How external auditor quality moderates the relation between internal audit committee effectiveness and accounting conservatism

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Abstract: This study examines the effect of audit committee on two measures of accounting conservatism. In addition, this study also investigates the interaction effect of exogenous variable (i.e., external auditor quality) on relationship between audit committee effectiveness and two measures of accounting conservatism. A total of 38 sample firms are selected from the Nasdaq Dubai for the period from 2013 to 2017. In addition, some information relating to audit committee and auditor quality are collected from firms' annual reports. For data analysis, panel data methodology is employed and multiple regression analysis technique is used to test the developed hypotheses of this study. Results show that interaction effect of external auditor quality found to be significant with one-year-lagged effect on both measures of conservatism. The findings of this study contribute to the signalling theory, agency theory, reputation theory and accounting conservatism literature with lagged effect in emerging economies settings.

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1 Introduction

Accounting conservatism is considered as a basic characteristic of financial reporting in relation to earnings quality since it enhances the reliability of financial statements and minimises the information asymmetry (Mohammed et al., 2010; Jeffrey et al., 2014) and monitor and control over overinvestment particularly in research and development cost (Lara et al., 2016). The conventional definition of accounting conservatism [Bliss (1924) as cited by Watts (2003a) and Ren (2014)] that states "anticipate no profit but anticipate all losses" which is also called unconditional conservatism. This concept is later on termed as an asymmetric timeliness of earnings which requires early and timely recognising of bad news as an expected loss and deferring the good news as expected gain (Basu, 1997). This concept presented by Basu (1997) is one of the popular tools for measuring the conditional conservatism. Hence, both of the explanations (unconditional and conditional conservatism) have defined the accounting conservatism as understatement of earnings rather than overstatement. The principle of conservatism helps in reducing conflicts regarding debt-contracting and managerial contracting and also is advantageous for the business in many ways. However, on the other hand, there are academics, capital market regulators, and standard-setters who also criticised the concept accounting conservatism. For instance, according to LaFond and Watts (2008),

on one hand the accounting conservatism understates the net assets of a firm in the current period, but on the other hand it overstates the earnings of the same firm in future periods because of the understatement of future expenses. Irrespective of the criticisms made by various researchers, the empirical research also designates accounting conservatism as ever increasing phenomenon for the last few decades (e.g., see Givoly and Hayn, 2000, 2002; Kim and Kross, 2005; Lobo and Zhou, 2006; Lara et al., 2016). This seems that the critics have overlooked to the principle of accounting conservatism as Lara et al. (2016) findings report that conservatism is a mechanism that reduces overinvestment (e.g., research and development expenditure). Therefore, a detail investigation in this area is required to answer the important unrevealed questions.

2   Literature review and hypotheses development

2.1   Audit committee effectiveness (ACE) and conservatism

There are few empirical researches that give the relation between conservatism and the role of the audit committee. However, the previous study on the subject indicates the link between audit committees and the quality of earnings. This suggests that there is a relationship between audit committee and conservatism (DeFond et al., 2005; Klein 2002a; DeZoort et al., 2002). The presence of the audit committee does not give an assurance of the automatic link between the audit committee and conservatism, it should be noted that an effective audit committee is one that determines that the other sub-committees will be committed to develop a specific degree of conservation (Turley and Zaman, 2007; Dhaliwal et al., 2006; Vafeas, 2005).

Other comprehensive research suggests that the most effective audit committees improve the quality of earnings (Turley and Zaman, 2007; Steward and Munro, 2007; Lennox and Park, 2007; Karamanou and Vafeas, 2005). In particular, the most effective audit committees eliminate the behaviour of the corporate management to engage in opportunism that will affect the quality of the earnings (Klein, 2002b). Finally, an effective audit committee is active in arbitration in systematic compromises between the external parties and the management of the firms, for example, the external auditors and the management of the firm (DeZoort and Salterio, 2001).

Conservatism reports a higher quality accounting system, therefore the audit committees will adopt this mode of accounting in the organisations they are engaged in and ensure management is able to abide.

Hence:

H$_1$ Ceteris paribus, an internal audit committee's influence positively to the degree of:

    a   accrual-based accounting conservatism

    b   timeliness accounting conservatism.

2.2   External auditor quality (EAQ) and conservatism

Chung et al. (2003) argued that auditors want their clients to make the choice of conservative accounting rather than liberal to lessen the risk of litigation as well as to protect his reputational capital. The authors anticipated and demonstrated that big auditing firms are more effective than smaller firms in limiting income-increasing accrual

because big audit firms are more likely to be exposed to the risk of litigation in the situation of a failure of audit which leads to loss of reputational capital. By using conservatism, Cahan and Zhang (2006) and Krishnan and Visvanathan (2007) provided support to auditors of ex-Andersen clients to lessen their risk of litigation. Cahan and Zhang (2006) found discretionary or lower abnormal accruals in clients of ex-Andersen as compared to a corresponding sample. To support the clients of big auditors with greater extents of conservatism, Krishnan (2007) applied the Basu (1997) measure of AT.

The general overwhelming consensus in the extant literature is a firm's audit committee engaging a higher quality auditor is also likely to report financial statements of a better quality (e.g., Balsam et al., 2003; Francis et al., 2004; Caramanis and Lennox, 2008). It is suggested a higher quality auditor will have a greater ability to detect and deter earnings management, unintentional errors (i.e., increased competence) and secure heightened reputation capital (i.e., preserve independence more stringently). Switching to a higher quality auditor with an established brand name can aid a firm in reassuring investors of the credibility of the reported financial statements, and the desire of the firm to address corporate management opportunism concerns. Finally, firms audit committee engaging a higher quality auditor will likely reduce information risk of higher accruals-based earnings (Li et al., 2009).

Thus:

H_2 Ceteris paribus, external auditor influences positively on the relationship between:

    a ACE and accrual-based accounting conservatism

    b ACE and timeliness accounting conservatism.

3 Research framework

The background of this study is based on two models developed by previous scholars like Wang et al. (2009) and Gigler et al. (2009). The theory of Gigler et al. is established on the moral hazard model; on the other hand, the idea of Wang et al. is developed on the signalling model. According to Gigler et al. (2009), the degree of accounting conservatism is treated as an endogenous variable while Basu (1997) portray it as an exogenous variable. In this study, one endogenous variable is taken into account, such as the ACE and one exogenous variable being considered is EAQ. These are used in resolving the issues in the accounting literature.

3.1 Motivations for lagged effect of endogenous and exogenous factors in conceptual model of study

There are some explanations for lagged effect of endogenous and exogenous factors on accrual-based conservatism and asymmetrical timeliness conservatism as it was originated from capital market returns. First motivational source for the lagged effect advocates that Barberis et al. (1998), Daniel et al. (1998), Hong and Stein (1999), Poteshman (2001) and Khan (2014) suggested that managers in short horizon underreact; whereas, over the long horizon they overreact to the information. This hypothesis dictates that managers/investors do not respond strong enough to the new endogenous and exogenous factors. In this sense, since the strong reaction by the managers take time; therefore, information displays their effect after sometime. Following the argument of

Daniel et al. (1998) and Khan (2014) who have reported that managers underreact to the publically available information as signals; while, they overreact to the privately received information. Third, Hong et al. (2007) have introduced diffusion hypothesis, a different but potential channel through which underreaction of managers can occur. They (Hong et al., 2007) described a model which comprises of 'momentum traders' and 'news watchers'. They documented that a news watcher cannot extract the information from the prices of other news watcher since he observes some private information. This leads to the gradual information diffusion hypothesis. Finally, based upon recommendation of Khan (2014) and Khan et al. (2014) who have suggested future study on lagged effect on capital market, this study has explored lagged effect of endogenous and exogenous factors on managers conservative policy for their firms in UAE capital market.

Figure 1   Conceptual framework
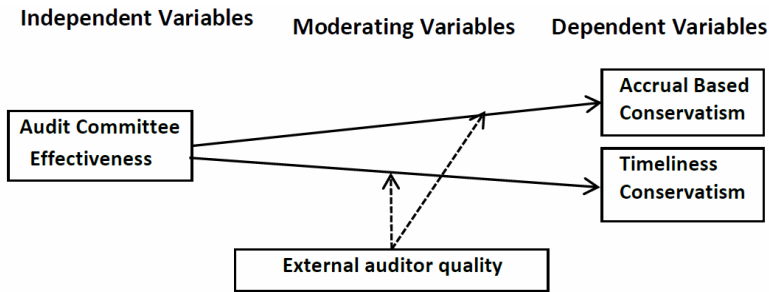
4   Methodology

4.1   Sample selection

The population samples selected was comprised of all listed companies on the Nasdaq Dubai from 1st January 2003 to 2017. The firms of Nasdaq Dubai were chosen because their information is publicly available. When the sample selection was made, the firms that are operating in finance and banking industry, excluded because they have different regulatory boards that determine their operations (Givoly et al., 2007; Ruddock et al., 2006). The other excluded firms were those that were not present for at least three years through the entire period of the study for example IPO firms and those firms that were delisted before they were re-listed again. The next group excluded is of those firms where there is a suspicion that its financial data is missing for more than three years in the period of study (Klein, 2002b).

   Finally, 38 firms were selected from the pool depending on the availability of its data (see Table 1). The resulting sample is 168 firm-year observations of the datasets, the subsequent tests are done on the firms as outlined in Table 1.

Table 1   Final sample by industry

1 S. no.	2 Industry	3 [1]Population	4 [2]Sample	5 Per. within sample (C4 ÷ C3)
1	Investment and financial services firms	8	7	87.50
2	Insurance firms	13	10	76.92
3	Real estate and construction firms	8	8	100.00
4	Transportation firms	4	3	75.00
5	Industrial firms	2	2	100.00
6	Consumers staple firms	6	4	66.67
7	Services firms	2	2	100.00
8	Telecommunication firms	2	2	100.00
	Total	*45*	*38*	*84.44*

Notes: [1]Population is calculated after excluding financial and banking. [2]Sample is
calculated after excluding the firms with missing data more than three years.

  Source: Website of Nasdaq Dubai at February 2018

4.2   Measures

Table 2   Multi-items construct for measuring independence variables

Construct	Related items	Measurement/source
Audit committee effectiveness (ACE)	Audit committee independence (ACI) Audit committee expertise (ACEx) Audit committee diligence (ACD)	*Measurements:* $ACE_{it} = \Sigma(ACI_{it} + ACEx_{it} + ACD_{it})$ ACI = a dummy variable with indicator scheme for firm *i* is using one (1) if at the end of time period *t* a head of audit committee is independent directors, otherwise, score is zero (0). $ACEx$ = a dummy variable with indicator scheme for firm *i* is using 1 if at the end of time period *t* at least one member of the audit committee is deemed to have suitable financial expertise (i.e., degree in accounting or professional credentials – member of a professional accounting body or work experience – experience as a public accountant, auditor, chief financial officer, controller, chief accounting officer, CEO), otherwise, score is 0. ACD = a dummy variable with indicator scheme for firm *i* is using 1 if during the period *t* the audit committee conducted ≥5 meetings, otherwise, score is 0. Firms are classified into four group on the basis on above score by the variable of interest, i.e., score 0 indicates no ACE, score 1 for somewhat ACE, score 2 for good ACE, and score 3 for very good ACE. *Sources:* Klein (2002a, 2002b), Abbott et al. (2003), Dhaliwal et al. (2006) and Krishnan and Visvanathan (2008)

Table 2   Multi-items construct for measuring independence variables (continued)

Construct	Related items	Measurement/source
External auditor quality (EAQ)	Auditor's independence (AI) Auditor's specialisation (AS) Auditor's brand name (ABN)	$EAQ_{it} = \Sigma(AI_{it} + AS_{it} + ABN_{it})$ AI = a dummy variable with indicator scheme for firm i is using 1 if during time period t the ratio of non-audit fees to total fees paid to the external auditor is less than 20%, otherwise, score is 0. AS = a dummy variable with indicator scheme for firm i is using 1 if auditor during time period t is recognised as an industry specialist for auditing purposes in the industry sector to which firm i is categorised by Nasdaq Dubai, otherwise, score is 0. ABN = a dummy variable with indicator scheme for firm i is using 1 if the auditor engaged is one of *Big 4* major leading international accounting firms (i.e., Price Waterhouse Coopers, Deloitte and Touché, KPMG and Ernst and Young), otherwise, score is 0. *Sources:* Rapani (2011), Wines (2006), Casterella et al. (2002), Frankel et al. (2002), Choi and Doogar (2005) and Basioudis et al. (2008)
Conservatism	Accrual-based conservatism (ACCRCON)	$Accruals = [INC + DEPRN - OCF] / TA$ $ACCRCON = (Accruals / 3\ years) \times (-1)$ Note: higher the values of ACCRCON the higher the conservatism. *Source:* Duellman (2006)
	Asymmetric timeliness measure (ATCON)	$Eit/Pit–1 = \beta0 + \beta1 Rit + \beta2 Dit + \beta3 Rit * Dit + \varepsilon it$ Eit = earnings before extraordinary items, $Pit–1$ = market capital of the firm, Rit = fiscal year share return, D = dummy variable is equal to 1 if returns are negative; 0 if otherwise. *Source:* Basu (1997)

4.3   Data analysis

4.3.1   Normality test of study variables

Checking the normality of data is the basic assumption of both factor analysis and structural equation modelling (Kline, 2005). Normality of all study variables was examined by screening the data through the skewness and kurtosis test as shown in Table 3. The distribution is considered to be normal if the skewness and kurtosis values fall between the range of +3 to –3 (Tabachnick and Fidell, 2007). Examination of skewness and kurtosis validated the normality of symmetry and peakedness of the distributions. These findings show that entire data are within the normal range and the distributions were close to normal (see Table 3).

4.4 Correlation analysis

The Pearson correlation coefficients are computed to explore the relationship between the endogenous, exogenous and conservatism variables before conducting the regression and examining the issue of multicollinearity. Table 4 provides correlation matrices for four observed variables used in this study. The correlation matrices show that accrual-based conservatism, timeliness-based conservatism which stems from the foundation of this study are found to be non-significant with endogenous variables (ACE) and exogenous variables (EAQ), providing primary evidence that these variables are unrelated with criterion variables which means there is no immediate effect of endogenous and exogenous on degree of conservatism. Therefore, this study focus on lagged 1 effect of endogenous and exogenous variables on criterion variables. In Table 5, shows significant and highly influential one-year-lag effect of endogenous and exogenous variables on accrual-based conservatism (ACCRCON) and asymmetrical timeliness conservatism (ATCON). Nevertheless, these findings regarding mutual relationship are prepared with vigilance and serve as a definitive yardstick in that two independent variables show robust proof of association. In light of Pearson correlation, this study uses one-year-lagged effect for further analysis.

Table 3 Skewness and kurtosis test

Variable	Skewness	SE	Kurtosis	SE
Lagged 1_ACE	1.332	0.112	2.443	0.100
Lagged 1_EAQ	1.329	0.112	2.319	0.100
ACCRCON	1.775	0.112	1.835	0.100
ATCON	2.076	0.112	1.887	0.100

Notes: ACE = audit committee effectiveness, EAQ = external auditor quality,
    ACCRCON = accrual-based conservatism and ATCON = asymmetrical
    timeliness conservatism.

Table 4 Correlation analysis of current affects

Variables	1	2	3	4
1 ACE	1			
2 EAQ	*0.286*	1		
3 ACCRCON	0.016	–0.006	1	
4 ATCON	0.015	–0.024	*0.185*	1

Note: Correlations in italic represent significance at 5% or less.
        Source: Author research

Table 5 Correlation analysis of lagged 1 affects

Variables	1	2	3	4
1 ACE	1			
2 EAQ	*0.286*	1		
3 ACCRCON	*0.175*	*0.231*	1	
4 ATCON	*0.088*	*0.193*	*0.185*	1

Notes: Correlations in italic represent significance at 5% or less.
        Source: Author research

Table 6   Results of moderating effect with one-year-lagged

Variables	Accrual-based conservatism Model-1		Asymmetrical timeliness conservatism Model-1		Accrual-based conservatism Model-2		Asymmetrical timeliness conservatism Model-2	
	Coefficients	*t-statistics*	*Coefficients*	*t-statistics*	*Coefficients*	*t-statistics*	*Coefficients*	*t-statistics*
Intercept	0.116	3.125**	0.227	2.867**	0.168	2.113**	0.185	2.087**
ACE	0.089	3.649**	0.095	2.443**	0.120	2.886	0.111	1.785
EAQ	0.085	2.775***	0.108	2.125***	0.124	1.650	0.121	2.554
EAQ * ACE					0.308	7.329***	0.291	5.251**
R^2	0.102		0.111		0.231		0.247	
R^2 change					0.129		0.136	
F-value	9.65**		10.33**		27.12**		28.22***	
N	160		160		160		160	

Note: P-values in parentheses. * = $p < 0.1$, ** = $p < 0.05$ and *** = $p < 0.01$.

4.5   Multiple regressions with moderating effect

Taking into account for one-year-lagged effect of one endogenous and one exogenous variables on accrual-based conservatism (ACCRCON) and asymmetrical timeliness conservatism (ATCON), the results show that endogenous variables (i.e., ACE) and one of exogenous variables (i.e., EAQ) significantly predict both of accrual-based conservatism (R^2 = 10.20%, F-statistics = 9.65, p = 0.04), asymmetrical timeliness conservatism (R^2 = 11.10%, F-statistics = 10.33, p = 0.05) in model 1 which is considered to be the main effect model without adding moderating effect (see Table 6).

In second step researchers added moderating effect exogenous variables on the relation of ACE and two measures of conservatism, the result of full path model found significant positive moderating effects on two measures of conservatism. This shows that this variable enhances the relationship of ACE and firm's degree of conservatism. While taking the moderating effect the coefficients found to be more significant with increased in R^2 value of 12.9% (0.102–0.231) for ACCRCON and 13.60% (0.111–0.247) which demonstrate the consistency of statistical significance in structural paths relationships in both models.

5   Discussion and conclusions of study

To answer research questions, this study empirically examined one endogenous and one exogenous independent factor influencing on the relationship between ACE and firms' degree of conservatism among Dubai listed firms (see Figure 1). Here one-year-lagged effects support the idea of Wang et al. (2009) and Jeffrey et al. (2014) regarding signalling theory traced from the Basu's (1997) asymmetric timeliness of earnings definition of conservatism as well as using the game-theoretic approach (i.e., game theory). The basic properties of signalling theory are mostly related to the role of risk. These basic properties serve as the foundation of signalling theory to affect the managers how to react to mitigate the risks in a firm. Watts (2003a) and Wang et al. (2009) suggested that there is a signalling equilibrium model whereby managers recognise information in earnings quality of firm and thereby communicate positive news to market. The followers of lagged effect advocates that managers in short horizon underreact whereas; over the long horizon they overreact to the information (Barberis et al., 1998; Hong and Stein, 1999; Poteshman, 2001). This hypothesis dictates that Nasdaq Dubai managers do not respond strong enough to the new endogenous and exogenous factors. In this sense, since the strong reaction by the managers take time; therefore, information displays their effect after sometime. This study found strong support of two-year-lagged effect of endogenous and exogenous factors on accrual-based conservatism and asymmetrical timeliness conservatism, therefore, this study support the signalling theory as lagged effect. Like this study model, Stiglitz and Weiss (1981) analysed the market-based selection of antecedents and consequences of signalling problems. Stiglitz and Weiss (1981) found that when the lenders have more accurate information about the risk characteristics of their investments then the lenders (banks) reduce the supply of credits which leads of shortage of funds in capital market. This shortage of funds increase costs to more risky firms. In this situation, borrowers firms try to overcome these problems by increasing the degree of conservatism as a lagged effect to reduce asymmetry of information. Findings of this study support the signalling theory

in a way to find significant effect of ACE and EAQ on degree of conservatism. Now the question is why there is delay effect on degree of conservatism? The answer of this question is diffusion hypothesis of Hong et al. (2007) and Khan (2014) who have stated that managers underreact the information (which is not good for stakeholders) and they said further that managers are 'momentum traders' and 'news watchers'. This study carries lagged effect which might cause of weak Dubai corporate governance codes of conduct.

While taken the moderating effect on the relationship between ACE and two measures of conservatism, this study found strong moderating effects of EAQ on managers' conservative policy which increased R^2 value and F-statistics significantly. This moderator (i.e., external auditor) carried two-year-lagged effect which reflect that supports the diffusion hypothesis of Hong et al. (2007) who have stated that managers underreact the information and they said further that managers are 'momentum traders' and 'news watchers'. They (Hong et al., 2007; Khan, 2014) documented that a news watcher cannot extract the information from the prices of other news watcher since they observes some private information. This leads to the gradual information diffusion hypothesis which this study justifies in Nasdaq Dubai listed firm. In addition, Barberis et al. (1998) and Khan (2014) stated in their "limited information processing capacity hypothesis" that most of the managers do not pay full attention (or may have less capacity to absorb information) to the publically available information. Therefore, in this way the lagged effect become more forceful as compared to immediate effect which is supported through this study. Therefore, Nasdaq Dubai listed firms should pay more attention on managers' timely and concurrent actions against internal and external factors which negatively affect the value of firm.

Results of this study support the benefit of conservatism on firm performance only when lagged effect is used to measure conservatism. Findings of this study indicate that the relation between endogenous and exogenous factors with conservatism are sensitive to the measures of conservatism because managers in Nasdaq Dubai listed firms take delaying actions that many managers in the market cannot pay full attention (or may ignore) to the publically available information (Khan, 2014). Despite the recognised limitations of limited sample size, the findings from this study have merit in highlighting important insights with significant implications for various key financial accounting stakeholders (e.g., regulators, corporate management, practitioners, investors, and scholars). In advancing the knowledge and understanding of lagged effects of antecedents, signalling theory and moderating role, and the related association between significant and non-significant factors, this study also highlights various paths for future interest and productive empirical research.

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