THE EFFECT OF CORPORATE GOVERNANCE ATTRIBUTES ON ACCOUNTING CONSERVATISM IN EGYPT

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ABSTRACT

This study aims to investigate the corporate governance attributes that influence the level of accounting conservatism in Egyptian listed firms. A sample of the 40 most active non-financial companies collected in the period 2009-2014 was used for hypothesis testing. Panel regression models were used for data analysis. Givoly & Hayn (2000) index is used as conservatism measurement criteria. The corporate governance mechanisms used in this study covers board characteristics, ownership structure, and audit quality. The results of the research indicate that board independence and audit quality have a significant positive association with the accounting conservatism. Moreover, institutional ownership and large block shares have a significant negative association. Firms with higher Market to-Book value are likely to be more conservative in their reports. To the best of our knowledge, no study has yet utilized seven variables in measuring the attributes of corporate governance in non-financial companies in Egypt.

Keywords: Accounting Conservatism, Corporate Governance, Egypt.

INTRODUCTION

Corporate governance facilitates contracting as it encourages adopting conservatism in financial reports (Fama & Jensen, 1983). Conservative accounting is an element of financial reporting quality because it alleviates agency conflicts as managers give a timely account of bad news instead of good news, thus reducing the managers' opportunity to manipulate financial reporting. It is a helpful implement for the board of directors to perform its role in controlling management (Ahmed & Duellman, 2007). Therefore, effective corporate governance and a high level of accounting conservatism will increase the company's financial reporting quality. The literature notes that alleviating agency problems, enhancing contractual agreements, reducing litigation costs, good decision making, and reducing information asymmetry are the results of conservative reporting (Ahmed & Duellman, 2007; Affes & Sardouk, 2016). Consequently, under situations of uncertainty and economic difficulties, accounting conservatism is required for the financial reporting process. Conservatism restricts opportunistic management to grantee the shareholders' interests and increases the firm's value. The relationship between the board characteristics and the quality of financial reports has been investigated in the literature. Xie et al. (2003) reported that the ratio of external directors has a negative effect on the proxy of earnings management. Companies that have a higher rate of external directors are more likely to recognize losses in a timely manner than companies with a low rate of external directors (Mohammed et al., 2017; Ahmed & Duellman, 2007). The board monitors managers and conservative accounting as a good measure of the agency's conflict. Therefore, the relation between the board characteristics and accounting conservatism has to be investigated.

Owners significantly influence specific forms of management decisions about conservative reporting. Prior literature argues that the ownership structure is a key element in corporate governance attributes that reduce incentives for earnings management and the mechanism for equilibrium shareholder interests to increase the significance of financial reporting (Liu, 2019; Lin, 2016; Song, 2015). The ownership structure supports maintaining conservative accounting and reducing managers' practices when choosing accounting policies to increase their benefits.

This study intends to answer the question of: What is the effect of corporate governance on the level of conservatism in financial reports in Egypt? As with the corporate governance mechanisms investigated in prior research, the corporate governance attributes used in this study include board structure, ownership structure, and audit type. Board characteristic and ownership structures are utilized as a proxy of internal corporate governance mechanisms and audit quality as a proxy of an external mechanism. The board characteristic variables are bored size, board independence, and CEO/Chair separation. The ownership structure variables are managerial ownership, institutional investors, and large block ownership.

The approach of Givoly & Hayn's, (2000) is used to measure the level of accounting conservatism. Balanced data of the 40 most active non-financial firms were utilized during the period 2009-2014 to test the proposed hypothesis. This paper contributes to the literature by providing decision-makers and regulators in Egypt with suggestions on improving corporate governance practices, as conservatism is a substitute for good governance.

The rest of the paper is organized as follows. The next section discusses the theoretical background and hypothesis development. Then clarify the research method, followed by providing the empirical results. The conclusions, recommendations, and limitations are in the last section.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Corporate Governance and Accounting Conservatism

Corporate governance is a tool for maintaining conservative accounting and reducing agency problems. This means that strong corporate governance mechanisms lead to higher managers monitoring and hence increased claims for accounting conservatism. Accounting conservatism is an alternative policy in the absence of strong corporate governance to reduce agency conflicts. Corporate governance is considered a determinant of the quality of financial reporting in emerging countries. In which, some countries adopt the Anglo-Saxon model, whereas others develop their particular model. Previous studies on the accounting consequences of corporate governance in emerging economies have mixed findings. For instance, board size and independence are found to be the governance variables that impact financial statement quality in Malaysia and the UAE (Mohammed, et al. 2017; Adawi & Rwegasira, 2011). Alareeni (2018) reported that board independence and internal ownership are positively associated with the proxy of earnings management for Bahraini firms. Furthermore, the board size was found to be negatively correlated, and CEO/Chair separation has no influence on earnings management. In Saudi Arabia, no governance mechanisms, except audit quality, have an impact on earnings management (Al-Abbas, 2009). None of the governance mechanisms have an impact on earnings quality in Kuwait and Greece (Al-shammari & Al-sultan, 2010; Chalevas & Tzovas, 2010).

The business environment in Egypt has a significant effect on accounting and financial reporting policies. In line with Gray (1988) about the cultural impact on accounting systems in Egypt, accounting and disclosure procedures are likely to be more conservative and less transparent. That is because conservatism is prominent in a country with weak property rights preservation. Increased interest in conservative accounting may be due to the fact that accounting standards do not cover all areas of accounting. Some fields require manager judgment, thus, the extent of conservative accounting relies on the manager's decisions (Dey et al., 2008). Corporate managers must be controlled through a number of corporate governance mechanisms to maintain conservative reporting. For example, the large number of non-executive directors could increase the managers monitoring and let them be more conservative in financial reports (Nasr & Ntim 2018; Mohammed et al. 2017). Many studies indicate that corporate governance mechanisms could enhance conservative accounting. Garcı´a Lara et al. (2009); Lim (2011) show a positive relationship between corporate governance features and the level of conservative accounting in the US and Australian firms respectively. However, other studies show that some corporate governance mechanisms, such as auditor type, CEO/Chair separation, the board size, institutional investors and managerial ownership can decline conservative accounting (Nasr & Ntim 2018; Lin, 2016; Ahmed & Henry, 2012). At the same time, prior studies assert that effective corporate governance mechanisms restrict the opportunistic behavior of the managers which may lead them to be more conservative in their financial reports. However, according to contingency theory, the relationship between corporate governance and conservative accounting differs according to the diverse institutional environment.

Positive accounting refers to accounting conservatism as a valuable instrument to alleviate agency conflicts (El-Habashy, 2004). Accounting conservatism is considered an essential tool in restricting managers' compensation plans (Watts, 2003). Separation of ownership and control leads to the lack of symmetrical information for shareholders which drives managers to over-compensation; yet, conservative accounting limits managers' opportunities to do so. Conservatism supports corporate governance as it requests the recognition of losses on gains. Hence, negative NPV projects timely will be referred to the board of directors for investigating such projects and managers' justifications. Then, agency theory and positive accounting theory describes the connection between the characteristics of the board and conservative reporting.

In developing countries like Egypt, ownership is focused between the government and families which may lead to complicity and weaken minority shareholders' rights to obtain firm information. The lack of separation between ownership and control reduces agency conflict. Thus, there is a negative relationship between managerial ownership and conservatism as the conservative reports is a shareholders requirement (Chi et al. 2009). The ineffectual corporate governance mechanisms are related to a high level of conserved reports, as conservatism acts as an alternative to corporate governance mechanisms. Although many empirical studies have investigated conservative accounting (Table 1), the economic demands of conservatism are still under debate. Some papers, for example, indicate that shareholders tend more towards conservative financial reporting as a corporate governance mechanism (Watts, 2003; Ramalingegowda & Yu, 2012). Moreover, Garcı´a Lara et al. (2009) argue that the governance ability to apply conservatism depends on internal and external mechanisms.

Some previous studies dealt with corporate governance issues in Egypt. Shehata (2016) noted some adequate practices of effective corporate governance in Egypt, including the dominance of independent directors, the CEO/chairman separation, and the existence of internal audit departments. Such compliance will contribute to enhancing the accounting conservatism and thus helping to enhance the efficiency of the capital market and attract more investors. Enhancing the disclosure and transparency level, as well as effective governance, helps in protecting the stakeholders' interests and contributes to strengthening Egypt's position as a financial center.

Hypothesis Development

Previous research refers to characteristics and corporate governance mechanisms that are likely to drive accounting conservatism. This section reviews relevant literature that studies the relationship between conservative accounting and the ownership structure, board structure, and audit type, as a proxy of corporate governance to develop hypotheses. The theoretical and empirical relationship between accounting conservatism and each corporate governance mechanism is highlighted.

Table 1
SELECTED STUDIES OF CORPORATE GOVERNANCE AND ACCOUNTING CONSERVATISM

Authors	Motivation	Independent variables	Sample	Results
Liu (2019)	Investigate the association between ownership structure and conditional and unconditional conservatism in China.	State ownership, institutional investors, foreign investors, and managerial shareholders	Listed Chinese firms (CSMAR) (2005–2014).	– Managerial ownership has a negative effect on both conditional and unconditional conservatism. – Accounting conservatism can be influenced by certain ownership and control features in the context of state ownership.
Nasr & Ntim (2018)	Investigate the influence of governance mechanisms on conservative accounting	board size, board composition, CEO/chair separation, and external auditor type	EGX-100 index (2015)	– Board independence has a positive influence on conservatism. – Board size and auditor type have a negative impact on conservatism. – CEO/Chair separation has no significant influence on conservatism.
Sugiarto, & Fachrurrozi (2018)	Examine the influence of financial distress, leverage, investment opportunity set (IOS), and managerial ownership to accounting conservatism.	Financial distress, Leverage, Investment Opportunity Set (IOS), and Managerial Ownership	Manufacturing companies listed on IDX in 2013-2016	– Financial distress and leverage have a positive relationship with conservatism. – Investment opportunity set (IOS) has no significant relation with conservatism. – Managerial ownership has a negative relationship with conservatism.
Alkurdi et al. (2017).	Examine the influence of ownership structure on the accounting conservatism in Jordan	governmental ownership foreign ownership institutional ownership ownership concentration	99 Jordanian (2005 - 2013).	– Governmental ownership negatively impacts accounting conservatism. – Foreign and institutional ownership positively impact accounting conservatism – Ownership concentration does not affect conservatism.
Mohamme et al. (2017)	Investigate the association between accounting conservatism, corporate governance and political connection in	Board size, Board independence, CEO/chair separation, Audit committee, Managerial ownership, largest Shareholders,	206 firms, (2004-2007)	– Board independence has a positive impact on conservatism. – Management ownership has a negative effect on conservatism. – Political connections positively associated with the company’s future performance.

Table 1
SELECTED STUDIES OF CORPORATE GOVERNANCE AND ACCOUNTING CONSERVATISM

	Malaysian companies.	External auditor type		
Lin (2016)	Examines the association between institutional ownership and conservatism	Institutional ownership	The active U.S. (1996 to 2006)	– Institutional ownership has a negative relationship with conservatism.
Ahmed & Henry (2012)	Investigate the association between voluntary adoption of certain corporate governance mechanisms and accounting conservatism	Board size, CEO/chairperson duality, board remuneration, director ownership, institutional investors, and external share ownership	Australian listed firms for 11-years preceding the Governance Principles in 2003.	– The voluntary audit committee and board independence have a positive relationship with conservatism. – Board size has a negative relation with conservatism associated with unconditional accounting conservatism. – CEO/chairperson duality, board remuneration, director ownership, institutional investors, and external share ownership have no significant relation with conservatism.
Ramalingegowda & Yu (2012)	Examines the association between institutional ownership and conservatism	Institutional ownership	U.S. companies (1995–2006)	– High institutional ownership is associated with a high-level of accounting conservatism.
Ahmed & Duellman, 2007	Investigate the effect of board characteristics on accounting conservatism	Board size, CEO/chair separation, non-executive directors, institutional ownership, and managerial ownership.	US 306 non-financial firms from 1999 to 2001	– Board Size, CEO/Chair separation, and managerial ownership have no significant relation with conservatism – Non-executive directors have a positive relationship with conservatism. – Institutional ownership has a negative relationship with conservatism.

Board Size and Accounting Conservatism

Garcı´a Lara et al. (2007) reported that companies with strong boards require a higher level of conservatism than companies with weak boards. The agency theory clarifies that the board of directors is expected to minimize agency conflicts so that companies apply the principles of conservative accounting. The signaling theory states that the larger board will give a positive signal to investors related to the service and control functions of the boards as a corporate governance mechanism (Ahmed & Duellman, 2007). Big board size enhances the effectiveness of the monitoring process, which increases the scope of accounting conservatism because of the broad variety of expertise, especially the quality of financial reports (Ebrahim & Fattah, 2015). Using data from 120 Australian listed firms, Ahmed & Henry (2012) indicate that the large board size leads to increasing the inaccuracy of earnings and book value, leading to more conservative accounting. However, a series of results indicate that the board size does not have a significant impact on conservative accounting. Using a sample of 200 American firms cover 3 years, Ahmed & Duellman (2007) show an insignificant correlation. Also, for 100 British companies in the FTSE index cover 6 years, Elshandidy & Hassanein (2014) indicate an insignificant positive correlation between board size and conservative accounting. The ECG indicates that the board size is based on the number necessary to perform their functions and duties. Indicating that large board size finds it difficult to manage and ensure coordination, the board size is negatively associated with the board capacity to work effectively which leads to adopting conservatism in their reporting. Therefore, the hypothesis can be formed as:

Hypothesis 1: Board size has a positive effect on accounting conservatism in Egypt.

Board Independence and Accounting Conservatism

According to agency theory, the presence of non-executive directors reduces agency problems by effectively monitoring the managers' behavior (Fama, 1980). Managers are more likely to overestimate profits to overcompensate themselves (Watts & Zimmermann, 1978) as managers are more likely to reduce this behavior through effective monitoring. Mohammed et al. (2017) argue that the outsider directors have experience in financial reporting because they are managers in other companies, which enhances the quality of accounting and recognizes the importance of adopting conservative accounting. It was justified that the highest attribution of board independence enables them to monitor managers and impact the level of conservatism. Kukah et al. (2016); Mohammed et al. (2017) and Nasr & Ntim (2018) demonstrate that non-executive directors restrict managers' chances to influence earnings and be more conservative in their reports. Elshandidy & Hassanein (2014) indicate that IFRS and a higher number of non-executive directors have a complementary impact on accounting conservatism. However, Lim (2011) established an insignificant relationship between the ratio of non-executive directors and conservative accounting, which was explained by the influence of differentiated recognized settings of Australian companies compared to non-Australian companies. In the same way, Garcı´a Lara et al. (2007) stated an insignificant impact of non-executive directors on conservative accounting in Spanish companies. Moreover, using a sample of 200 Malaysian firms covering 3 years, Amran & Manaf (2014) found that non-executive directors were not in line with a higher level of conservatism. Instead, non-executive directors do not actually monitor and advise the board independently. The ECG proposed that the majority be non-executive directors as a large number of external directors serve as a strong corporate governance mechanism. Lin et al. (2012) indicate that Chinese listed companies have accounting conservatism in their accounting policies where an increasing proportion of non-executive directors on the board assist in improving accounting conservatism. Bowen et al. (2005) demonstrate that companies with a higher proportion of external directors on the board tend to reduce earnings management. In view of the evidence from the literature recommendations and the idea that non-executive directors are likely to pressure on the managers to practice more conservatism, this study proposes the following hypothesis:

Hypothesis 2: Board independence has a positive effect on accounting conservatism in Egypt.

CEO Duality and Accounting Conservatism

According to the agency theory, CEO duality is undesirable and restricts the monitoring process and increases agency conflict and information asymmetry. The CEO/Chair separation aids in the determination of the responsibility for low performance and decision-making. The preceding results regarding the relationship between CEO duality and accounting conservatism have mixed results. While Lim, (2011); Elshandidy & Hassanein, (2014) showed an insignificant positive association between CEO/chair separation and conservative accounting. Chi et al. (2009) stated that companies with CEO/chair duality are likely to be more conservative in their reports as CEO/chair duality is a weak corporate governance mechanism, and urges managers to adopt conservatism to compensate for such weakness. Some previous studies argue that CEO/chair duality does not impact conservative accounting. Ahmed & Duellman (2007); Ahmed & Henry,

(2012) reported that the duality has no impact on conservative accounting. Nasr & Ntim (2018) found that the CEO/chair duality has no impact on accounting conservatism by utilizing data from 67 Egyptian listed firms for one year. The ECG states that the positions of the chairman and CEO must be occupied by two separate persons. Given the mixed results of previous research, the proposed hypothesis is:

Hypothesis 3: The CEO/Chair separation has a positive effect on accounting conservatism in Egypt.

Institutional Ownership and Accounting Conservatism

Large institutional ownership restricts managers' behavior and has the opportunities, resources, ability to control, and impact managers. Prior research indicates that institutional shareholders are a governance mechanism that plays a valuable role in requesting for conservative accounting. Jiang & Kim (2000) and Lin et al. (2014) suggest that institutional investors enhance conservative accounting and decrease asymmetry information between management and stakeholders. It can influence accounting procedures and financial reporting by monitoring management behavior to raise the quality of financial reports (Song, 2015). Ramalingegowda & Yu (2012) suggest that high institutional ownership is associated with a high level of accounting conservatism. They indicate that the positive relationship is more prevalent in companies with higher growth options and information asymmetry, as direct monitoring is more difficult and the benefits of conservatism are likely to be greater. Increasing institutional ownership is directly related to the relative increase in outsider members on the board of directors. Institutional shareholders have the distinct advantage of controlling and monitoring corporate policies through their concentrated holdings, and therefore higher levels of institutional ownership lead to lower agency costs. Institutional investors are more likely to monitor manager behavior by using more conservative practices. Lin et al. (2014) indicate that lesser institutional shareholders offer managers the opportunity for earnings management profits. Their findings suggest that firms with a higher level of conservatism accounting are less likely to participate in earning management activities. Alkurdi et al. (2017) point out that institutional investors support increasing the level of accounting conservatism by motivating the board and audit committees. Thus, high institutional ownership may reduce the time required to complete the audit function. This will certainly decrease the required time to prepare annual reports and be more effective and less expensive. However, Lin (2016) demonstrates that a large proportion of institutional investors are correlated with less conserved financial reports and found that institutional investors positively influence earnings management. Similarly, Chi et al (2009) and Ahmed & Duellman (2007) suggest that companies with a higher fraction of institutional investors have fewer demands in conservative accounting. From the above discussion, it is suggested that institutional investors who monitor corporate managers are more likely to require conservatism than individuals. Institutional shareholders, as more sophisticated and important in determining prices in capital markets, recognize and appreciate the benefits of corporate governance on the conservative financial reports, and thus demand more conservative accounting by managers.

Hypothesis 4: Institutional ownership has a positive effect on accounting conservatism in Egypt.

Ownership Concentration and Accounting Conservatism

Investors with large shares are more likely to participate in corporate management and directing its financial and operational policies. They are able to control the voting privileges, thus placing them in a strong position and care about their own interests by manipulating earning information. However, Lskavyan & Spatareanu (2011) argue that the ownership concentration improves the firm's performance and helps to choose accounting policies for reducing opportunistic behaviors of managers, optimizes the use of company resources and increases investor confidence. Some studies have been suggested to address the relationship between ownership concentration and timing of profits. Astami & Tower (2006) investigate firm features and accounting policies. Their findings appear that lower financial levels, lower ownership concentration, and high investment opportunities lead to a higher level of accounting conservatism. Apadore & Mohd-Noor (2013) suggest that a higher ownership concentration increases the processing time of the annual report. Major investors have two aspects of the influence on financial reports. First, through participating in the firm's activities like finance, investment, and managers' decisions. Second, access and exploit private information to achieve personal benefits or impact the decisions of managers (El-Habashy, 2019). It is proposed that a higher proportion of ownership lead to a lack of shareholder motivation to monitor the firm's activities and weak participation in management decisions and policies such as accounting conservatism. Therefore, the hypothesis can be formed as:

Hypothesis 5: Ownership concentration has a negative effect on accounting conservatism in Egypt.

Managerial Ownership and Accounting Conservatism

Conservatism leads to reduced short-term earnings and increased long-term earnings. Managers tend to over-invest because it creates special benefits for them. Ellili (2013) shows that managerial ownership has a positive influence on accounting conservatism as managerial ownership is associated with a weak practice of earning management and increases the quality of the accounting information. However, Cullinan et al. (2012); Mohammed et al. (2017); Sugiarto, & Fachrurrozi (2018); and Liu (2019) demonstrate a negative association between managerial ownership and accounting conservatism. Lafond & Roychowdhury (2008) examined the effect of management ownership on conservative accounting used by firms, and they found that manager-owned companies with agency conflicts face a lower extent of conservatism. Moreover, Liu (2019) suggests that managerial ownership has a negative relationship with accounting conservatism in Chinese companies. In companies with high managerial ownership, decisions and activities will be taken according to the interests of the manager, who become shareholders in the company. Given the managerial ownership, the management is not only an agent but also a company owner, this can reduce agency conflicts so that companies tend to use conservative accounting. This is due to the sense of belonging of the managers of the company. Bonus plan hypothesis in positive accounting theory states that managers use their discretion to increase accounting earnings to maximize their bonuses (El-Habashy, 2004). A higher level of shareholdings within the company by managers, the more conservative financial reporting that is submitted. The manager works not only as an agent but also acts as a shareholder. This happens because the company is not only directed to large earnings but more concerned with company sustainability. Managerial ownership is dominance in listed Egyptian companies. Ownership structure significantly impacts the reporting quality. Accordingly, the proposed hypothesis is formed as follows:

Hypothesis 6: Managerial ownership has a positive effect on accounting conservatism in Egypt.

Audit Type and Accounting Conservatism

Audit quality is considered a substitute for external corporate governance mechanisms. Ownership/control separation requires a third party to offer guarantees, increase shareholder confidence in annual reporting and comply with accounting standards. Big 4 audit firms are used as a proxy for audit quality in many studies. Previous research has shown that using high-quality external auditors has a negative association with the abnormal accruals and accounting error rate (Francis et al., 1999). Khurana & Raman (2004) suggest that Big 4 auditors provide assurance and reliability with financial reports, more than that of a small auditor. The integrity and conservatism levels delivered through large audit firms lead them to choose conservative accounting options to defend themselves. In addition, they are more at risk of litigation with the client, which means greater compensation from lawsuits. Audit quality of the Big 4 firms differs with respect to the shareholder protection system and control mechanisms. Big 4 firms induce their clients to adopt conservatism compared to smaller auditors. Francis & Wang (2008) explore the impact of earnings quality and the Big 4 auditors in 42 countries, and they conclude that earnings quality is increased only in companies audited by one of the top four auditors. This means that low investor-protection regimes in developing economies, poor earnings and audit quality are related to the big four audit firms. Mohammed et al. (2017) found a positive relationship between the big four audit firms and accounting conservatism in Malaysia. Mitra et al. (2016) note that American companies that have shifted from the Big 4 show less conservative accounting. However, Yasar (2013) indicated that there was no difference between big and non-big auditors regarding reducing earnings management in Turkish companies. Egyptian firms which were audited by Big 4 firms are likely to have a higher degree of conservatism due to their reputation. The above discussion supports the argument that firms with high audit quality is likely to be more conservative in financial reporting. Therefore, the proposed hypothesis is as follows:

Hypothesis 7: The Big 4 audit firms have a positive effect on accounting conservatism in Egypt.

RESEARCH METHODOLOGY

The study uses panel regression to analyze cross-section data of nonfinancial firms during the period 2009-2014. This was the most recent data available at the time of the study. The study employs a descriptive and correlational research design using panel data.

Sample and Data Sources

The study utilizes balanced panel data from the most active firms in the Egyptian Stock Market issued in the disclosure book (EGX 50). The disclosure book includes consolidated financial statements, including information about the board characteristics, ownership structure, latest three-year financial reports, ratios and the latest actions and events for each corporation. The data is for period 2009-2014 which was the latest data available at the time of the study. The data of financial firms are excluded because these firms are completely different from non-financial firms, and some features may not be comparable between financial and other firms. Hence, balanced data from the 40 most active non-financial firms with 240 firm-year observations was utilized to test the proposed hypothesis.

Dependent Variable

Accounting conservatism is the dependent variable. This study adopts the measurement on the accrual basis suggested by Givoly & Hayn (2000); Ahmed & Duellman (2007) to reflect the accounting accruals in the following period. Accounting conservatism results in negative accruals as the higher the negatives, the higher the level of conservative accounting in corporate financial reporting. Thus, the accounting conservatism approach is:

$$Accruals = \frac{EBEXTit + DEPit - OCFit}{TA}$$

$$CONACC = (Accruals)\ x\ (-1)$$

Where:

CONACC is accounting conservatism based on the accrual-based measure of conservatism for firm i in year t, EBEXT is income before tax and extraordinary items, DEP is depreciation charge for the year, OCF is operating cash flow, and TA is total assets.

Table 3
VARIABLE DEFINITIONS AND MEASUREMENT

Code	Description	Measurements
Governance variables		
ManOwn	Managerial Ownership	A ratio of the firm's shares is owned by managers.
INST	Institutional Ownership	A ratio of the firm's shares is owned by institutional investors and the government.
OWCO	Ownership Concentration	The ratio of shares is owned by the largest owners
BSize	Board Size	Number of Directors.
BIndep	Board Independence	A ratio of non-executive directors.
Dual	CEO/Chair separation	A dummy variable equals zero if the role of CEO and Chairman of the board is occupied by the same person and 1 if not.
AuditQ	Audit quality	A dummy variable equals 1 if the auditor is one of the big 4 firms and 0 if not.
Conservatism Accounting		
CONACC	Accounting Conservatism	$CONACC = \left(\frac{EBEXTit + DEPit - OCFit}{TAit}\right) x - 1$ EBEXTit = Income before tax and extraordinary items DEPit = Depreciation Charge for the year OCFit = Operating Cash Flow TAit = Total Assets
Control variables		
Size	Firm Size	Total Assets.
Lev	Financial Leverage	Total liabilities / Total assets
MBV	Market to-Book Value	Market value / Book value.

Independent and Control Variables

The corporate governance mechanisms used in this study covers board characteristics, ownership structure, and audit quality. Seven variables are used in measuring the attributes of corporate governance; they are the top management ownership, institutional ownership, large block shares, board size, board independence, CEO/Chair separation, and audit quality. To ensure the reliability of the results and to avoid potential bias associated with the deleted variables, this study measures and includes three variables to control the models: financial leverage, firm size, and market to book value ratio. According to the agency theory the higher the level of leverage, the greater the likelihood of conflict between shareholders and creditors which increase the contractual demand for conservative accounting (Ahmed & Duellman, 2007). Therefore, it can be theorized that leverage positively impacts accounting conservatism. Managers of large firms are likely to be more conservative in their reports by recognizing bad news more quickly than good news to avoid possible political costs. The market-to-book value rate controls the growth opportunities and cumulative impacts of the preceding governorate (Roychowdhury & Watts, 2007). Symbols and variables are presented in Table 2.

Table 3
DESCRIPTIVE STATISTICS

	Mean	**Median**	**Std. Deviation**	**Mini**	**Max**
CONACC	0.073	0.070	0.0829	-0.144	0.429
BSize	10.72	11	3.74	5	21
BIndep	83%	89%	13%	44%	100%
ManOwn	7%	0	14%	0	66%
INST	21%	6%	28%	0	92%
OWCO	38%	33%	23%	10%	92%
Size	8049	2053	14454	48	59300
Lev	40%	39%	24%	4%	90%
MBV	1.90	1.50	1.77	0.21	11.08
Dummy variables					
	Dummy		N	%	
Dual	Coded 0		184	77%	
	Coded 1		56	23%	
AuditQ	Coded 0		114	47.5%	
	Coded 1		126	52.5%	

Model Development

To test the variables in this study, three models were developed. The study uses a fixed and random effect panel regression model for parameters estimation. The Hausman test results determine the efficiency of the mentioned methods. Model (1) is formed to test the effect of corporate governance attributes which are board characteristics, ownership structure, and audit quality on the level of accounting conservatism.

$$CONACCit = \beta 0 + \beta 1 ManOwnit + \beta 2 INSTit + \beta 3 OWCOit + \beta 4 BSizeit + \beta 5 BIndepit + \beta 6 Dualit + \beta 7 AuditQit + \beta 8 Sizeit + \beta 9 Levit + \beta 10 MBVit + eit. \quad (1)$$

Model (2) tests the impact of board characteristics on the level of accounting conservatism.

$$CONACCit = \beta 0 + \beta 1BSizeit + \beta 2BIndepit + \beta 3Dualit + \beta 4AuditQit + \beta 5Sizeit \text{ z } \beta 6Levit + \beta 7MBVit + eit. \quad (2)$$

Model (3) tests the impact of ownership structure on the level of accounting conservatism.

$$CONACC_{it} = \beta_0 + \beta_1 ManOwn_{it} + \beta_2 INST_{it} + \beta_3 OWCO_{it} + \beta_4 AuditQ_{it} + \beta_5 Size_{it} + \beta_6 Lev_{it} + \beta_7 MBV_{it} + e_{it}. \quad (3)$$

EMPIRICAL RESULTS

Descriptive Statistics

Table 3 shows that the average accounting conservatism (CONACC) is .073. The positive value shows the firms' tendency to be less conservative in financial reports. The average board size (BSIZE) is 10.72 with a minimum of 3 members and a maximum of 21 members. Moreover, the mean value of board independence (BIndep) is 83%. This complies with the Egyptian governance code which indicates that at least one-third of the board members must be non-executive. On the ownership side, it appears that Egyptian listed companies have a reasonable share of institutional shareholders and a high ratio of shares is owned by the block owners. For the control variables, only 23% of listed companies separate the roles of chairman and CEO. The high duality rate is due to the lack of a clear recommendation in the Egyptian code about separation. With regard to audit type, only 52.5% of firms were audited by one of the Big 4 audit firms.

Correlation

The correlation coefficients are presented in Table 4. Coefficients are shown above and the p-values below. No significant correlation shown between board size, CEO/chairman separation, board independence, and management ownership with accounting conservatism (Coef.=-0.032, -0.064, 0.069, 0.062 respectively), these findings agree with Elshandidy & Hassanein (2014) in the UK and (Al-Abbas, 2009) in Saudi Arabia. The table shows that accounting conservatism is negatively correlated with large block shares and institutional ownership (Coef.=-0.141, -0.139) at the 5% level. For control variables, no significant correlation was found between firm size and accounting conservatism. Leverage ratios and market-to-book value have a positive correlation with accounting conservatism at the 1% level (Coef.=0.221, 0.242). This means that large-leveraged and/or well-grown companies are likely to be more conservative in their reports than others.

Table 4
CORRELATION MATRIX

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**	**11.**
1. *CONACC*	1										
2. *BSize*	-0.032	1									
	0.625										
3. *BIndep*	0.069	0.363^{**}	1								
	0.290	0.000									
4. *Dual*	-0.064	-0.294^{**}	0.100	1							
	0.328	0.000	0.124								
5. *OWCO*	-0.141^{*}	-0.191^{**}	-0.273^{**}	0.128^{*}	1						

Table 4
CORRELATION MATRIX

	0.028	0.003	0.000	0.048							
6. *ManOwn*	0.062	0.017	-0.009	0.024	0.014	1					
	0.341	0.794	0.893	0.713	0.828						
7. *InstO*	-0.139*	0.380**	0.181**	-0.239**	0.275**	-0.315**	1				
	0.032	0.000	0.005	0.000	0.000	0.000					
8. *AuditQ*	0.229**	-0.022	0.045	0.083	-0.072	0.064	-0.209**	1			
	0.000	0.742	0.497	0.208	0.272	0.329	0.001				
9. *Size*	0.009	-0.146*	-0.210**	-0.107	0.329**	-0.087	-0.108	0.401**	1		
	0.889	0.024	0.001	0.100	0.000	0.178	0.094	0.000			
10. *Lev*	0.221**	-0.248**	-0.413**	-0.033	0.125	0.225**	-0.259**	0.184**	0.264**	1	
	0.001	0.000	0.000	0.614	0.053	0.000	0.000	0.005	0.000		
11. *MBV*	0.242**	0.049	-0.047	0.011	0.150*	-0.115	0.224**	-0.151*	-0.062	0.377**	1
	0.000	0.453	0.472	0.867	0.020	0.076	0.000	0.021	0.338	0.000	

Significant coefficients at the 1% and 5% levels are noted by ** and *, respectively.

Regression Analysis and Discussion

Tolerance values for each variable are obtained using 1-R2, all values are over 0.10 thus, no multi-collinearity risk exists between the independent variables (Table 5). Furthermore, the VIF value is less than 10 indicating that there is no multi-colinearity between these variables. The results of panel regression are presented in Tables 6-8. The findings indicate that board size has an insignificant negative influence on accounting conservatism, thus H1 is rejected. This finding agrees with the results of Ahmed & Duellman (2007) for American firms and Elshandidy & Hassanein (2014) for British firms. This means that board size does not affect the level of accounting conservatism, especially in countries of common law with solid investor protection. However, this result is inconsistent with Ahmed & Henry (2012), as they reported that large board sizes enhance the accounting conservatism in Australia. Contrariwise, using one-year data for Egyptian firms, Nasr & Ntim (2018) found that board size had a negative impact on conservatism. Accordingly, in this study, using data for 6 years, it's shown that the board size is not an effective mechanism for enhancing conservative accounting in Egyptian listed firms. The results showed a positive association between the proportion of non-executive directors and accounting conservatism, hence, H2 is accepted. This result is consistent with Nasr & Ntim (2018); Mohammed et al. (2016); and Ahmed & Duellman, (2007) as they suggest a positive correlation between the proportion of board independence and the conservative accountant. This result supports the agency's theory, suggesting that more non-executive directors are likely to adopt more conservative accounting as a tool to reduce agency problems and facilitate management control.

TABLE 5
GOVERNANCE – ACCRUALS MEASUREMENT OF CONSERVATISM RELATION

MODEL 1					Collinearity Statistics	
CONACC	**Coef.**	**Std. Err.**	**t**	**P-value**	**Tolerance**	**VIF**
BSize	-0.081	0.017	-1.07	0.288	0.616	1.624
BIndep	0.721	0.405	1.78	0.077	0.634	1.578
Dual	-0.264	0.138	-1.91	0.057	0.704	1.420
OWCO	-0.005	0.003	-1.75	0.082	0.551	1.816
ManOwn	0.003	0.004	0.66	0.511	0.739	1.354
INST	-0.006	0.003	-2.24	0.026	0.495	2.018

TABLE 5
GOVERNANCE – ACCRUALS MEASUREMENT OF CONSERVATISM RELATION

AuditQ	0.4508	0.1145	3.94	0.000	0.719	1.391
Size	-0.096	0.016	0.75	0.454	0.584	1.712
Lev	-0.085	0.649	-0.13	0.896	0.519	1.928
MBV	0.149	0.030	4.99	0.000	0.655	1.526
_cons	0.380	0.375	1.01	0.313		
Model Summary						
R-squared	0.2034					
Adj R-squared	0.1686					
F	5.85					
P-Value	0.000					

The results show a significant negative correlation at the 10% level between the CEO/Chair separation and conservative accounting; therefore, H3 is accepted. This result supports the stewardship theory. However, this finding opposes the agency theory and the results of Elshandidy & Hassanein (2014); Garcı'a Lara et al. (2007) as separation enhances board independence and increases the level of accounting conservatism. Accordingly, the CEO/chair separation is an effective mechanism for enhancing conservative accounting in developed countries. However, conservative accounting is a governance mechanism to mitigate agency conflict in developing economies like Egypt. The results show acceptance of the relationship mentioned in H7. Results indicate that the impact of audit quality (AuditQ) is positively significant at the 1% level. Kim et al. (2003) and Ahmed & Henry (2012) showed that the Big 4 firms differ from other firms because of their conservative attitudes toward accounting choices. Thus, in pursuit of quality, the Big 4 firms seek to limit the opportunistic behavior of managers to be more conservative than other companies.

Table 6
BOARD AND OWNERSHIP STRUCTURES - CONSERVATISM RELATIONSHIP

Model 2									
CONACC	**Pred. Sign.**	**Coef.**	**Std. Err.**	**t**	**P-value**	**Coef.**	**Std. Err.**	**t**	**P-value**
BSize	+	-0.027	0.016	-1.70	0.091				
BIndep	+	0.828	0.394	2.10	0.037				
Dual	+	-0.227	0.135	-1.68	0.094				
OWCO	-					-0.007	0.003	-2.85	0.005
ManOwn	+					0.003	0.004	0.87	0.384
INST	+					-0.004	0.002	-2.00	0.046
AuditQ	+	0.545	0.111	4.92	0.000	0.429	0.114	3.76	0.000
Size	+	0.000	0.000	0.17	0.869	0.000	0.000	0.94	0.348
Lev	+	0.161	0.630	0.26	0.799	0.059	0.637	0.09	0.926
MBV	+	0.119	0.030	4.00	0.000	0.143	0.030	4.79	0.000
_cons	+	0.159	0.325	0.49	0.625	0.758	0.118	6.41	0.000
Model Summary									
R-squared		0.1704				0.1803			
Adj R-squared		0.1453				0.1556			
F		6.81				7.29			
P-Value		0.000				0.000			

The results show an insignificant positive effect of managerial ownership (CEOOwn) on conservative accounting. This finding is consistent with the views of Ahmed & Duellman, (2007), and Ahmed & Henry (2012) reporting an insignificant positive relationship. This can be explained by the difference in ownership structures. The Egyptian ownership structure is more concentrated than in developed countries. In this regard, agency costs lead to enhancing the conservative accounting as a regulator of opportunistic behavior of managers. The results show that the effect of institutional ownership (INST) on accounting conservatism in Egypt is significantly negative at the 5% level. This result supports the findings of Salehi & Sehat (2018); and Ramalingegowda & Yu. (2012). Moreover, Ahmed & Duellman, (2007) show a significant negative association between the measures of conservatism and the participation of institutional investors. One can interpret this result that the high proportion of institutional ownership in Egypt is considered as a control mechanism that can be a replacement of conservatism accounting and as a tool for the monitoring of the managers. The results show that the effect of the largest shareholder (OWCO) on accounting conservatism in Egypt is negative and significant at 5% and 10% levels. This result supports the finding of Apadore & Mohd-Noor (2013) and Astami & Tower (2006). Ownership concentration increases the effectiveness of control frameworks by shareholders and is considered a control mechanism that can prevent managers' performance. Ahmed & Henry (2012) argue that the existence of controlling shareholders negatively affects the relevance of financial information.

Regarding the control variables, firm size and leverage are not significant determinants of accounting conservatism. Positive and insignificant coefficients indicate that large firms do not limit the scope of conservative accounting. It argues that large firms do not mostly possess better internal control systems. Moreover, large leverage does not lead to greater financial obligations that the company must meet. The result is inconsistent with the results of Lafond & Roychowdhury (2008). The market-to-book value ratio has a positive and significant influence on conservative accounting. The result is in line with Roychowdhury & Watts (2007) and suggests that Egyptian companies with high growth prospects are likely to be more conservative in their reports.

CONCLUSION

This study aims to examine the associations between corporate governance attributes and the level of accounting conservatism. A positive correlation between the proportion of board independence and the conservative accountant is found. This result supports the agency's theory, suggesting that more non-executive directors are likely to adopt more conservative accounting as a tool to reduce agency conflicts and facilitate management control. The independent directors induce managers to adopt accounting policies which reflect the economic substance, not their wishes. Accordingly, board independence is an effective mechanism for enhancing conservative accounting in Egypt. The empirical result confirms that CEO/Chair separation is related to a low level of accounting conservatism practice which supports the stewardship theory. However, this finding opposes the agency theory which states that the separation enhances board independence and increases the level of accounting conservatism.

The results show that institutional investors and the largest shareholders have a negative impact on accounting conservatism. The findings report that highly institutional investors and the block holders' ownership are associated with a weak level of accounting conservatism and will lead to low accounting information quality. Regarding institutional ownership, the findings are consistent with Lin (2016); Chi et al (2009); Ahmed & Duellman (2007) as a large proportion of institutional investors are correlated with less conserved financial reports and institutional investors positively influence earnings management. Regarding the block holders' ownership, the results show that firms with a high ownership concentration have a lower level of conservative accounting which confirms that the largest shareholders achieve personal benefits or impact the decisions of managers. Concerning managerial ownership, the results failed to find a significant relationship with the adoption of accounting conservatism. Results indicate that the impact of audit quality (AuditQ) is positively significant at the 1% level. Thus, in pursuit of quality, the Big 4 firms seek to limit the opportunistic behavior of managers to be more conservative than other companies.

The results show that the firm size and leverage level of a company do not affect accounting conservatism and confirm that highly leveraged companies do not have incentives to use income increases accruals to reduce debt constraints. Regarding size, it does not affect the level of accounting conservatism, which shows that the larger firms have no incentive to choose the accounting policy that reduces the political costs and do not mostly possess better internal control systems. Finally, with regard to the market-to-book value ratio, it has a positive and significant influence on conservative accounting and suggests that Egyptian companies with high growth prospects are likely to be more conservative in their reports.

The results of this study can provide recommendations to help the companies in improving their financial reporting quality. The study contributes to the existing literature on the association between corporate governance attributes and accounting conservatism practice in the company. The high presence of board independence and audit quality of the company enhances the level of accounting conservatism and ensures the high quality of financial reporting. The board independence and audit quality of the company lead managers to adopt accounting policies to reflect the real economic substance, not their wishes. While the institutional and the largest shareholders in the company ownership structure lead to the high practice of earnings management a lower level of conservative accounting. In addition, the board size and managerial owners are not always a gauge of the level of accounting conservatism and quality of accounting information. Policymakers must compel companies to comply with disclosure rules. Further research will, therefore, be undertaken considering more governance quality variables and using larger samples and longer time periods.

The study has limitations as the research uses data from only the 40 most active nonfinancial firms listed on the Egyptian Stock Exchange. However, this index is the preferred index for investors in Egypt. Moreover, the data is for period 2009-2014 which was the latest data available at the time of the study. The data of financial firms are excluded as these companies are totally different from non-financial companies, and some attributes may not be comparable between financial and other companies.

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