THE OWNERSHIP STRUCTURE, THE BOARD OF DIRECTORS AND THE QUALITY OF ACCOUNTING INFORMATION

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Abstract

High quality accounting information is vital for the accuracy of the financial statements, whereas poor quality information may lead to serious economic problems. The recent financial crisis has attracted the interest of many researchers in determining the factors that may affect the quality of accounting information. In this field, our research investigates the possible impact of the ownership structure and of the make-up of the board of directors on the quality of accounting information, using annual data from 29 companies listed on the Abu Dhabi Securities Exchange in 2008 and 2009. The actual research starts by presenting an appropriate measure of the quality of the accounting information, then developing a model explaining the relationship between the ownership structure, the board of directors and the quality of the accounting information. In the light of our results, we will be able to provide recommendations for helping the companies improve the quality of their financial reporting.

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1. Introduction

Separation between ownership and control of a company creates conflicts of interests between managers and shareholders (Berle and Means, 1932). Shareholders are interested in maximizing the value of their company while managers seek to increase the consumption of both pecuniary and non-pecuniary advantages. The financial literature specifies a certain number of governance mechanisms which could help companies to reduce their agency problems and to align the interests of their managers more closely with those of their shareholders. These mechanisms include managerial ownership (Jensen and Meckling, 1976), blockholders ownership (Agrawal and Mandelker, 1990), institutional ownership (Brickley, Lease and Smith, 1988), the board of directors (Fama and Jensen, 1983), managerial compensation (Mehran, 1995), control market (Jensen and Ruback, 1983), the labor market (Fama, 1980) and the product market (Hart, 1983).

Several studies have been carried out into the relationship between managerial ownership and the performance of companies. Jensen and Meckling (1976) affirm that this relationship is linear and that high levels of managerial ownership can reduce agency problems within a company. Other authors affirm that the relationship between managerial ownership and the performance of the company is nonlinear (Morck, Shleifer and Vishny, 1988; Shorts and Keasy, 1999). This takes the form of alignment of interests in regard to managerial entrenchment. However, according to Himmelberg, Hubbard and Palia (1999), Cho (1998), and Demsetz and Villalonga (2001), managerial ownership is an endogenous variable which depends on the performance of the company.

The impact of the characteristics of the board of directors was also the subject of several studies. Fama and Jensen (1983) affirm that the separation between positions of the Chief Executive Officer and the Chairman of the Board of Directors improves the performance of the companies. Jensen (1993) and Yermack (1996) suggest that the small boards of directors are more effective, and that they control managerial discretion more effectively. Fama (1980) argues that a large presence of the external members in the board of directors ensures a better performance of the companies.

The actual study continues in the same spirit of the previous research by examining the interrelationships between managerial ownership, the characteristics of the board of directors and the practice of earnings management. Accounting earnings are considered to be one of the main indicators of the financial performance of a company and the practice of earnings management has attracted the interest of many researchers. In this study, panel data from 29 companies trading on the Abu Dhabi Securities Exchange between 2007 and 2009 has been

used. As can be seen so far, there are only three empirical analyses conducted on the corporate governance of UAE companies. The first analysis was conducted by Moustafa (2005) on the impact of separation between the ownership and control of the UAE firm performance, the second by Aljifri and Moustafa (2007) on the impact of corporate governance mechanisms on the UAE firm performance and the third by Ellili (2012) on the interrelationships between the different mechanisms of control. In the three aforementioned analyses, the researchers have studied the impact of the ownership structure of the performance of the company, but in this study we will incorporate the discretionary accruals as a measure of the earnings management practice.

To study the interrelationships between the managerial ownership, the characteristics of the board of directors, and the quality of the accounting information, many models have been used. The panel data regressions are used to analyze the simultaneous impacts of both the managerial ownership and characteristics of the board of directors on the discretionary accruals. The empirical results showed the presence of important impacts of the managerial ownership, the blockholders' ownership and the board's duality on the earnings management practice. More particularly, we found that both managerial and blockholders ownership have negative impacts on the discretionary accruals which confirms that the high presence of the managers and the blockholders in the ownership structure of the company is associated with a weak practice of the earnings management and leads to good quality accounting information. In addition, the results showed that board duality has a positive effect on discretionary accruals, which confirms that the duality of a CEO can be related to a high earning management practice. These empirical results help companies to optimally manage the various mechanisms of governance in order to improve the quality of the accounting information.

The remainder of this paper is organized as follows: firstly, a literature review of the ownership structure is presented. Then there is a presentation of the corporate governance system in UAE, followed by an explanation of data and methodology, empirical results analysis, and finally a conclusion.

2. Literature Review

2.1.The ownership structure

In the financial literature, while there has been extensive research that has examined the relationship between ownership structure and corporate performance (Jensen and Meckling, 1976; Morck, Shleifer and Vishny, 1988; Short and Keasy, 1999), only a few studies have examined the relationship between ownership structure and the quality of accounting information (Warfield et al., 1995; Rajgopal et al., 1999; Fang and Wong, 2002). The quality of the financial reports can be adversely affected by the widespread practice that earning management have of increasing their earnings as a consequence of the information asymmetries between owners and managers (Hadani, Goranova and Khan, 2011). This process is defined by the manipulation of the firm's earnings as reported in the financial statements (Pfarrer, Smith, Bartol, Khanin and Zhang, 2008). Healy and Wahlen (1999) underline that "Earning management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers". Any analysis of the relationship between the ownership structure and earning management needs to distinguish between the managerial ownership (2.1.1.), blockholders' ownership (2.1.2.) and the institutional ownership (2.1.3.).

2.1.1. The managerial ownership

From a theoretical point of view, managerial ownership seems have two conflicting effects on the quality of the accounting information: the convergence of interest effect and entrenchment. Based on the *Convergence of Interest Hypothesis* (Jensen and Meckling, 1976), the agency theory would suggest that managerial ownership leads to a better quality of accounting information (Gegenfurtner, Ampenberger and Kaserer, 2009). Hence firms with high managerial ownership seem to reflect the true financial situation. Therefore, the convergence effect predicts that managers with higher ownership have stronger incentives to act in line with shareholders' interests. In contrast, agency costs are high when the managerial ownership is at a low level. This convergence effect suggests that as the managerial ownership increases, the opportunistic managerial behavior decreases monotonically.

The Managerial Entrenchment Effect Hypothesis (Morck, Shleifer and Vishny, 1988) argues that managers with larger ownership have greater control over firms, and therefore possess more freedom to act in their own private interests, often to the detriment of those shareholders who engage in opportunistic behavior to serve their own interests, since they are less likely to be controlled and dismissed. According to Morck and al. (1988) and Sort and Keasy (1999), the entrenchment effect is dominant only within the intermediate levels of ownership.

In the empirical financial literature, the researchers focus on the relationship between the managerial ownership and corporate performance. In fact, Morck et al. (1988) find a positive relationship between the managerial ownership and firm performance (measured by Tobin's q) for the low and

high levels of ownership, and thereby the dominance of the convergence effect. Moreover, they indicate that there is a negative relationship between the managerial ownership and firm performance at the intermediate levels of managerial ownership, consistent with the entrenchment effect. Short and Keasy (1999) argue that the relationship between managerial ownership and firm performance is nonmonotonic. McConnell and Servaes (1990) also provide evidence that is consistent with the managerial entrenchment effect.

In the context of UAE, the empirical results of Ellili (2012) show that the managerial ownership does not have any impact on the performance of the firm. Indeed, managerial ownership is endogenous and the performance of the firm is one, among others, of its determinants. Warfield et al. (1995) and Salsiah, Norman and Hassan (2008) indicate that the quality of accounting information (measured by the earnings response coefficient) is positively related to managerial ownership, whereas the magnitude of the discretionary accruals is negatively related to it. Their results confirm that the quality of the accounting information increases as managerial ownership increases, supporting by consequence the convergence of the interest effect hypothesis. Gul and Wah (2002) examined the effect of the convergence of the interests and of the managerial entrenchment on the accounting informativeness by comparing the intervals of managerial ownership already specified by Morck et al. (1988).The accounting informativeness represents the response of the market to the disclosure of the accounting income and is measured by the regression coefficient of the market value on the accounting income. These authors find that the informativeness is higher in the intervals of convergence of interests than in those of the managerial entrenchment. Consequently, if the interests of the managers are aligned with those of the shareholders, the accounting income will be of a higher quality since the managers will be less likely to manipulate their financial statements. From the same perspective, Lennox (2005) shows that the relationship between managerial ownership and audit quality is significantly negative for the low and high levels of ownership (the convergence of interest effect). He also indicates that the relationship is slightly positive for the intermediate levels of managerial ownership (the entrenchment effect). This result is supported by Teshima and Shuto (2008) who find that the relationship between the managerial ownership and the discretionary accruals of the Japanese firms (proxy of the quality of the accounting information) is non monotonic (both convergence of interest and entrenchment effects).

In related research, LaFond and Roychowdhury (2008) examined the effect of managerial ownership on the conservatism of accounting as measured by the asymmetric timeliness of earnings. They underline that, as the managerial ownership decreases, there is greater asymmetric timeliness of earnings (a higher demand for accounting conservatism). This result is consistent with the implication of the convergence of interest effect on managerial ownership. In an extension of this, Shuto and Takada (2010) examined the effect of managerial ownership on the accounting conservatism defined as the imposition of stricter verification standards for recording good news as gains than for recording bad news as losses. Their empirical results reveal that there is a nonmonotonic relationship between managerial ownership and accounting conservatism. In fact, within the low and high levels of managerial ownership, managerial ownership is significantly negatively related to the asymmetric timeliness of earnings, which is consistent with the convergence of interest effect. They also find a significant positive relationship between managerial ownership and the asymmetric timeliness of earnings with regard to the intermediate levels of managerial ownership, as suggested by the management entrenchment effect. These results are very helpful for our research in that they show that accounting conservatism is able to reduce the agency costs of the firms through a corporate governance system. Therefore, the following hypothesis can be tested

H1: There is a negative relationship between the managerial ownership and the quality of the accounting information.

2.1.2. The Blockholders ownership

Block holders are defined as the large stockholders who hold at least 5 % of the shares of a company. In the financial literature, there is no consensus on the relationship between the blockholders and the performance of the company on terms of positive or negative signs, nor on the direction of causality between the two variables. In financial theory, and more particularly in agency theory literature, the relationship between ownership concentration and the performance of a company is generally seen as positive. Blockholders have more power and stronger incentives in controlling efficiently the managers and the more concentrated structures are associated to less governance problems arising from the separation between ownership and control (Shleifer and Vishny, 1986; Denis, Denis and Sarin, 1995; Agrawal and Mandelker, 1992). In contrast to all the previous research, Demsetz (1983) and Demsetz and Lehn (1985) affirm that the ownership structure of the company is endogenous and is the result of an optimal shareholder value maximizing process.

Despite the number of studies that have been carried out, the theoretical relationship between ownership structure and the performance of the company is still ambiguous. Blockholders may get private benefits in terms of control which are detrimental to the interests of the other shareholders and which may lead to the entrenchment of the managers and expropriation of the wealth of the

minority shareholders because of their privileged access to inside information and their high level of risk aversion compared to that of the diversified shareholders (Morck et al., 1988).

In the context of UAE, the empirical results of Ellili (2012) show that the impact of blockholders' ownership on the performance of a firm can be negative. Therefore, the presence of blockholders in the ownership structure of the company does not always ensure good performance. On the contrary, it often leads to a poor performance. This could be explained by the managerial entrenchment theory which argues that the blockholders are not always considered to be an efficient internal monitoring mechanism. In fact, the blockholders may enjoy private benefits from their control, to the detriment of the other shareholders, and can expropriate the wealth of minority shareholders because of their privileged access to inside information and their high risk aversion compared to the diversified shareholders (Morck et al., 1988).

In the accounting literature, Firth, Fung and Rui (2007) examined, across listed companies in China, the quality of the financial statements manifested in their earnings informativeness. In their paper, informativeness is primarily measured by the association between stock returns and earnings. Their empirical results, based on data from 1998 to 2003, show that firms with highly concentrated share ownership have lower earnings informativeness. This has been attributed to an entrenchment effect, whereby blockholders may influence the adoption of accounting policies to reflect their wishes, rather than the economic substance of a business transaction. Therefore, the following hypothesis can be tested:

H2: There is a positive relationship between the blockholders ownership and the quality of the accounting information.

2.1.3. Institutional Ownership:

In financial literature and especially in the analysis of the relationship between the institutional ownership and corporate performance, Pound (1988) proposes three hypotheses: the *efficient monitoring hypothesis*, the *conflict of interest hypothesis* and *the strategic alignment hypothesis*. According to the efficient monitoring hypothesis, institutional ownership has a positive impact on performance because of the greater expertise of institutional investors and their ability to monitor managers at a lower cost. According to the conflict of interest hypothesis, institutional investors have business relationships with the firm in which they are shareholders. Therefore, the institutional owners are less likely to monitor the manager more efficiently. According to the strategic alignment hypothesis, the institutional owners and managers have a mutually advantageous system of cooperation which may reduce the beneficial effect on the value of the firm. In consequence, both conflict of interest and strategic alignment hypotheses predict a negative relationship between the institutional ownership and the performance of the firm. In the same research framework, Brickley, Lease and Smith (1988) classify the institutional investors into two groups: pressure-resistant and pressure-sensitive institutional investors. Pressure- resistant institutional investors only have investment relationship with the firm in which they are owners like the brokerage house, the investment companies and the mutual funds. In contrast, the pressure sensitive institutional investors have both an investment and business relationship with firms in which they are owners like the banks and the insurance companies. Despite the number of the researchers, the impact of the institutional investors on the performance of the firm is still ambiguous. Cornett, Marcus, Saunders and Tehranian (2007) found a positive relationship between institutional ownership and the performance of the firm. However, Limpahayom and Polwitoon (2004) found a non monotonic relationship between bank ownership and the performance of a firm in Thailand. Their empirical results show that low bank ownership increases the value of a firm while a high level of bank ownership reduces the value of a firm.

In the context of UAE, Ajifri and Moustafa (2007) and Ellili (2012) find a negative relationship between the institutional investor and the performance of the firm. This result does not support an "*efficient monitoring hypothesis"* and by consequence, the institutional investors are not able to efficiently control opportunistic managerial behavior.

In the spirit of the earning management research, Hadani et al. (2011) found that institutional ownership is negatively related to earnings management, which indicates that institutional owners are better positioned to constrain the practice of earnings management by their ability to gauge firm performance against the long-term fundamentals of a firm. Therefore, the following hypothesis can be tested:

H3: There is a negative relationship between institutional ownership and the quality of accounting information.

From an annual report voluntary disclosure perspective, Jiang and Habib (2009) found that the firms with the financial-controlled ownership structures disclose significantly less (more) at high (low) ownership concentration levels, suggesting that the expropriation phenomenon is likely to dominate efficient monitoring by increasing institutional ownership.

2.2. The board of directors

Various studies have focused on the relationship between the quality of the accounting information and the characteristics of the board of directors such as the board's duality (2.2.1.) and its size (2.2.2.)

2.2.1. The board's duality:

Duality is usually deemed to be present when the Chief Executive Officer (CEO) of a company is also its chairman. In the corporate governance literature, two theories (the agency theory and the theory of the normal succession) attempt to explain the separation between the chairman of the board of directors and the CEO. The agency theory argues that firms distinguish between the chairman and the CEO in order to control agency costs. In fact, Fama and Jensen (1983) suggest that the separation between the positions on decisions (initiation and implementation of investment projects) and the control positions (ratification and monitoring of investments) reduces agency costs and improves corporate performance. In consequence, the highest position in the control structure (the chairman) should not be held simultaneously by the person at the highest level of the decision structure (the CEO). If the CEO is also the chairman of the board, he or she would have a great influence on the board and on arranging his or her own compensation. Fama and Jensen (1983) argue that effective separation between management and control requires that two different people holding these positions. If the CEO is also chairman, this may be a dangerous situation for the shareholders. CEOs are more likely to act against the shareholders' wealth. Jensen (1993) believes that the CEOs should not also be chairman of the board as this would give them enormous power within the company and would be likely reduce their control effectiveness.

The normal succession theory suggests that the separation between the CEO and the chairman of the board of directors emerges as a part of the normal succession process. The new CEO must therefore pass through a probation period during which the directors assess his/her performance and determine whether he/she is ready or not to hold the position of the chairman. Davidson, Worrell and Cheng (1990) add that in this case, the separation between the CEO and the chairman does not lead to a better performance.

Another group of researchers found that board duality can actually lead to better performance (Rechner and Dalton, 1991; Pi and Timme, 1993; Fosberg and Nelson, 1999). Brickley, Coles and Jarrell (1997) confirm that separation between the CEO and the chairman does not necessarily lead to better performance. According to them, board duality can improve and facilitate the decision-making process. Similarly, in the context of UAE, Ellili (2012) shows that with board duality there is a positive impact on the performance of a company. This indicates that the separation between the positions of the CEO and the chairman of the board of directors does not lead to an improvement in corporate performance.

In an accounting context, Bowen, Rajgopal and Venkatachalam (2002) indicate that the separation between the CEO and the chairman is important to avoid earnings management malpractice. In fact, they find that the earning management malpractice is higher in firms with CEO duality. This result is supported by Mohd Saleh, Mohd Iskander and Rahmat (2005), who provide evidence that CEO duality is positively related to earning management and that companies with CEO duality did not perform well compared with their counterparts. We can therefore test the following hypothesis:

H4: There is a positive relationship between the separation and the quality of the accounting information.

2.2.2. The board's size

The effect of board size on the corporate performance is still controversial, even though in corporate governance literature most studies show that a small board of directors can enhances the performance of a firm (Jensen, 1993; Yermack, 1996; Hermalin and Weisbach, 2003). It is obviously true that having additional directors can improve a control system but, conversely, they can slow the process of the decision making. Jensen (1993) argues that the board is at the top of the internal control system and the ultimate consequence of its dysfunction is the failure of the firm. According to Jensen (1993), the smaller board improves the corporate performance and to control easier the managers, the number of directors should not exceed seven or eight. Yermack (1996) and Hermalin and Weisbach (2003) find a negative relationship between the size of the board of directors and corporate performance, confirming that the small boards operate more effectively. Pearce and Zahra (1992) and Dwivedi and Jain (2005), however, conclude that the board size has a positive impact on performance. In fact, large boards could provide the diversity that can help firms to secure critical resources and reduce environmental uncertainties.

In the context of UAE, the empirical results of Aljifri and Moustafa (2007) and Ellili (2012) reveal that board size often has a negative impact on the performance of a firm. This suggests that UAE firms, on average, do not select their board members optimally, which may lead to a lack of coordination and communication and cause decision making problems. Therefore, boards with a small size are more effective in the control of the managerial discretion. In the earning management context, there is a kind of consensus on the impact of the board size on discretionary accruals. Xie, Davidson and DaDalt (2003) and Rashidah and Fairuzana (2006) find that a larger board is associated with lower levels of discretionary current accruals, confirming that a larger board can often be more effective in monitoring such accruals than a smaller board. This result indicates that the outside directors may lack the financial expertise and skills to detect the earning management. Therefore, we can test the following hypothesis:

H5: There is a positive relationship between board size and the quality of accounting information.

2.3. The quality of accounting information:

High quality accounting information is vital to ensure the accuracy of financial statements and poor quality of information may lead to serious economic problems. In the accounting literature, the quality of information is a complex concept and has many definitions. In general, the quality of the accounting information is related to different areas such as value relevance, earning management and accounting conservatism.

In the empirical literature, the quality of the accounting information is measured by several approaches. In fact, the quality of the accounting information disclosed by firms has been measured by estimating the value relevance of the accounting numbers for the stock market (Alford, Jones, Leftwich, and Zmijewski, 1993). Accounting information is included in investors' valuation models and helps in decision making. Another approach involved in measuring the quality of disclosed financial reports is to study conservatism in accounting (Garcia Lara and Mora, 2004). The International Financial Reporting Standards (IFRS) state that accountants should prepare reliable and relevant financial reports in order to provide high quality information. The quality of the accounting information can be also measured by the degree of the earnings management. The most common definition of earnings management is the direct or indirect manipulation of financial reports through accounting methods. This manipulation happens to meet the investors' expectations or to overcome the period of volatile earnings. The managers engage in earnings management activities with the objective of obtaining many incentives such us debt covenants, management compensation and job security (Alzoubi, 2012). Also, since the shareholders exercise earnings for bonus and stock options, the managers manipulate the earnings to get more profits. Therefore, the managed earnings are considered to be misleading signals for investors (Dechow, 1994).

In our study, we follow many researchers (Liu and Lu, 2007; Jaggi and Leung, 2007) and we measure the quality of the accounting information by the discretionary accruals as a proxy of the earning management because in the recent accounting literature, there is a consensus that the current discretionary accruals are the most powerful models for estimating discretionary accruals.

3. Corporate governance in UAE

Corporate governance does not have a single formal definition but it "is most often viewed as both the structure and the relationships which determine corporate direction and performance. The board of directors is typically central to corporate governance. Its relationship to the other primary participants, typically shareholders and management, is critical. Additional participants include employees, customers, suppliers, and creditors. The corporate governance framework also depends on the legal, regulatory, institutional and ethical environment of the community"[9].

In UAE, a code of corporate governance was issued by the "Security and Commodities Authority" (SCA) in 2007 and it has been superseded and amended by the "Ministry of Economy's Decision No. 518 of 2009". The code requires companies and institutions that have securities listed in any securities market in UAE (either in Dubai or in Abu Dhabi) and members of their boards of directors to adopt corporate governance rules that aim to:

1- Specify clearly the duties of the board of directors;

2- Describe the responsibilities of the chairman of the board of directors;

3- Explain the roles of members of the board of directors;

4- Determine the audit charges, the nomination and the remuneration committees;

5- Decide on the remuneration of the board members

6- Create an internal control system within their company;

7- Encourage the companies to adopt the principles of good corporate governance, to publish their corporate governance report and make them available to all the shareholders;

8- Establish an effective framework for the protection of shareholder rights; and

9- Strengthen transparency within the company.

To advance corporate governance reform in UAE and to promote the economic development, two organizations were created: the Hawkamah (the Institute for Corporate Governance) in Dubai and the Center for Corporate Governance in Abu Dhabi. Both organizations encourage and assist the private and the public sectors to adopt the highest standards and practices of corporate governance.

Also, the UAE requires its banks as well as the companies listed on the UAE's new stock exchange and the Dubai International Foreign Exchange to abide by IFRS in order to project an image of integrity, efficiency and transparency and to comply with international standards.

4. Data and methodology

4.1.Data

The objective of this paper is to determine the relationship between ownership structure and the quality of the accounting information of the

[9] http://www.corpgov.net/library/definitions.html

companies listed on the Abu Dhabi Stock Exchange (ADX), using data from 2008 and 2009. The data has been hand collected and the choice of the companies was based on the availability of data. The number of companies included in our analysis is 29. The banks and the financial institutions have been excluded from our sample because of their specific financial activities in terms of their supervision by the central bank.

4.2. The choice of variables:

In our model, managerial ownership is measured by the proportion of the capital held the Chief Executive Officer (CEO). Blockholders' ownership is the proportion of the capital held by the external shareholders when they hold more than 5% of the capital of the firm and if they are different from the managers and the institutional shareholders. Institutional ownership is measured by the proportion of capital held by the institutions. To measure a firm's ownership concentration, we use the Herfindahl index of the firm's ownership structure, which it is calculated as the sum of squared percentage of shares held by the largest three shareholders.

Table 1. The ownership variables

Variables	Notation	Measure	Potential impact on quality of the accounting information
Managerial ownership	MO	The part of the capital held by the manager	Negative
Blockholders ownership	BO	The part of the capital held by external shareholders having more than 5%	Positive
Institutional ownership	IO	The part of the capital held by the institutional shareholders	Negative
Herfindahl index	HI	The sum of squared percentage of shares held by the largest three shareholders.	Negative

The board duality is a dummy variable that takes the value of 1 if the CEO is at the same time the chairman of the board of directors and 0 otherwise. The board size is the number of the members of the board. According to the above ministerial resolution, one-third of the board members must be independent.

Table 2. The board variables

Variables	Notation	Measure	Potential impact on quality of the accounting information
Board duality	BD	1 if the CEO is the chairman of the board, 0 otherwise	Positive
Board size	BS	The number of the directors in the board	Positive

Other factors other than ownership structure may also affect the quality of the accounting information. To take them into account, we introduce a set of control variables. Dummy variables for industries are used to control the difference between the sectors. Also, the capital structure variable is defined as total debt to total assets and firm size is defined as the logarithm of total assets.

Table 3. The Firm's variables

Variables	Notation	Measure	Potential impact on quality of the accounting information
Sector	DUM	Dummy variable: i=1,2,…7	-
Debt	DEBT	total debts/total assets	Positive
Size	SIZE	Log (total assets)	Positive
Performance	ROE	Net income/ shareholder's equity	-

In our study, the quality of the accounting information is measured by the discretionary accruals according to the two Jones models (1991). In the first model, the total accruals (*TACC*) are regressed on both the change in the revenues (*Δ Rev*) which is a normal component of the working capital accruals and the level of gross property, plant and equipment (PPE), which is a component of long-terms accruals. All the variables in the regression are divided by the lagged total asset to avoid the heteroskedasticity problem. The non-discretionary accruals (*NDCC)* are the predictions from the Ordinary Least Squares (OLS) of the model below, while the discretionary accruals (*DACC*) are the residuals.

The specific model is:

$$\frac{TACCit}{TAi,t-1} = \alpha 1\left(\frac{1}{TAi,t-1}\right) + \alpha 2\left(\frac{\Delta\, Rev\ i,t}{TAi,t-1}\right) + \alpha 3\left(\left(\frac{PPE\ it}{TAi,t-1}\right) + \varepsilon it\right.$$

TACC: Total accruals in year t, calculated as the difference between the net income and operating cas flows.

TA: Total assets at the beginning of the year.

Δ Rev: Change in the revenues.

PPE: Gross property, plant and equipment.

i,t : Firm and year index.

In the second mode, the only differences from the first model are the changes in the revenues, which are adjusted by the changes in receivables (Δ Rec). The non-discretionary accruals (Mod_NDCC) are the predictions about the OLS estimation of the model, while the discretionary accruals (Mod_DACC) are the residuals.

The specific modified model is:

$$\frac{TCCCit}{TAi,t-1} = \alpha 1\left(\frac{1}{TAi,t-1}\right) + \alpha 2\left(\frac{\Delta\ \text{Rev i},t - \ \Delta\ \text{Rec i, t}}{TAi,t-1}\right) + \alpha 3\left(\left(\frac{PPE\ it}{TAi,t-1}\right) + \varepsilon it\right.$$

TACC; TA; *Δ Rev:* Change in the revenues*;* PPE: Gross property, plant and equipment; i,t : Firm and year index: as defined previously.

Δ Rec: Change in the accounts receivable.

Table 4. The variables of the accounting information quality

Variables	Notation	Measure
Total accruals	TACC	The difference between net income and operating cash flows.
Change in the revenues	Δ Rev	Ending revenues-Beginning revenues
The difference between the changes in revenues and the changes in the accounts receivables	Δ Rev- Δ Rec	(Ending revenues-Beginning revenues)- (Ending accounts receivables-Beginning accounts receivables)
Gross property, plant and equipment (PPE)	PPE	Gross fixed assets
Non-discretionary accruals	NDACC	Predictions from the OLS of the first above model
Modified non-discretionary accruals	Mod_NDACC	Predictions from the OLS of the second above model
Discretionary accruals	DACC	The difference between the total accruals and the non-discretionary accruals
Modified discretionary accruals	Mod_DACC	The difference between the total accruals and the modified non-discretionary accruals

4.3. Methodology:

This study employs cross-sectional and multivariate regression analysis in an attempt to understand the relationship between the ownership structure, the board of directors and the quality of the accounting information. In our empirical analysis, we test the following models:

$$DACC_{it} = \beta_0 + \beta_1\, MO_{it} + \beta_2\, BO_{it} + \beta_3\, IO_{it} + \beta_4\, HI_{it} + \beta_5\, BD_{it} + \beta_6\, BS_{it} + \varepsilon_{it} \quad (1)$$

$$Mod\_DACC_{it} = \beta_0 + \beta_1\, MO_{it} + \beta_2\, BO_{it} + \beta_3\, IO_{it} + \beta_4\, HI_{it} + \beta_5\, BD_{it} + \beta_6\, BS_{it} + \varepsilon_{it} \quad (2)$$

Given that the four ownership variables (managerial, blockholders, Institutional and concentration) and the two board variables (duality and size) are not the only factors affecting the earnings management, we also include in our analysis several control variables (the debt, the size, the performance and the industry sector).

$$DACC_{it} = \beta_0 + \beta_1 MO_{it} + \beta_2 BO_{it} + \beta_3 IO_{it} + \beta_4 HI_{it} + \beta_5 BD_{it} + \beta_6 BS_{it} + \beta_7 DEBT_{it} + \beta_8 SIZE_{it} + \beta_9 ROE_{it} + \beta_{10} DUM_{it} + \varepsilon_{it} \quad (3)$$

$$Mod\_DACCit = \beta0 + \beta1\ MOit + \beta2\ BOit + \beta3\ IOit + \beta4\ HIit + \beta5\ BDit + \beta6\ BSit + \beta7\ DEBTit + \beta8\ SIZEit + \beta9\ ROEit + \beta10\ DUMit + \varepsilon it \quad (4)$$

5. The empirical results

5.1. Descriptive statistics

Table 5 below shows descriptive statistics for the variables used in the study of the relationship between ownership structure, the board of directors and the quality of the accounting information. The average of managerial ownership is 4.82%. Blockholders' ownership has an average of 7.19% while institutional ownership has the highest average at 47.97%. The typical company in the sample has 8 directors and only 7% of the companies have a CEO who is also chairman of the board of directors. The average debt ratio is 35.96%. The average company in the sample has total assets of AED 645,349,427. The average ROE of the companies included in our analysis is 4.40. The discretionary accruals and modified discretionary accruals have respective averages of -0.0605 and -0.0511.

Table 5. Descriptive statistics

Variables	Mean	Min	Max	Std. Dev
MO	0.0482	0.00	0.7521	0.1517
BO	0.0719	0.00	0.4270	0.1124
IO	0.4797	0.05	0.9992	0.2655
HI	0.8650	0.03	2.83	0.7185
BD	0.07	-	-	-
BS	8.2	3	17	2.7
DEBT	0.3596	0.01	0.9100	0.2459
SIZE	17.6665	9.00	22.0000	3.4430
ROE	4.40	-0.11	115.69	18.74
DACC	-0.0000	-0.3949	0.2338	0.0831
Mod_DACC	-0.0607	0.0765	0.0134	0.0105

Table 6 below shows the correlation matrix of the independent variables. As shown in the table, the highest correlation coefficients are (0.8566) between the Herfindahl Index and the Institutional Ownership and (-0.5048) between the blockholders Ownership and the Board's Size. All the other correlation coefficients are less than 0.5 which means that there is no multicollinearity problem.

Table 6. Correlation matrix for the variables

	MO	BO	IO	HI	BD	BS	DEBT	SIZE	ROE
MO	1.0000								
BO	- 0.0528	1.0000							
IO	-0.4068	-0.4858	1.0000						
HI	-0.1749	-0.2850	0.8566	1.0000					
BD	-0.0369	0.2525	-0.0203	0.0374	1.0000				
BS	-0.0661	-0.5048	0.1823	0.1779	-0.0717	1.0000			
DEBT	0.1753	-0.0586	-0.0602	0.0731	-0.0855	0.0447	1.0000		
SIZE	0.2898	0.3346	-0.0852	0.2182	0.2002	-0.3606	0.0497	1.0000	
ROE	-0.0732	-0.1379	0.0986	0.0521	-0.0621	0.1842	0.0688	-0.0185	1.0000

Table 7 below reports the average by sector of the different ownership variables. The highest average of the managerial ownership is in the industrial sector, with a value of 11.05%, while the managers hold 0% of ownership in the energy, the telecommunications, and the real estate. The highest average of the blockholders' ownership is in the health care industry sector with a value of 28.50% while the blockholders have 0% of ownership in energy, industrial, telecommunications and real estate. The highest average of institutional ownership is in the telecommunications sector with a value of 76.73 %. The institutional investors hold ownership in all the sectors.

Table 7. Ownership Structure by Sector

Sector	Number of the firms	Managerial	Blockholder	Institutional
Energy	2	0.0000	0.0000	0.4626
Industrial	4	0.1105	0.0000	0.3182
Consumer	7	0.1068	0.0490	0.3620
Health care	3	0.0639	0.2850	0.3448
Telecommunication	3	0.0000	0.0000	0.7673
Construction	9	0.0599	0.0249	0.6155
Real estate	1	0.0000	0.0000	0.3098

The table 8 below shows the degree of the ownership concentration by sector. The highest ownership concentration is in the telecommunications sector while the lowest is in the real estate sector. As shown above by the table 5, ownership in both sectors is held only by institutional investors.

Table 8. Ownership Concentration by Sector: Cumulative percentage of shares controlled by different types of shareholders

Sector	Definition	C1	C2	C3	HI
Sector 1	Energy	0.3574	0.4626	0.4994	0.7126
Sector 2	Industrial	0.3208	0.3111	0.4144	0.3757
Sector 3	Consumer	0.3630	0.4291	0.4857	0.5887
Sector 4	Health care	0.3081	0.4386	0.5512	0.5684
Sector 5	Telecommunication	0.7673	0.7673	0.7673	1.8365
Sector 6	Construction	0.5454	0.6320	0.6335	1.2431
Sector 7	Real estate	0.1886	0.2560	0.3083	0.1666

C1- percentage holding of largest shareholders, C2- combined percentage holdings of 2 largest shareholders, C3- combined percentage holdings of 3 largest shareholders.

Table 9 below shows the discretionary accruals by sector. The highest discretionary accruals are in the real estate industry (DACC= 0.0586 and the Mod-DACC= 0.0648). This ranking is a comparative measure of the size of discretionary accruals across the sectors, and is a proxy for the quality of a firm's earnings. A high amount of discretionary accruals indicates lower-quality earnings and is a sign that the management in the real estate may be using the aggressive accounting to overstate earnings. According to the tables 7 and 8, the real estate sector is characterized by the lowest institutional ownership (30.98%) and the lowest Herfindahl index (16.66%).

Table 9. Discretionary Accruals (DACC) and Modified Discretionary Accruals by sector

Sector	Number of the firms	DACC	Mod_DACC
Energy	2	0.0379	0.0404
Industrial	4	-0.0518	-0.0438
Consumer	7	-0.0073	0.0011
Health care	3	0.0036	-0.0016
Telecommunication	3	0.0019	0.0091
Construction	9	0.0110	0.0138
Real estate	1	0.0586	0.0648

6. Empirical results

Here we present the results of the regression of the four models above. An important part of the analysis below consists of separating the discretionary accruals and the modified discretionary accruals. The estimation of the panel data with fixed effects of the four above models invalidates the presence of the individual effects. Thus, we can consider the coefficients of the pooled estimation, since the data comprise N*T rather than panelized observations.

The two first models are examined to test the relation between the ownership structure (managerial, blockholder and institutional) and the board of directors' characteristics (duality and size) and earning management measured by the DACC and Mod_DACC. The two last models look at the effect of the ownership structure, the board of director's characteristics as well as others factors that may affect the earning management like DEBT, SIZE, ROE and the industry sector on the DACC and Mod_DACC. In the two first models and the fourth model, the board's duality has a positive and significant impact (at 10%) for both discretionary accruals and modified discretionary accruals. Our empirical results confirm that the duality of the CEO is related to a high earning management. Our findings corroborate those of Bowen, Rajgopal and Venkatachalam (2002) who indicate that the separation between the CEO and the chairman is important to avoid earnings management malpractices and confirm that the earning management practices are higher for firms with CEO duality. This result is supported by Mohd Saleh, Mohd Iskander and Rahmat (2005) who provide evidence that CEO duality is positively related to the earning management and that companies with CEO duality do not perform well compared with their counterparts. In the two last models, other control variables have been included, along with ownership structure and the board of directors' characteristics and all the signs remain the same (except the board size).

The empirical result of the third model shows that managerial ownership has a negative and significant impact (at 10%) on discretionary accruals. This result confirms that a high presence of mangers in the ownership structure is associated with a weak practice of the earning management. Our result confirm the findings of Warfield et al. (1995) and Salsiah et al. (2008) who indicate that the quality of the accounting information is positively related to managerial ownership, whereas the magnitude of the discretionary accruals is negatively related. Indeed, their results confirm that the quality of the accounting information increases as managerial ownership increases, thus supporting the convergence of interest effect hypothesis (Morck et al., 1988).

Blockholders' ownership has a negative and significant impact (at 5% in the second model and 10% in the third and fourth models) on both discretionary accrual and modified discretionary accruals. According to this result, the high presence of the blockholders in the ownership structure of the company ensures a good quality of accounting information. Our result contradicts those of Fung and Rui (2007) who confirm that firms with highly concentrated share ownership have lower earnings informativeness. Their result has been attributed to an entrenchment effect, where blockholders may influence the adoption of accounting policies to reflect their wishes rather than the economic substance of a business transaction.

In all the above models, institutional ownership has a negative but non-significant impact on earning management. Therefore, the institutional ownership is not necessarily associated with the practice of earning management. Our findings contradict those of Hadani et al. (2011), who find that institutional ownership is negatively related to earnings management and indicate that institutional owners are better positioned to constrain the practice of earnings management by their ability to gauge firm performance against the long-term fundamentals of a firm. With regard to the Herfindahl Index, our study fails to find any significant association between the ownership concentration and earning management. Similarly, in the four models, the impact of the board's size is non-significant. The empirical result of the third model shows that the debt level of a company has a positive and significant (at 5%) relationship with discretionary accruals. This result illustrates that high leverage is associated with a high level of earning management. Our result validates the findings of Jiang, Lee and Anandarajan (2008) who confirm that the highly leveraged companies have strong incentives to use income increasing accruals to relax the contractual debt-constraints.

With regard to size, it appears that it negatively and significantly (at 5%) affects earnings management. This finding shows that the larger companies have better earnings quality since they engage less in earnings management and suggests that these companies are more closely scrutinized than smaller companies. Indeed, the larger companies are more encouraged to produce a higher quality of reported earnings compared to the smaller companies (Park and Shin, 2004).

Regarding the industry sector, two other models show that in the industrial sector, there is a weak practice of earnings management (the coefficient is significant at 5%), while this practice is high in the construction and real estate sectors, (the coefficients of both sectors are positive and significant at 5 % and 10%, respectively). This result could be explained by the higher prevalence of managerial ownership in the industrial sector than in the construction and real estate sector. As shown above, high managerial ownership is associated with good accounting information.

7. Conclusion

The aim of this research was to analyze the relationships between the ownership structure, the board of directors' characteristics and the quality of the accounting information. The empirical results show that managerial and blockholders ownerships have negative impacts on the discretionary accruals. This result confirms that the high presence of the managers and blockholders in the ownership structure of a company are associated with a weak practice of the earning management and will lead to good quality of the accounting information. Indeed, our empirical results confirm that the quality of the accounting information increases as managerial ownership increases, thus supporting the convergence of interest effect hypothesis (Morck et al., 1988). Regarding the blockholders' ownership, our results show that firms with highly concentrated share ownership have higher earnings informativeness which confirms that blockholders influence the adoption of accounting policies to reflect the economic substance of the business transaction and not their wishes. In addition, our study shows that the board's duality is positively associated with the discretionary accruals. Indeed, our empirical result confirms that the duality of the CEO is related to a high earnings management practice. Our findings indicate that the separation between the CEO and the chairman is important to avoid the earnings management practices.

With regard to institutional ownership, our study failed to find any significant association with the practice of the earnings management. Our findings validate the theory that institutional owners are not always better positioned to constrain the practice of earnings management by their ability to gauge firm performance against the long-term fundamentals of the firm. Our empirical results show that the debt level of a company positively affects the discretionary accruals and confirms that highly leveraged companies have strong incentives to use income increasing accruals to relax contractual debt-constraints. With regard to size, it appears that this negatively affects earnings management, which shows that the larger companies have better earnings quality since they are more closely scrutinized than smaller companies. Finally, with regard to the industry sector, our study shows that there is often a weak practice of earnings management when this practice is common in the construction and real estate sectors. This could be explained by there being more managerial ownership in the industrial sector than in the constructions and real estate sectors. As shown above, high managerial ownership is associated with good quality accounting information.

This study contributes to the existing literature on the relationship between managerial ownership, the board of directors and the earnings management practice within the company. In fact, the high presence of the managers and the blockholders in the ownership structure of the company ensures high quality of the accounting information while the non-separation between the CEO and the chairman of the board leads to a high practice of the earnings management. In addition, the contribution of the institutional owners is not always a gauge of the quality of accounting information.

References

1. Agrawal, A. & Mandelker, G. (1992). Shark repellent and the role of institutional investors in corporate governance. *Managerial and Decision Economics*, 13, 15-22.
2. Ahmed, A., & Duellman, S. (2007). Accounting conservatism and board of director characteristics: An empirical analysis. *Journal of Accounting and Economics*, 43, 411-437.
3. Alford, A., Jones, J., Leftwich, R., & Zmijewski, M. (1993). The relative informativeness of accounting disclosures in different countries. Journal of Accounting Research, 31(3), 183-223
4. Aljifri, k. & Moustafa, M. (2007). The impact of corporate governance mechanisms on the performance of UAE firms: An empirical analysis'. *Journal of Economic & Administrative Sciences*, 23, 71-93.
5. Alzoubi, E. S. S. (2012). Board characteristics and financial reporting quality among Jordanian listed companies: Proposing conceptual framework. Asian Journal of Finance and Accounting, 4(1), 245-258.
6. Beeks, W., Pope, P.F. & Young, S.E. (2004). The link between earnings timeliness, earnings conservatism and board composition: Evidence from the UK. *Corporate Governance: An International Review*, 12. 47-59.
7. Bowen, R. M., Rajgopal, S. & Venkatachalam, M. (2002). Accounting choice, corporate governance and firm performance. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=367940.
8. 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, 3-42.
9. Dechow, P. M &. Dichev, I. D. (2002). The quality of accruals and earnings: The role of accrual estimation errors. The Accounting Review, 77, 35-59.
10. Demsetz, H. (1983). The structure of ownership and the theory of firm. *Journal of law and Economics* 26, 375-390.
11. Demsetz, H. & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93, 1155-1177.
12. Denis, D. Denis, D. & Sarin, A. (1995). Performance changes following top management dismissals. *Journal of Finance*, 50, 1029-1057.
13. Ellili, N, O, D. (2012). The ownership structure, the board of directors and the corporate performance: Complementarity or substitutability? Evidence from companies listed on Abu Dhabi stock exchange. *Corporate Ownership and Control Journal*, 3, 276-288.
14. Fang, J.P.H. & Wong, T.J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. Journal of Accounting and Economics, 33, 401-425.

15. Firth, M., Fung, P. & Rui, O.M. Ownership, two-tier board structure, and the informativeness of earnings-Evidence from China. *Journal of Accounting and Public Policy*, 26, 463-496.
16. García Lara, J.M. & Mora. A. (2004). Balance sheet versus earnings conservatism in Europe, European Accounting Review, 13, 261-292.
17. Gegenfurtner, B., Ampenberger, M., & Kaserer, C. (2009). The impact of managerial ownership, monitoring and accounting standard choice on accrual mispricing. CEFS Working Paper Series 2009-02. Center for Entrepreneurial and Financial Studies (CEFS). Technische Universität München.
18. Gul, F., & Wah, L.K. (2002). Insider entrenchment, board leadership structure and informativeness of earnings. Working paper, City University of Hong Kong.
19. Hadani, M., Goranova, M. & Khan, R. (2011). Institutional investors, shareholder activism, and earnings management. *Journal of Business Research*, 12, 1352-1360.
20. Healy, P. M., & Wahlen, J. M. (1999). A review of earnings management literature and its implications for standard setting. *Accounting Horizons*, 13, 365-383.
21. Jaggi, B & Tsui, J. (2007). Insider trading earnings management and corporate governance: Empirical evidence based on Hong Kong Firms', Journal of International Financial Management and Accounting, 18, 192-222.
22. Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm, managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.
23. Jiang, H & Habib, A. (2009). The impact of different types of ownership concentration on annual report voluntary disclosures in New Zealand. *Accounting Research Journal*, 22, 275-304.
24. Jiang, W, Lee, P. & Anandarajan, A. (2008). The association between the corporate governance and earnings quality: Further evidence using the GOV-score. *Advances in Accounting incorporating Advances in International Accounting*, 24, 191-201.
25. Jones, J.J. (1991). Earnings management during import relief investigations. Journal of Accounting Research, 29, 193-228
26. LaFond, W., & Watts, R. L. (2008). The information role of conservatism. *The Accounting Review*. 83, 447-478.
27. Lennox, C. (2005). Management ownership and audit firm size. *Contemporary Accounting Research,* 22, 205-227.
28. Liu, Q & Lu, Z. (2007). Corporate governance and earnings management in Chinese listed companies: A tunneling perspective. Journal of Corporate Finance, 13, 881-906.
29. McClelland, P., & Barker, V.L. (2004). The interaction of CEO and the ownership control in publicly traded firms: performance implications ", Working paper, School of Business, University of Kansas.
30. McConnell, J., Servaes, H., & Lins, .K. (2004). Changes in insider ownership and changes in the market value of the firm. *CEPR Discussion paper* n°*4411, http://papers.ssrn.com/abstract=560084*
31. Mohd Saleh, N., Mohd Iskandar, T., & Rahmat, M. M. (2005). Earnings management and board characteristics: Evidence from Malaysia. *Journal Pengurusan*, 24, 77-103.
32. Morck, R. Shleifer, A., & Vishny, R.W. (1988). Management ownership and market valuation. *Journal of Financial Economics*, 20, 293-315.
33. Park, Y. M & Shin, H.H. (2004). Board composition and earnings management in Canada. *Journal of Corporate Finance*, 10, 431-457.
34. Pfarrer, M. D., Smith, K. G., Bartol, K. M., Khanin, D. M. & Zhang, X. (2008). Coming forward: The effects of social and regulatory forces on the voluntary restatement of earnings subsequent to wrongdoing. *Organization Science,* 19(3), 386-403.
35. Rajgopal, S., Venkatachalam, M., & Jiambalvo, J. (1999). Is institutional ownership associated with earnings management and the extent to which stock prices reflect future earnings? *Working Paper, University of Washingto.*
36. Rashidah, A.R. & Fairuzana Haneem, M.A. (2006). Board, audit committee, culture and earnings management: Malaysian evidence. *Managerial Auditing Journal,* 21, 783 – 804.
37. Salsiah, M. A., Norman, M. S & Hassan, M. S. (2008). Ownership structure and earnings management in Malaysian listed companies: the size effect. *Asian Journal of Business and Accounting*, 1, 89-116.
38. Shleifer, A. & Vishny, R.W. (1986). Large shareholders and corporate control. *Journal of Political Economy* 94, 461-479.
39. Short, S H., & Keasy, K. (1999). Managerial ownership and the performance of firms: Obviousness from the U.K. *Journal of Corporate Finance*, 5, 79-101.
40. Shuto, A. & Takada, T. (2010). Managerial ownership and accounting conservatism in Japan: a test of management entrenchment effect. *Journal of Business Finance and Accounting*, 37, 815-840
41. Teshima, N. & Shuto, A. (2008). Managerial ownership and earnings management: Theory and empirical evidence from japan. *Journal of International Financial Management and Accounting*, 19, 107–32.
42. Warfield, T.D., Wild, J.J. & Wild, K.L. (1995). Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics*, 20, 61-91.
43. Xie, B., Davidson W. N.& DaDalt. P.(2003). Earnings management and corporate governance: The role of the board and the audit committee. *Journal of Corporate Finance*, 9, 295-316

Appendix 1. Total Accruals

	Original Measure		Modified Measure	
	Coefficient	t-Student	Coefficient	t-Student
Constant	-0.0605	-4.63	-0.0555	-4.43
Δ Rev	0.0745	1.12		
Δ Rev- Δ Rec			-0.0003	-1.11
PPE	-0.0010	-1.11	-0.0009	-1.09

Appendix 2. The Quality of the Accounting Information, the Ownership Structure and the Board of directors

	Discretionary Accruals		Modified Discretionary Accruals	
	Coefficient	t-Student	Coefficient	t-Student
Constant	0.0231	1.29	0.0416	1.51
MO	-0.0427	-1.40	-0.0422	-1.39
BO	-0.1811	-1.04	-0.2277	-2.29**
IO	- 0.0188	- 1.14	-0.0022	-1.02
HI	-0.0131	-1.33	-0.0078	-1.20
BD	0 .0338	1.73*	0.0318	1.68*
BS	-0.0009	-1.19	-0.0015	-1.30
R^2 R^2 adjusted				

**, ** Significant at a confidence degree of 10 % and 5 %, respectively.*

Appendix 3. The Quality of the Accounting Information, the Ownership Structure, the Board of directors and the Control Variables

	Discretionary Accruals		Modified Discretionary Accruals	
	Coefficient	t-Student	Coefficient	t-Student
Constant	0.0877	1.43	0.0875	1.42
MO	-0.1485	-1.93*	-0.0955	-1.59
BO	-0.1618	-1.80*	-0.1773	-1.86*
IO	-0.0858	-1.46	-0.0650	-1.34
HI	-0.0040	-1.07	-0.0086	-1.15
BD	0.0368	1.61	0.0442	1.72*
BS	0.0029	1.36	0.0033	1.41
DEBT	0.1147	2.43**	0.1136	2.39**
SIZE	-0.0061	-2.05**	-0.0062	-2.05**
ROE	0.0001	1.24	0.0002	1.25
Energy	-0.0151	-1.17	-0.0213	-1.24
Industrial	-0.0831	-2.12**	-0.0790	-2.04**
Consumer	0.0228	1.26	0.0259	1.29
Health care	0.0432	1.41	0.0160	1.15
Telecommunication	0.0117	1.12	0.0094	1.10
Construction	0.0596	1.67*	0.0549	1.61
Real estate	0.0607	2.02**	0.0624	2.03**
R^2 R^2 adjusted				

**, ** Significant at a confidence degree of 10 % and 5 %, respectively.*