org/10.2308/acch.1999.13.4.365.

[40] Jeanjean T., (2001). Contributions à l'analyse de la gestion du résultat des sociétés cotées. Actes du XXIIème congrès de l'Association Française de Comptabilité.

[41] Jiang, W., Lee, P., Anandarajan, A., (2008). The association between corporate governance and earnings Quality: further evidence using the GOV-Score. Advances in Accounting, incorporating Advances in International Accounting, Vol. 24: pp. 191-201.

[42] Jiambalvo, J., Rajgopal, S., Venkatachalam, M., (1999). Is institutional ownership associated with earnings management and the extent to which stock prices reflect future earnings? Working Paper, University of Washington.

[43] Jones, J., (1991). Earnings management during import relief investigations. Journal of Accounting Research 29, pp.193-228.https://doi.org/10.2307/2491047.

[44] Kasznik, R., (1999). On the association between voluntary disclosure and earnings management.Journal of Accounting Research 37: 57-81. https://doi.org/10.2307/2491396.

[45] Klein, A., (2002). Audit committee, board of director characteristics, and earnings management Journal of Accounting and Economics, vol.33, no.3, pp375-400. https://doi.org/10.1016/S0165-4101(02)00059-9.

[46] Kothari, S. P., Leone, A. J., Wasley, C. E., (2005). Performance-matched discretionary accrual measures. Journal of Accounting and Economics 39: 163-197.https://doi.org/10.1016/j.jacceco.2004.11.002.

[47] Mard, Y., (2004). Gestion des résultats comptables: l'influence de la politique financière, de la performance et du contrôle. actes du 25ème congrès de l'association française de la comptabilité.

[48] Mard, Y., Marsat, S., (2012). Gestion des résultats comptables et structure de l'actionnariat: le cas français. Association francophone de comptabilité, Comptabilité, Contrôle Audit. Tome 18,pp. 11-42https://doi.org/10.3917/cca.183.0011.

[49] McNichols, M., (2002). The quality of accruals and earnings: The role of accrual estimation errors. The Accounting Review 77, pp.61–69.https://doi.org/10.2308/accr.2002.77.s-1.61.

[50] McNichols, M., (2000). Research design issues in earnings management studies. Journal of Accounting and Public Policy 19, pp.313-345.https://doi.org/10.1016/S0278-4254(00)00018-1.

[51] Myers, J., Myers, L., Skinner, D., (2006). Earnings momentum and earnings management.Journal of Accounting, Auditing, and Finance 22, 249–284.https://doi.org/10.1177/0148558X0702200211.

[52] Park, Y. W., Shin, H., (2004). Board composition and earnings management in Canada. Journal of corporate finance, Vol 10, pp. 431-457https://doi.org/10.1016/S0929-1199(03)00025-7.

[53] Peasnell, K.V., P.F. Pope, Young, S., (2000). Board Monitoring and Earnings Management: Do Outside Directors Influence Abnormal Accruals?Working Paper, Lancaster University.

[54] Roychowdhury, S., (2006). Earnings management through real activities manipulation. Journal of Accounting and Economics 42, pp. 335-370.https://doi.org/10.1016/j.jacceco.2006.01.002.

[55] Saada, T., (1995). Les déterminants des choix comptables: étude des pratiques françaises et comparaison franco-américaine. Comptabilité, Contrôle, Audit, Tome 1, vol.2, pp. 52-74.https://doi.org/10.3917/cca.012.0052.

[56] Schipper, K., (1989). Commentary on earnings management. Accounting horizons, volume 3, No 4, December, pp. 91-102.

[57] Shleifer, A., Vishny, R.W., (1986) large shareholders and corporate control, Journal of Political Economy, vol.94, no.3, pp461-488.https://doi.org/10.1086/261385.

[58] Skinner, D., Sloan, R., (2002). Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio. Review of Accounting Studies 7, 289–312.https://doi.org/10.1023/A:1020294523516.

[59] Sun, J., Cahan, S., Emanuel. D., (2011). How would the mandatory adoption of ifrs affect the earnings quality of US firms? Evidence from Cross-Listed Firms in the U.S. Accounting Horizons 25 (4): 837-860 https://doi.org/10.2308/acch-50049.

[60] Teoh, S., Wong, T., (1998). Perceived auditor quality and the earnings response coefficient. The Accounting Review 68, pp.346-366.

[61] Wang, D., (2006). Founding Family Ownership and Earnings Quality. Journal of Accounting Research, Vol. 44, No. 3: pp.619-56.https://doi.org/10.1111/j.1475-679X.2006.00213.x.

[62] Watts, R., Zimmerman, J., (1986) .In: positive accounting theory. Prentice-Hall.

[63] Zhong, K., Gribbin, D. W., Zheng, X., (2007). The effect of monitoring by outside blockholders on earnings management. Quarterly Journal of Business and Economics, 37-60.