Evaluating the Relationship between Ownership Structure as Corporate Governance Mechanism and Accounting Earnings Management Tools on the Financial Performance: A Case of Egypt

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Abstract
This study focused on examining whether the internal mechanisms of corporate governance especially ownership structure (institutional /family) can control earning management manipulations and enhance the firm performance. As there has been an ongoing debate and conflict on whether the existence of institutional /family ownership eliminate or increase accounting earning management manipulations in the listed companies in Egyptian stock exchange. This study focused on 49 listed companies whose shares are among Egypt's 100 most actively traded shares (EGX100 price index) form the years (2006 to 2013) after excluding Firms with insufficient data, Banks and Financial Institutions, and Insurance companies from annual reports of Egyptian companies, Egyptian disclosure Books, and Egyptian financial statements. The study employs an advanced panel threshold regression estimation developed in 1999 by Hansen that test whether there are positive and negative impacts of ownership structure on earning management and firm value. This estimation procedure has the advantage of quantifying the threshold level of ownership structure as compared to the ad hoc classification procedure of splitting the sample. The results show that institutional ownership is only pertinent to the firm value up to a threshold level from (62%- 64 %). While, family ownership is only pertinent to the firm value up to a threshold level from (36%-41%). Additional increase in level of ownership structure beyond the threshold level does not add to a firm's value. This is the first study to look at this issue for Egyptian listed firms to apply the appropriate level of ownership structure, which would thus decrease the management opportunistic behavior, and maximize the firm and stockholders' value. An excessive level of ownership structure could lead to sever agency problems and overhang situation at the microeconomic firm level; this could eventually could cause vulnerability in financial systems and thus lead to the financial catastrophes. These suggested amendments could contribute towards enhancing the impact of the Egyptian corporate governance guidelines on the performance of listed companies in the Egyptian capital market. Regulatory bodies such as Securities Commission, Egyptian stock Market and Committee of Egyptian Code of Corporate Governance need to take note on the percentage of concentrated ownership among the Egyptian listed companies to enhance and develop performance of Egyptian stock exchange.

Keywords: institutional-ownership, family-ownership, corporate governance, accounting earning management, financial performance, egyptian stock market, and panel threshold analysis

INTRODUCTION
Within the broader context of globalization, liberalization, deregulation, and corruption, almost all organizations (private, public, or non-governmental) are competing to enhance their accountability and reliability and to increase the stakeholders confidence, thus, they require to govern the organization and to link their shareholders (owners) interest and stakeholders with management (agent), otherwise known as “corporate governance”. A number of big-name corporate collapse, accounting irregularities, corporate corruption, remuneration excesses and inadequate disclosure practices such as (Swissair, Enron, Arthur Andersen, Parmalat, Adecco, Yukos, Baring bank, World-com, UBS) have made the investors wary of corporate governance system. Thus, Corporate governance has indeed received a lot of attention in the recent year both in academic and the professional literature. Both inside and outside boardrooms including directors, stakeholders, and regulators enthusiastically recommended it and have successfully enacted corporate governance reforms into law in some countries such as USA (Sarbanes-Oxley Act, 2002), UK
In this regard, the OECD (2001) stressed on the importance of corporate governance for national development due to its growing role in helping to increase the flow of financial capital to firms in developing countries. Correspondingly, Babic (2003) further emphasized that corporate governance is doubly critical in transition countries. The scarcity of domestic savings demands that capital be directed towards the most profitable companies, which is possible only if principles of corporate governance are given publicity, transparency and monitoring. A result for the imperfection of market mechanisms (undeveloped stock and bond markets and ineffective banking system), corporate governance presents an additional mechanism for discipline and effective management control in corporations. Thus, good corporate governance is an important factor for the functioning of a financial market, which leads to efficient and equitable allocation of financial resources. Accordingly, corporate governance has become increasingly imperative for underpinning growth prospects especially among emerging markets. It has an important role not only attracting foreign direct investment but also in enabling domestic enterprises to move beyond their family base to tape new sources of capital on a sustainable basis. In addition, protecting the environment, employees and society at large, are crucial objectives for corporate governance in developing countries.

However, Mensah (2002) claimed that developing countries are poorly equipped to implement effectively the corporate governance found in the developed market economies because developing countries are characterized by state ownership of firms, interlocking relationships between governments and financial sectors, weak legal and judiciary systems and limited human resource capabilities.

Within this context, the countries with a civil law legal system tend to provide less protection to shareholders than countries with a common-law legal system. Accordingly, this can be the reason for the initial issuance of the Egyptian corporate governance guideline in 2005. Literature studies such as (Shleifer and Vishny (1997), La Porta et al., (1999), and Claessens et al. (2000) referred that codes of corporate governance can serve to compensate for the lack of protection in the legal system and thus would be more likely to be adopted in civil law countries. From this standpoint, the study aims to highlight the important role played by Egyptian corporate governance guidelines in Egypt's corporate governance system.

Literature also provided that in countries following a civil-law legal system, issuers of corporate governance codes can include stock exchanges, governments, director’s association, managers association, professional association or investors. Again, this typically applies to Egypt's case where the issuer of the initial Egyptian corporate governance guidelines (2005) was the Egyptian institute of directors in cooperation with the Egyptian stock exchange (government authority). Consequently, this highlights the important role of the Egyptian government and stock exchange (being the issuers) towards the sound adoption and implementation of the Egyptian guidelines among Egyptian listed companies. However, the fact that the code is " partially voluntary" can result in more difficulties in its implementation and enforcement, which justifies McGee (2010) study on Egypt, which concluded, "Enforcement of the corporate governance rules continues to be a challenge". Additionally, Emerging countries are not effective in applying the corporate governance mechanisms either internal or external mechanisms. There are many examples for inappropriateness of CG mechanisms in transition economies as follow:

- Board of directors do not perform their responsibilities and tasks as determined in corporate governance guidelines, they can be considered as one of the main causes of corporate corruption and collapse such as Enron, World-com, and Parmalat scandals (Adams and Mehran, 2011).
- One of the serious problems that investors face in the emerging market place is the information asymmetry that may lead to extreme deficiencies in transparency and disclosure practices. Thus, this is due to the lack of using accounting information system in supporting board of director to continuously monitor the process of disclosure and communications, to ensure from the integrity of the corporations accounting and financial reporting systems, and to demonstrate transparency and social accountability.
- The existing corporate governance literature in the developed market economy is almost exclusively concerned with external mechanisms (accounting, transparency to improve the accuracy of stock market valuations, regulatory pursuit of fraud, the role
of the shareholders’ general meeting, disciplinary takeovers and legal requirements for the appointment of external directors (Monks, 2002). On the contrast, these mechanisms of market discipline in transition economies hardly work because of the lack of such institutions as stock markets and an efficient banking sector.

- In emerging markets, the internal mechanisms including owners, board of directors and managers differ significantly in comparison to the internal mechanisms of the developed market economies. For instance, the concept of ownership itself is problematic. Ownership of post-socialist enterprises was often shared between the state, public corporate bodies, managers, employees, other state or private companies, private individuals and foreign individuals and corporation. The absence of real owners leads to neglect the interests of capital itself and thus to degradation in the quality of the capital, damaging the long-term interests of the firm (Zu, 2006).

Consequently, it is of utter importance to study the corporate governance practices in the Egyptian capital market and its implications on Egyptian listed companies’ performance as well as providing recommendations that aim towards effectively implementing corporate governance practices in a way that contributes in enhancing listed corporate performance in Egypt’s case. The importance of this study is doubled when considering the vital role that the Egyptian corporate governance guidelines play in a country with a civil law legal system such as Egypt. This study focuses on examining corporate governance mechanisms, especially the ownership structure, (through institutional and family ownership) with the aim for underlining optimal ownership structure that can enhance the corporate performance and eliminate earning management.

PROBLEM STATEMENT

When prior studies (such as Bremer and Elias, (2007) and Omran et al., (2008) investigated the challenges and assessed the progress of corporate governance in Egypt. They revealed that although Egypt has started to appreciate the need to introduce corporate governance in the Egyptian businesses, they reported that there are many integral factors that hinder the development of corporate governance in Egypt like: (1) family owned or closely held corporations dominate the Egyptian private sector, (2) predominance of State owned enterprise still play a major role in the Egyptian Economy, (3) feeble legal and judiciary frameworks, (4) restricted research and development capabilities, interlocking connections in the middle of governments and money related areas, (5) illiquid stock market, economic uncertainties, weak legal control and investor protection, (6) lack of awareness of corporate governance concepts and benefits, lack of board independence, weaknesses in the Egyptian economic structure (Desoky, and Mousa, (2012), and (Fawzy, 2003). In addition, The World Bank (2004) claimed that poor corporate governance and, in particular, the existence of dominant shareholders (family Firm) who effectively controlled listed companies for their own interests were key contributing factors to the corporate crisis, which seriously affected economy.

Following wide spread corruption, and corporate failure among different financial and non-financial institutions (involving both companies and banks) in the Egyptian capital market, which resulted in the deterioration of their corporate performance. Therefore, this study aimed to investigate to what extent the internal mechanism of corporate governance especially ownership structure affect on the earning management manipulation and on the financial performance due to prevalence of state or family owned enterprise in Egyptian context.

RESEARCH OBJECTIVES

The main objective of the research is to evaluate the financial corporate performance through applying the internal corporate governance mechanism in Egyptian stock market. This main objective can be achieved through the following sub-objectives:

- To compare which type of the ownership structure can be best equipped to enhance financial performance of firm.
- To enhance the growing influence of institutional investors and why they are increasingly interested in corporate governance.
- To detect the role of institutional investors as one of the mechanisms of corporate governance on earnings management among some listed companies in Egyptian Stock Exchange.
- To evaluate the effectiveness of family-ownership institutional ownership in limiting or controlling the magnitude of earning management.

Literature Reviews and Hypotheses Development Regarding the Relationship between Ownership Structures, Earning Management, and Egyptian Listed Performance

It is important to review the accounting and finance literatures that test theories, which cover the effect of
ownership structure as corporate governance mechanism in mitigating earning management and in improving stock performance in Egypt. The ownership structure is an important factor in shaping the corporate governance system. The degree of ownership concentration in a company is determined based on the distribution of power between its managers and shareholders. The concentration of ownership is beneficial to companies as large shareholdings allow for greater monitoring of managers (Jensen and Meckling 1976). Thus, the absence of separation between ownership and control reduces conflicts of interest and increases the shareholders’ value.

The ownership structure is also a primary determinant of the agency problems between controlling insiders and outside investors, which has important implications for the valuation of the firm. The controlling insiders can potentially disadvantage outside investors by diverting resources for their personal use or by committing funds to unprofitable projects that provide private benefit but reduce the firm’s value. Alternatively, by investing resources in good projects, the firm’s value increases and the insiders can increase their wealth in proportion to their claims on the firm. The next section of this paper discusses the literature relating to family ownership, institutional ownership, earning management, and firm performance. More recent research accounts for both the alignment and entrenchment hypotheses by considering a nonlinear relationship between family ownership or institutional shareholding and firm performance.

**Family Ownership and Magnitude of Discretionary Accruals**

There is no consensus whether the existence of family ownership reduce or enhance the incentives to engage in opportunistic earning management. On one hand, several literatures Halioui and Jerbi, (2012), and Amador (2012) argued that concentrated family ownership may be subject to conflicts of interest between majority and minority shareholders. Large controlling shareholders are likely to exercise their control rights and impose their personal preferences even if those preferences run contrary to those of minority shareholders to create private benefits (expropriation hypothesis or entrenchment effect). Therefore, large shareholders may intervene in the firm’s management, and may encourage managers to engage in earnings management to maximize their private benefits. As managers fear negative repercussions for declining performance from large shareholders, they may also have a strong motivation to engage in earnings management. Like wise, Family firms are likely to engage in accounting discretion in order to avoid the violation of debt covenants, because they do not want to lose their control (Hashim and Devi, 2009). Similarly, Several researchers documented that earnings management is positively related with ownership concentration.

On the contrary, Wang (2006), Siregar and Utama, (2008), Usman and Yero, (2012), Ghabdian, et al., (2012), and karunatrat (2013) suggested that large shareholders in family firm have a strong incentive to actively monitor and influence firm management to protect their significant investments (the efficient monitoring hypothesis or alignment effect). Therefore, they have tendency to reduce agency costs by increasing monitoring and alleviating the free-ride problem. As result, they devote their energy and effort to monitor managerial behavior actions effectively, which reduce the scope of managerial opportunism to engage in earnings management. Additionally, there will be less pressure on management to meet short-term earnings expectations because controlling shareholders focus more on the long term. Thus, according to the efficient monitoring hypothesis, ownership concentration limit managers’ discretionary behavior (Ali et al., 2007).

From analyzing the empirical results of the prior studies, the researcher concluded that there is no consensus whether the family ownership concentration reduce or enhance the incentives to engage in opportunistic earning management.

**H1: There will be an inverted-U-shaped relationship between the family ownership and earning management manipulation.**

**Institutional Shareholding and Earning Management**

To mitigate the problems associated with conflict between controlling owners and minority shareholders especially in family firm with large controlling shareholders, the involvement of institutional investors’ equity participation may improve corporate governance practices (Claessen et al., 2000). Concentrated institutional shareholdings provide an incentive for diligent monitoring as they have the resources, expertise and stronger incentives to actively monitor the actions of management and prevent managers’ opportunistic behavior (David et al., 2001, and, Abdul Wahab and Abdul Rahman, 2009).

Due to their substantial shareholdings, it is difficult to sell shares immediately at prevailing price, thus, they have greater incentives to closely monitor companies with high free cash flow (Chung et al., 2002, 2005). Extending prior research that look into the role of internal governance mechanisms and earnings
management, Chung et al., (2002) and Abdul Jalil and Abdul Rahman, (2010) provided evidences that active monitoring from the institutional investors also help to prevent managerial opportunistic reporting behavior and improve the quality of governance in the financial reporting process. They found that institutional shareholders intervene and mitigate the self-serving behavior of corporate managers in financial reporting based on a sample of 136 companies belong to the S&P 500 group and 237 belong to non-S&P 500 category for eight years period (1991-1998).

Correspondingly, Zouari and Rebai (2009), Abdul Jalil and Abdul Rahman, (2010), Hadani, et al., (2011), Alves (2012), Yanga et al. (2009), and Aygun, et al., (2014) among many others, provided evidence indicating institutions are playing an active role in monitoring and disciplining managerial discretion. They revealed that there is a negative relationship between dedicated institutional investors or long-term institutions (holding concentrated portfolios with low turnover) and discretionary accounting accruals.

Conversely, Abdul Jalil and Abdul Rahman, (2010), Porter, (1992), Bushee, (1998), Cheng and Reitenga, (2009), and Salajeghe et al. (2012) alleged that frequent trading and fragmented ownership discourage institutional from becoming actively involved in the corporate governance of their portfolio firms. Thus, there is a significant positive relationship between transient institutional investors (holding diversified portfolios with high turnover) and discretionary accounting accruals.

Surprisingly, Farooq and El Jai, (2012), Wong et al., (2009), Al-Fayoumi, et al., (2010), and Iqbal and Strong, (2010) indicated that there is no significant relationship between the institutional ownership and earning management as ownership concentration (percentage shareholding of the largest shareholder greater than 50%) has no significant impact on earnings. These results seem consistent with Ding et al. (2007) who documented that assets expropriation stops increasing when ownership concentration reaches a certain threshold. While the others stated that the institutional ownership effect on earning management according to the different nature of institution and their behaviors (Rebai, (2010)) and Zouari and Rebai, (2009).

To sum up, it appears that there is no general agreement regarding the effect of institutional ownership structure on earnings management. Therefore, this study investigates the determinants of earnings management activities and extends the very limited research on the association between institutional ownership and earnings management in the emerging market. Unlike most existing researches, which usually study just one aspect of ownership structure, this research focuses on two ownership categories: family ownership and institutions-holders.

**H2: There will be an inverted-U-shaped relationship between the institutional ownership and earning management manipulation.**

**Family Ownership and Corporate Performance:**

Prior studies proved conflicting results regarding the effect of family ownership on the performance of the organizations. On one hand, several literatures like (e.g. Reyna and Encalada, (2012), Anderson and Reeb, (2003), Wang, (2004, 2006), Isakov and Weisskopf, (2010), Maury, (2005), Ibrahim and Abdul Samad (2011), Yohan (2015), and Saito, (2008) documented that there is a positive relationship between family ownership and the firm performance. They supported this view by indicating that the wealth of the family is closely related to the value of the company, especially when families have strong incentives to monitor agents and create long-term loyalty in them. Moreover, due to the substantial and long-term presence of families and their intention to preserve the family name, family firm has a greater interest in the company than others do and are more interested to give up short-term benefits to pass the business to future generations and protect their family’s reputation. This perspective can create long-term economic consequences compared to non-family firms. Thus, it was expected that family firms are likely to be more profitable than non-family ones.

Alternatively, extent literatures like (Samaha, et al., 2012), and Ibrahim and Abdul Samad, (2011) claimed that the conflict between controlling and minority shareholders is considered greatly in family firms with high ownership concentration. While family businesses have benefits associated to their concentrated ownership structure, this property scheme is also disadvantageous, as it can be seen in the limited supply of talent in the family and the problems derived from management entrenchment. Regarding the former, the company is compromised by the commitment to maintain the control in the hands of the family, who end up monopolizing managerial and supervisory positions. This complicates the opportunity to hire new employees based on their capabilities, their skills, and their professionalism. Thus, the value of the company will be shrunk due to the high risk of recruiting unprofessional officers.

Moreover, the combination of ownership and control in a family business make the owner exert an overwhelming leadership, which in turn, generate
management entrenchment problems. Based on the entrenchment hypothesis, the ownership concentration can create motives for large shareholder to expropriate the minority shareholders through excessive compensations, special dividends, and even suboptimal decisions resulting in poor functioning of the company. Accordingly, family companies exhibit poor performances in as much as their owners try to increase their own wealth and ensure their personal interests at the expense of small shareholders.

However, other studies like Omran et al. (2008), Abdel Shahid's (2003), Ibrahim and Abdul Samad, (2011) indicated that the relationship between the family concentrated ownership and the corporate performance differ according to marketing and financial performance measures. Omran et al., (2008) results linking ownership characteristics with corporate performance contradict with Abdel Shahid's (2003) findings. While the latter detects a significant relationship between ownership structure and accounting performance measure (namely ROA and ROE) and an insignificant relationship with stock market indicators (measured in terms of P/E and P/BV ratios), Omran et al., (2008) study showed an insignificant relationship between ownership structure and profitability (using ROA and ROE ratios) but a significant positive relationship with Q-ratios. As well, Ibrahim and Abdul Samad, (2011) found a negative relationship between the family firm and firm value based on Tobin's Q and positive effect based on ROE. However, Arosa, et al., (2010) and Feng-Li and Tsangyao (2010) stated that the relationship between family firm and firm performance is curved linear relationship based on the monitoring and the expropriation effects.

**H3: There will be an inverted-U-shaped relationship between the family ownership and performance.**

**Institutional shareholding and organizational performance**

Reviewing existing literatures did not give a specific conclusion and provided mixed conclusions regarding the effect of institutional investors on firm performance.

The inclusion of institutional ownership in the capital structure play significant role in enhancing the performance of the organization, especially who have few business relations with portfolio firms and are less pressure-sensitive than other institutions (Elyasiani and Jia, (2010), and Gürbüz, et al., (2010). They revealed that those investors usually have the incentives to collect information, discipline and monitor the management performance to reveal more information to the public, such as investment styles and prospective returns, which directly increases the scrutiny from regulators.

Furthermore, those investors are concerned more regarding the long-term profitability rather than short-term earnings. Thus, they would discourage management from using discretionary accruals to engage in opportunistc earning management. This can be facilitated through more access to inside and management information and they may depend more on direct monitoring instead of accounting numbers to reduce agency costs due to shareholdings concentration, firm management independence, and long investment horizons. Institutional investors affect corporate managers monitoring role, such as voting initiatives and board selection, which align the firm interests with executive compensation, increase future operating performance, and increase shareholder wealth (Shleifer and Vishny, 1997, Smith, 1996, and Gillan and Starks, 2003).

Contrariwise, institutional investors who have diversified portfolio, trade heavily on the current earnings without any motives to monitor the management. They are likely to sell their stock in case of poor performance rather than initiate corrective actions. They cannot afford long-term perspective in their investment decision, since they are rewarded or reviewed on quarterly or annual performance measures. They may slash the research and development expenditures which hinder long-term growth and firm reputation development. Therefore, transient institutional investors have lower accrual quality increasing earning management manipulation (Bushee, 1998, and Wellalage and Locke, 2012).

While, others claimed that there is non linear relationship between the institutional and the organization performance due to difference in investment time horizon, the size of institutional holdings, the business relationship with the investee firm, the sensitivity of shareholding, and shareholder activism (Burns, et al., (2010), Bushee, (1998), Iqbal and Norman (2010), and Song, (2013).

Like wise, Feng-Li Lin (2010) determined non-linear relationship between the institutional ownership and financial performance. Institutional investors will decrease firm value once their ownerships exceed a certain level. That is, active monitoring may improve firm value (efficient monitoring hypothesis) only up to a certain level of ownership. Therefore, at higher levels of share ownership, institutional investors may encourage sub-optimal decisions that could be harmful to the firm value (cost of capital, conflict-of-interest, and strategic
alignment hypotheses) (Brickley et al., (1988), and Chen et al., (2007).

A combination of these hypotheses leads to the prediction of a non-linear relation between institutional ownership and firm value. Such a non-linear relation for institutions has not been investigated in prior studies in Egypt.

\( H4: \text{There will be an inverted-U-shaped relationship between the institutional ownership and performance.} \)

**Model used for the Measurement of Corporate Governance**

The following diagram represents the theoretical framework for the measurement of relationship among control variables, family ownership and institutional ownership, earning management, and the organization performance.

**Figure 1.1: Model development**

**VARIABLES DEFINITION AND MEASUREMENT**

**Table 1.1: Summarizing variables, measurements, and data sources**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition and measurement</th>
<th>SOURCE OF DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial performance</td>
<td>Returns on assets (ROA): Net profit after tax as a percentage of the total assets.</td>
<td>Egyptian Disclosure book, Coface Egypt finance yearbook.</td>
</tr>
<tr>
<td>Family ownership</td>
<td>The percentage of shares held by family owners.</td>
<td>Annual reports and/or company’s website.</td>
</tr>
<tr>
<td>Institutional ownership</td>
<td>The percentage of shares held by institutions shareholders.</td>
<td>Annual reports and/or company’s website.</td>
</tr>
<tr>
<td>Earning management</td>
<td>Discretionary Accruals is calculated by the Modified Cross-sectional Jones Model</td>
<td>Annual reports and/or company’s website.</td>
</tr>
<tr>
<td>CEO duality</td>
<td>Dummy Variable known as CEO Duality 1 if duality exists, 0 otherwise</td>
<td>Annual reports and/or company’s website.</td>
</tr>
<tr>
<td>Firm SIZE</td>
<td>The natural log of total assets.</td>
<td>Calculated using figures from the annual reports or Coface Egypt financial yearbook or disclosure Book.</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>The ratio of debt to share capital Measuring the amount of outsourced funds in comparison to firm’s equity.</td>
<td>Calculated using figures from the annual reports or Coface Egypt financial yearbook or disclosure Book.</td>
</tr>
<tr>
<td>Liquidity</td>
<td>Liquidity measured using Current ratio, which calculated as Current assets/current liabilities to evaluate liquidity and short-term debt of company.</td>
<td>Calculated using figures from the annual reports or Coface Egypt financial yearbook or disclosure Book.</td>
</tr>
</tbody>
</table>

Source: Developed by researcher
RESEARCH METHODOLOGY
Research methodology is composed of the following two studies:

THEORETICAL STUDY
Theoretical study has been developed to investigate and analyze the previous studies of literatures that concentrated with reviewing the corporate governance literature in both the developed and developing countries to: 1) develop the research gap and produce the research questions and 2) identify the specific research approach that this research will follow in investigating the relationship between ownership structure as corporate governance mechanism and firm performance, 3) determining the variables to be used in this research and research gap of the previous studies that can provide the direction for this research and for future research. 4) Test the relation between the institutional/family ownership structure, corporate governance, earning management and financial performance through financial data obtained from the stock market.

EMPIRICAL STUDY
Determination of the population: The targeted population is Egyptian listed companies in (EGX 100 price index)

Sample selection: The sample will include 49 listed companies whose shares are among Egypt’s 100 most actively traded shares (EGX100 price index) from the years 2006 to 2013. Many companies of EGX100 listed companies are excluded from the sample due to the insufficiency of data. In addition, it includes most of the sectors listed on the Egyptian stock exchange. Accordingly, the sample companies cover the following sectors of the economy: 1) Building material and construction, 2) Chemicals, 3) Communication, 4) Electrical equipment and engineering, 5) Entertainment, 6) Financial services, 7) Health and pharmaceuticals, and 8) Textiles and clothing.

Data collection: The researcher will collect the data to test the research hypotheses through conducting financial statement analysis of listed organizations in the stock exchange in Egypt.

Statistical analysis: The descriptive statistics, correlation analysis, and panel threshold regression analysis are used to determine the optimal percentage of institutional and family ownership in relationship to earning management and firm performance. This analysis is conducted to determine institutional/ family threshold with earning management and financial performance using ROA measure.

Panel Threshold Analysis
The following steps have been conducted to examine whether or not there is a threshold effect between institutional/ family ownership, earning management, and firm value. The study assumes that there is an optimal institutional/family ownership ratio and use the threshold model to estimate this ratio as this can capture the relationship between institutional/ family ownership, earning management and firm value, thus, this should help financial managers understand the conditions under which the theory holds and in turn, help them formulate a corporate governance policy.

Panel Unit Root models
An extension of the traditional least squared estimation method, Hansen’s (1999) panel threshold regression model requires that the variables in the model be stationary in order to avoid spurious regressions. Thus, the study first performs the unit root test. Since the study only uses panel data in this investigation, the study adopts the Levin-Lin-Chu (LLC) (Levin et al., 2002), the Im-Pesaran-Shin (IPS)(Im et al., 2003), the Augmented Dickey-Fuller (ADF)(Dickey and Fuller, 1979), and the PP-Fisher Chi-square (Phillips and Perron, 1988).

<table>
<thead>
<tr>
<th>Group unit root test: Summary</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Series: EM_1, FO_1, INS_OWN, ROA_1</td>
<td></td>
</tr>
<tr>
<td>Sample: 1 245 observations</td>
<td></td>
</tr>
<tr>
<td>Exogenous variables: Individual effects</td>
<td></td>
</tr>
<tr>
<td>Automatic selection of maximum lags</td>
<td></td>
</tr>
<tr>
<td>Automatic lag length selection based on SIC: 0 to 12</td>
<td></td>
</tr>
<tr>
<td>Newey-West automatic bandwidth selection and Bartlett kernel</td>
<td></td>
</tr>
</tbody>
</table>

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Based on the results of the stationary test of each panel (i.e., the explained variables, the threshold variable, and the control variables) in the above Tables, it is abundantly clear that all the variables have stationary characteristics since the nulls of the unit root are mostly rejected, especially in the case of the LLC test as the significant of these measures are less than 5%. Thus, this study rejects null hypothesis and accepts alternative
hypothesis. Co-Integrating Relationships Using Johansen And Juselius’S Tests
In 1990, econometricians Soren Johansen and Katarina Juselius of the University of Copenhagen devised approach estimates all three-error correction equations together, obtaining estimates of the long-run and short-run coefficients in one pass. The usual computer output for Johansen and Juselius’s approach provides tests of hypotheses about the number of co-integrating relationships. When there are three stochastically trending variables in the co-integrated regression, Johansen and Juselius’s method tests three hypotheses about the co-integrating relationships:
1. There are no co-integrating relationships; the regression is spurious.
2. There is at most one co-integrating relationship.
3. There are at most two co-integrating relationships.

The number of such hypotheses tested corresponds directly to the number of Co-integrating variables. The Johansen and Juselius strategy is to ask whether one estimated co-integrating relationship is a multiple of another or is a linear combination of some others. Johansen and Juselius offer two test statistics for each hypothesis. They call the first the Trace statistic; they call the second the maximum Eigen-value statistic. Both are usually reported by econometrics software packages that implement the Johansen and Juselius procedure. There is not much reason to prefer one over the other. Fortunately, they frequently lead to the same conclusion. Econometricians commonly attend to these tests sequentially. If none of the three hypotheses are rejected, the study must worry that the regression is spurious. If the first hypothesis only is rejected, the study proceeds assuming that there is only one co-integrating relationship. If the first and second hypotheses are rejected, the study proceeds assuming that there are two co-integrating relationships. If all three hypotheses are rejected, the study conclude that none of the variables contain stochastic trends after all, because that is the only way there could be as many co-integrating relationships as variables.

The following Table contains the pertinent E-views output from conducting a Johansen analysis of institutional/family ownership, earning management and firm performance data. The trace test reject Null hypothesis (H0), that there are no co-integrating relationships among these variables. The study results using the trace test accepted the first, second, third, and fourth hypothesis that whether the data are Co-ingtrated either when there is no difference, or one difference (At most 1) or two difference (At most 2) or three difference (At most 3). The study results indicate that there are con-integration among time series data on long run. The data are Co-ingtrated either in whether there is no difference, or one difference (At most 1) or two difference (At most 2) or three difference (At most 3).

Table 1.3: Trace Test for the study variables

<table>
<thead>
<tr>
<th>Hypothesized</th>
<th>Trace</th>
<th>Prob.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of CE(s)</td>
<td>Eigenvalue</td>
<td>Critical Value</td>
</tr>
<tr>
<td>None *</td>
<td>0.090608</td>
<td>47.85613</td>
</tr>
<tr>
<td>At most 1 *</td>
<td>0.084972</td>
<td>29.79707</td>
</tr>
<tr>
<td>At most 2 *</td>
<td>0.039448</td>
<td>15.49471</td>
</tr>
<tr>
<td>At most 3 *</td>
<td>0.026093</td>
<td>3.841466</td>
</tr>
</tbody>
</table>

* Denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Second, The following Table contains the pertinent E-views output from conducting a Johansen analysis of institutional/family ownership, earning management and firm performance data. The Eigen-value test reject null hypothesis that there are no co-integrating relationships among the study variables. This test accepted the second hypothesis and the fourth hypothesis that data are Co- ingtrated either there is one difference or three-difference (At most 3). However, Eigen test rejects the first and the third hypothesis, that there is no Co-integration among variable where there is at most no difference or two difference among variables as the probability is more than 5%.

Table 1.4:Eign Test for the study variables

<table>
<thead>
<tr>
<th>Hypothesized</th>
<th>Max-Eigen</th>
<th>Prob.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of CE(s)</td>
<td>Eigenvalue</td>
<td>Critical Value</td>
</tr>
<tr>
<td>None</td>
<td>0.090608</td>
<td>22.79498</td>
</tr>
<tr>
<td>At most 1 *</td>
<td>0.084972</td>
<td>21.13162</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.039448</td>
<td>14.26460</td>
</tr>
<tr>
<td>At most 3 *</td>
<td>0.026093</td>
<td>3.841466</td>
</tr>
</tbody>
</table>

Max-eigenvalue test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

Measuring Model Fit In Panel Threshold Analysis
There are several methods used to measure the model fit and to chose the model that can best fit the firm performance either with institutional or family threshold. Hence, Akaike information criterion and Schwarz criterion, The Breusch–Pagan test.
heteroscedasticity, and residual are used as measure for model fit.

**Akaike Information Criterion and Schwarz Criterion**

AIC is a measure of the relative quality of statistical models for a given set of data. Given a collection of models for the data, AIC estimates the quality of each model, relative to each of the other models. Hence, AIC provides a means for model selection.

Regarding to measuring model fit regarding to the relationship between institutional ownership/family ownership, the minimum level of earning management, and firm performance using ROA that can be presented as follow:

Table 1.4: Akaike information criterion and Schwarz criterion for ownership structure, earning management and performance using ROA

<table>
<thead>
<tr>
<th></th>
<th>Institutional with ROA</th>
<th>Institutional With EM</th>
<th>Family own with ROA</th>
<th>Family Own with EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.991112</td>
<td>0.971214</td>
<td>0.982420</td>
<td>0.962809</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.988688</td>
<td>0.967616</td>
<td>0.990445</td>
<td>0.959842</td>
</tr>
<tr>
<td>S.E of regression</td>
<td>0.398761</td>
<td>0.008156</td>
<td>0.509399</td>
<td>0.009100</td>
</tr>
<tr>
<td>Sum-squared Residual</td>
<td>22.73843</td>
<td>0.010643</td>
<td>48.52418</td>
<td>0.015568</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-68.84894</td>
<td>624.7620</td>
<td>-143.9597</td>
<td>677.5623</td>
</tr>
<tr>
<td>F-statistics</td>
<td>408.8885</td>
<td>269.9158</td>
<td>497.6142</td>
<td>324.4694</td>
</tr>
<tr>
<td>Prob (f-statistics)</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
</tr>
<tr>
<td>Mean dependent variable</td>
<td>5.337027</td>
<td>-0.038856</td>
<td>5.456865</td>
<td>-0.040973</td>
</tr>
<tr>
<td>S.D. dependent variable</td>
<td>3.749297</td>
<td>0.045322</td>
<td>3.642790</td>
<td>0.045410</td>
</tr>
<tr>
<td>Akaike info criterion</td>
<td>1.189606</td>
<td>-6.671404</td>
<td>1.588131</td>
<td>-6.485905</td>
</tr>
<tr>
<td>Schwarz criterion</td>
<td>1.891133</td>
<td>-6.300307</td>
<td>1.939956</td>
<td>-6.225661</td>
</tr>
<tr>
<td>Hannan-Quinn criter.</td>
<td>1.473969</td>
<td>-5.20953</td>
<td>1.730376</td>
<td>-6.308632</td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td>1.877299</td>
<td>1.122923</td>
<td>1.494939</td>
<td>1.036683</td>
</tr>
</tbody>
</table>

**Heteroscedasticity Test**

One of the key assumptions of regression is that the variance of the errors is constant across observations. If the errors have constant variance, the errors are called homoscedastic. Typically, residuals are plotted to assess this assumption. Standard estimation methods are inefficient when the errors are heteroscedastic or have non-constant variance. **Heteroscedasticity Test** the model and provide two tests for heteroscedasticity of the errors: White’s test and the modified Breusch-Pagan test. Both White’s test and the Breusch-Pagan are based on the residuals of the fitted model. For systems of equations, these tests are computed separately for the residuals of each equation. The residuals of estimation are used to investigate the heteroscedasticity of the true disturbances.

The Breusch–Pagan test tests for conditional heteroscedasticity. It is a Chi Squared test; the test statistic is nX^2 with k degrees of freedom. It tests the null hypothesis of homoscedasticity. If the Chi Squared value is significant with p-value below an appropriate threshold (e.g., p < 0.05), then the null hypothesis of homoscedasticity is rejected and heteroscedasticity assumed. If the Breusch–Pagan test shows that there is conditional heteroscedasticity, the original regression can be corrected by using the Hansen method using robust standard errors, or re-thinking the regression equation by changing and/or transforming independent variables.

This study will apply the Breusch–Pagan test and
Recursive Estimate test is used to test the stability of coefficient. If an F-test confirms that the independent variables are jointly significant, then the null hypothesis of homoscedasticity can be rejected.

From the following tables; the study results indicated that there is stability in coefficient as the curve line is located between upper and lower pound among study variables (institutional ownership, family ownership, Earning management and Performance using ROA). If the curve is out of two lines so there is no stability of coefficient.

Table 1.5: Heteroskedasticity Test: institutional ownership, earning management and performance using ROA

<table>
<thead>
<tr>
<th>Heteroskedasticity Test: Breusch-Pagan-Godfrey (Institutional Own and ROA)</th>
<th>F-statistic</th>
<th>Prob. F(10,193)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared</td>
<td>20.66094</td>
<td>0.4173</td>
</tr>
<tr>
<td>Scaled explained SS</td>
<td>15.59675</td>
<td>0.7413</td>
</tr>
</tbody>
</table>

Table 1.6: Heteroskedasticity Test: family ownership, earning management and performance using ROA

<table>
<thead>
<tr>
<th>Heteroskedasticity Test: Breusch-Pagan-Godfrey (family Own and earning management)</th>
<th>F-statistic</th>
<th>Prob. F(10,193)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared</td>
<td>5.003234</td>
<td>0.8910</td>
</tr>
<tr>
<td>Scaled explained SS</td>
<td>6.045000</td>
<td>0.8115</td>
</tr>
</tbody>
</table>

Threshold Autoregressive Model

This study applies the panel threshold regression model to strike a “trade-off” between the positive effect and the negative effect of institutional /family ownership. For instance, regarding the relationship between institutional ownership, earning management and firm performance using ROA, four alternative hypotheses with respect to this relation are well documented. The efficient monitoring hypothesis predicts a positive relationship, whereas the costs of capital, conflict-of-interest and strategic alignment predict a negative relationship between institutional ownership and firm value. Since Tong (1978) first proposed the threshold autoregressive model, the use of this nonlinear time series model has increasingly gained momentum and importance and is now widely used in economic and financial research.

When, the threshold autoregressive model is estimated, it must first be tested whether or not there are threshold effects. If the null hypothesis cannot be rejected, then the threshold effect does not exist. Again, the presence of nuisance parameters makes the testing statistic follow a non-standard distribution, which is referred to as “Davies’ Problem. Hansen (1999) suggested using a “bootstrap” method to compute the asymptotic distribution of the testing statistics and, therefore, test the significance of the threshold effects.

Empirical Analysis and Results

The results show different directions: negative, positive and negative indicating entrenchment, alignment, and entrenchment respectively. The different directions may arise because most companies in Egyptian have dominated by state or family member and put their family members in the board as outside directors. The family directors can make sub-optimal investment decisions since the interests of the family are not necessarily in line with other shareholders. They may also use the concentrated ownership to expropriate wealth from other shareholders (Morck et al., 2000).

Following the procedures by Ng (2005), ownership has been identified (negative, positive and negative) with company performance (ROA). Family ownership shows a non-linear relationship with firm value (ROA). Therefore, this study supports H1 and H3. It is evident that from (0% to 36%), the firm value decreases. Family members that hold small number of shares felt less belonging with the firm. It may leads to low motivation to work by the family managers and a weak sense of belonging towards the business success. However, as their shares increase (36% to 41%), the firm performance is enhanced. At this level, the interests of family directors are aligned with the firm performance. The family directors are happy with their share ownership and this is the best level for family managers to retain their shareholdings and to have lower level of
earning management manipulations and positive performance. But, as shareholdings go beyond 41%, the firm value starts to drop again. This is where the family directors may act in their own interests without considering other shareholders. Family members might use their concentrated ownership to expropriate wealth of other shareholders. In short, the relationship between Egyptian family holdings and firm performance is not uniform over the entire range of family ownership. The entrenchment-alignment-entrenchment exists in Egyptian family-controlled companies. These findings do support previous works (Yeh et al. 2001, and Ng, 2005) done in Asian countries. The findings from this study are similar to past studies done in Taiwan and Hong Kong. In a Taiwan study, the findings reveal that when family ownership is weak, the performance of family-control is low. A family only needs 15% equity in a listed firm to control the firms effectively. Thus, the effective ways of mitigating the ownership problem is when the family ownership is high but with low family representation on the board. In this way, the conflict of interest between the majority and minority shareholders can be minimized (Yeh et al. 2001). In Hong Kong scenario, the study reveals that at a low level of ownership, managers entrench their interest with the companies. Next, when ownership is 17% to 63%, family managers interests are match with companies need, and firm performance improves. However, at high levels of ownership, the family management feel stronger in the companies as they have sufficient control in the companies and that they can benefit more by expropriating the minority shareholders (Ng, 2005).

For institutional ownership, ownership has been identified (negative, positive and negative) with company performance (ROA). Institutional ownership shows a non-linear relationship with firm value (ROA). Therefore, this study supports H2 and H4. It is evident from (0% to 61%), the firm value decreases and earning management using discretionary accruals increases, it indicated that when institutional shareholding ranges from 0% to 61%, the institutional have greater incentive to pursue personal benefits and have less incentive to maximize firm value. Another range of relationship between performance, earning management and institutional ownership is between range 62% to 64%. In this range, the relationship was positive and the interest of institutional and shareholders seem to be aligned (alignment theory). As institutional ownership continues to rise beyond 64%, the institutional entrenchment starts to dominate again at the expense of shareholders’ interests. In another word, beyond 64% institutional ownership, the firm value begins to fall and earning management manipulations increase again. This shows an alignment/convergence of interest hypothesis exists as suggested by Jensen and Meckling (1976). An increase in the proportion of firm’s equity owned by insiders is expected to increase firm value as the interest of internal and external are realigned, thus, resulting in less conflict among the shareholders. However, this study observed that when institution own beyond 64% of shares in the company, firm performance fall again. The reason may be that with greater control and large institution shareholdings, managers are more concerned about their own interests rather than the interests of the shareholders at large. In sum, it can be concluded that institutional ownership in EGYPT is found to be influenced by who control and manage the companies, instead of the composition of the board of directors.

**SUMMARY AND CONCLUSIONS**

Generally, the ownership influences the earning management practices and firm performance. Family ownership is most prevalent of ownership structure in the Emerging market (such as Egypt). In terms of theoretical perspective, the alignment and entrenchment hypothesis were found in this Egyptian family ownership. This may be due to the concentrated ownership among Egyptian companies and that majority of businesses in Egypt are family-companies. Regulators and investors need to be sensitive that the ownership structure in Egypt is unique because Egyptian companies tend to be less dispersed and more concentrated. This concentration of ownership is found to be owned or held by the State, families or large corporations unlike in the West. On the practical side, regulatory bodies such as Securities Commission, Egyptian stock Market and Committee of Egyptian Code of Corporate Governance need to take note on the percentage of concentrated ownership among the Egyptian listed companies. This is because if the percentage is too low or too high, so it can threaten the minority shareholders and the purchase of shares is no more attractive to the investors.

**RESEARCH CONTRIBUTION**

- This research contributes to advance the earnings management practices research agenda by describing the motivations and techniques and to examine the corporate governance, ownership structure, earnings management practices, and financial performance and any relationship between them, in the context of Egypt. Fundamentally, the current study provides new evidence from a developing country that contributes to the existing literature on the effect of monitoring mechanisms on earnings management and on enhancing the financial performance in general.
- The findings could be useful to stock market,
external auditors, regulators, and investors in their attempts to constrain the incidence of earnings management and enhance the quality of monitoring mechanisms. Accordingly, regulators may satisfy investors by providing more effective legal action and imposing penalties on those who commit aggressive earnings management and encourage firms to comply with ethics standards by increasing their awareness of the importance of investor protection. Moreover, these findings may contribute to reducing earnings management practices by identifying optimal percentage threshold for ownership structure either for family or institutional ownership that are likely able to reduce opportunistic earning management and maximize the firm value.

- Overall, this research contributes to the continuing debate on the feasibility of harmonizing monitoring mechanisms around the globe. Theoretically in the literature review, and empirically in the findings and discussions, this research indicates that the efficiency of monitoring mechanisms differs from country to country, perhaps as a result of different macro and micro economic characteristics such as stock market regulations, disclosure requirements, firms’ ownership structures, culture and other factors.

- On the practical side, regulatory bodies such as Securities Commission, Egyptian stock Market and Committee of Egyptian Code of Corporate Governance need to take note on the percentage of concentrated ownership among the Egyptian listed companies. This is because if the ownership threshold is too low or too high, so it can threaten the minority shareholders and the purchase of shares is no more attractive to the investors.

- The corporate governance authorities, especially in Egypt, can use this study as empirical support for developing their regulations and making further recommendations on corporate governance. Stock market authorities can also employ this study results to put threshold limits for family/institutional ownership not to harm minority shareholders and to evaluate the current disclosure requirements of corporate governance practices and to improving the quality of accounting reports and financial performance. New corporate governance regulations and revisions of existing corporate governance codes should be based on evidence from empirical studies such as evidence offered by this research.

**RESEARCH LIMITATION**

- The study focus on listed firms (EGX 100) in the Egyptian Market and therefore does not represent unlisted companies.
- The study excluded finance and banking industries because the nature of capital and investment in these industries are not comparable to those of non-financial firms, in addition theses institutions are governed under specific laws and have different regulators.
- More independent variables (such as corruption, bad law enforcement and mismanagement) could have been included in the formulated tested models in order to investigate their impact on the selected performance ratios. However, this was not possible due to the impossibility of data collection in the Egyptian context especially if it relates to the aforementioned factors.
- Another limitation is that time constraint and the tasking nature of first-hand data collection did not permitted exhaustive search for data relating to other industries which could have made the result to have a more far-reaching application to encompass more industries.
- The study used one measure for the opportunistic earning management (i.e discretionary accruals), however, in order to have strong evidence about the level of quality of earning before taking any corrective action or making any decision related to listed company. Thus, It is preferable to imply many models for comparison, including those based on discretionary revenues, as suggested by Stubben (2010), beside accruals-based models.

**SUGGESTED FUTURE RESEARCH**

Based on the limitations and findings of current research, the following recommendations can be made for future research: The researcher needs to include more years of data and more countries in order to extend the study and add some control variables like growth, risk and Board of director characteristics to investigate their role in mitigating agency cost. Furthermore, those who want to study the impact of governance and ownership structure on earning management and performance in the future needs to cover financial sectors, which will not only extend this study but also the results will become more effective. In order to investigate whether the level of earning management and performance are affected by the existence of nonlinear ownership, the researchers in the field of corporate finance needs to re-estimate the above model after including squared terms for the external and director ownership variables.

**REFERENCES**


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