

**Audit efficiency and board activity in Saudi Arabia: Empirical investigation****Khaled Salmen Aljaaidi<sup>a\*</sup>, Omar Ali Bagais<sup>a</sup> and Sultan Abdullah AlAbdullatif<sup>b</sup>**<sup>a</sup>*Department of Accounting, College of Business Administration, Prince Sattam bin Abdulaziz University, Saudi Arabia*<sup>b</sup>*Accounting Department, College of Business Administration, Umm Alqura University, Saudi Arabia***CHRONICLE****ABSTRACT***Article history:*

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The aim of this study is to empirically examine the association between audit efficiency and board activity among listed energy companies in Saudi Stock Exchange (Tadawul) for the period 2012-2019. The final sample of this study consists of 32 firm-year observations. Using the Pooled OLS regression, the study finds that audit efficiency was positively related to board activity. Moreover, the result indicates the complementary role of monitoring mechanisms in which audit efficiency complements the board activity. The study also provides insightful evidence to policy makers on the link of audit efficiency and board activity among energy companies.

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**1. Introduction**

The focus of this study is to examine how audit efficiency may influence the activity of the board meeting frequency among energy listed companies in Saudi Arabia for the period 2012-2019. Findings of various research studies have established that the number of board meetings plays a critical role in determining the level of the board monitoring efficacy. Essentially, board meetings provide directors with ample opportunity to perform and coordinate their duties with ease. Moreover, the board meetings create a conducive working environment and principal occasions when the directors can formally conduct monitoring management effectively (Baccouche & Omri, 2014; Jiraporn et al., 2009; Conger et al., 1998; Vafeas, 1999; Brick & Chidambaran, 2010; Ramos & Olalla, 2011; Agrawal & Knoeber, 2001; Agrawal & Knoeber, 2001). The frequency of board meetings is widely viewed in the current literature as an alternative to the level of observing service delivery (Greco, 2010; Collier and Gregory, 1999; Vafeas, 1999; Laksmana, 2008; Sharma et al., 2009). Additionally, the frequency of board meetings can be considered as a proxy for the time directors have to conduct their monitoring role as well as the level of activity delivery monitoring (Greco, 2010; Vafeas, 1999; Carcello et al., 2002; Laksmana, 2008). Several empirical studies examined the board meeting frequency with different issues in the marketplace (Greco, 2010; Vafeas, 1999; Hahn, 2007; Baccouche and Omri, 2014; Hahn & Lasfer, 2016; Lin et al., 2014; Menon & Williams, 1994), ignoring the impact of audit report delay. Essentially, companies wait for the issuance of the auditing report before pronouncing their earnings (Bamber et al., 1993). Generally, this means that it is incumbent upon the individual companies to promote timeliness provision of financial reports. It is considered an important element in sharing vital financial information of a given company with the market and is closely associated with

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market responses (Ferreira et al., 2011; Dopuch et al., 1986; Al-Najjar, 2012; Chambers & Penman, 1984). According to Al-Ajmi (2008), most shareholders in the emerging markets demographic, especially in developing countries, largely depend on financial reporting as the primary source of information. As such, this study intends to examine the effects of the delayed audit report on the activities of the board. Yet, to the best of the researcher's knowledge, no empirical evidence exists that allows conclusive determinations to be made of how the delay of audit report influences the board meeting frequency in the context of Saudi Arabia. This study contributes to the existing literature in several ways. First, this study examines the association of the audit report delay on board meeting frequency. We provide an additional empirical evidence on the link between audit report delay and board meeting frequency. Second, this study is conducted in the setting of Saudi Arabia which is characterized as a context having a paucity of research. Finally, the sample of this study is the energy companies which is considered an important sector in the Saudi market that has been ignored as a sole industry in the empirical investigations.

The rest of the paper continues as follows. The next section briefly reviews the extant literature and formulates the hypotheses. The third section describes the research design. The empirical results are reported in the fourth section while in the final section, conclusions are drawn.

## 2. Literature Review and Hypotheses Development

Evidence reveals that auditors form an integral part of corporate governance, especially in countries with relatively weak legal institutions. Worthwhile noting is that the auditors' ability to conduct an exhaustive financial audit and discover mismanagement of public funds is vital in the fight against corruption. In effect, higher-quality auditors play an effective monitoring role and help in reducing agency problems as compared with the low-quality auditors (Choi & Wong, 2007; Beattie & Fearnley, 1995; DeFond, 1992; Ashbaugh & Warfield, 2003). External auditors play an essential monitoring role in corporate governance (Allen et al., 2005; DeFond et al., 2000; Raghunandan & Rama, 2007) since stakeholders' demand reliable financial information (Ashbaugh & Warfield, 2003). Audit efficiency refers to the auditor's ability to minimize audit-related costs while achieving audit goals on time without compromising the quality of the audit report (Bamber et al., 1993; Pincus et al., 1999; Abbott et al., 2012; Knechel & Sharma 2012; Knechel et al., 2012; Kaplan & Williams, 2013; Blankley et al. 2014; Al-Daoud et al., 2016).

Newton and Ashton (1989) and Afify (2009) assert that timeliness of financial reporting is considered a key indicator of better auditing outcomes. As such, it is incumbent upon auditors to provide accurate auditing reports on time. A timely audit report is essential as several companies rely on the auditor's report to declare their financial report (Bamber et al., 1993). This means that timing is an essential element in financial reporting regarding the sharing of important financial information with the market and is closely related to market responses (Dopuch et al., 1986; Coles et al., 2008; Chambers & Penman, 1984). Al-Ajmi (2008) reports that shareholders in the emerging countries rely on financial reporting as a main source of information. Khasharmeh and Aljifri (2010) add that audit reports are critical for upcoming economies as a media release, news conferences, and financial analysts' forecasts are not fully established (Wallace & Briston, 1993; Chahine & Tohme, 2009; Lipton & Lorsch, 1992). For better outcomes, shareholders make their decisions based on timely published and audited financial reports (Piot et al., 2015). Consequently, several empirical studies have been conducted to examine the board meeting frequency with various factors in the marketplace (Greco, 2010; Vafeas, 1999; Hahn, 2007; Baccouche & Omri, 2014; Hahn & Lasfer, 2016; Lin et al., 2014; Fama & Jensen, 1983), ignoring the impact of audit report delay. However, to the best of the researchers' knowledge, a study linking empirically the audit report lag with board meeting frequency does not exist. This issue has been ignored by the researchers of audit report lag in the context of corporate governance monitoring mechanisms.

It is argued by previous studies that corporate governance mechanisms may substitute or complement each other (Cai et al., 2009; Byrne, 1996; Davis & Useem, 2002; Rediker & Seth, 1995; Ward et al., 2009). In this regard, as audit report lag is an indicator for an audit efficiency, external monitoring mechanism, and board activity, an internal monitoring mechanism, the association between these two monitoring mechanisms have not yet been tested whether they play a substitution or a complementary role. In specific, the more time and effort spent on auditing the financial statements may delay issuing the audit report which, consequently, may increase the audit fees. This might affect negatively the investors' confidence and increase the overall monitoring costs, and as a result, the agency cost will increase. Based on the above discussion evidencing the positive direction of the association between the audit efficiency and board activity, we formulate the following hypotheses:

*H<sub>1</sub>: Audit efficiency is related positively to board activity.*

*H<sub>2</sub>: Audit efficiency complements and not substitutes the board activity.*

## 3. Research design

We construct our sample by selecting energy companies listed on Saudi Stock Exchange (Tadawul) from 2012 to 2019 that disclose information on board meetings and audit report delay. The information related to board meetings and audit report delay

was collected by hand from financial statements. Our final sample comprises 5 energy companies with complete data, resulting in 32 firm-year observations.

To examine the association between audit efficiency and board activity, a multiple regression model was specified that links these variables and control for other several variables that are evidenced by the extant research of their influence on the board activity. Pooled Ordinary least square model OLS was specified to examine the association of audit report delay with board activity *BDACT*.

$$BDACT = \beta_0 + \beta_1 AEF + \beta_2 FSIZE + \beta_3 FLEV + e \quad (1)$$

where:

<i>BDACT</i>	=	Number of meetings held during the year
<i>AEF</i>	=	A number of calendar days from fiscal yearend to the date of the auditor's report
<i>FSIZE</i>	=	Total assets
<i>FLEV</i>	=	Debt to equity ratio
<i>e</i>	=	error term.

As for the measurements of the variables, Table 1 exhibits the dependent and test variables.

**Table 1**  
Summary of the Operationalization and the Expected Sign of the Research Variables

Variables	Acronym	Operationalization	Coefficient Predictions
			Pooled OLS
Dependent Variable			
Board activity	<i>BDACT</i>	Number of meetings held during the year	d.v
Test variable			
Audit Efficiency	<i>AEF</i>	A number of calendar days from fiscal yearend to the date of the auditor's report	i.v
Control Variables			
Firm size	<i>FSIZE</i>	Total assets	
Financial leverage	<i>FLEV</i>	Debt to equity ratio	

Note: d.v – dependent variable, i.v – independent variable

The board meeting frequency model used in this study is an extension of the previous studies (Greco, 2010; Vafeas, 1999; Hahn, 2007; Baccouche & Omri, 2014; Hahn & Lasfer, 2016; Lin, Yeh & Yang, 2014). We include two control variables that have been previously evidenced to have an association with board meeting frequency. Firm size *FSIZE* is found to have a significantly positive association with board meeting frequency (Greco, 2010; Hahn, 2007; Brick & Chidambaran, 2010; Lin, Yeh and Yang, 2014; Baccouche and Omri, 2014). Firm leverage *FLEV* is reported to have a significantly positive association with board meeting frequency (Greco 2010; Baccouche & Omri, 2014; Hahn & Lasfer, 2016; Haniffa et al., 2006)

#### 4. Empirical Results

Table 2 shows the descriptive statistics of the variables. It depicts the mean, standard deviation, minimum and maximum of each variable in the sample data set.

**Table 2**  
Descriptive statistics

	Mean	Minimum	Maximum	Std.Deviation
<i>BDACT</i>	6	4	10	0.991
<i>AEF</i>	49	15	89	19.790
<i>FSIZE</i>	18872179084	309984124	74029648000	23262872571.872
<i>FLEV</i>	1.805	.01	6.370	1.961

Table 2 displays that there is a significant range of variation among the considered sample of this study. It is shown that the range of *BDACT* is from 4 to 10 with an average of 6 and a standard deviation of 0.991. The mean of *AEF* is 49 days with a

minimum of 15 days and a maximum of 89 days and a standard deviation of 19.790 days. The average of the *FSIZE* is 18872179084 with a minimum of 309984124 and a maximum of 74029648000 and a standard deviation of 23262872571.872. The mean of *FLEV* is 1.805 with a maximum of 6.370 and a minimum of .01 and a standard deviation of 1.961. The range of *PE* is from .00 to .11 with an average of .042 and a standard deviation of 1.961.

**Table 3**  
Correlation matrix of independent variables

	AEF	FSIZE	FLEV
AEF	1		
FSIZE	.256	1	
FLEV	.698	.740**	1

As shown by Table 3, the correlation matrices verify that no multicollinearity exists among the variables, as none of the variables correlates above 0.90. All the variables have a correlation of equal to or less than .740.

Table 4 reports the estimated model coefficients, the associated significant test results, the adjusted  $R^2$  and the  $F$ -value for the board activity model. The  $F$ -value for the model is statistically significant at the 1% level, indicating that the overall model can be interpreted. The adjusted  $R^2$  is .307, indicating that the model has explained 30.70% of the variance in the board activity. This indicates a good fit of the board activity model.

**Table 4**  
Pooled OLS Analysis Results

Variables	Coef.	$t$	$P >  t $
<b>Hypothesized variable</b>			
AEF	26.178	2.994	.006
<b>Control variables</b>			
FSIZE	5.887	2.416	.022
FLEV	-.788-	-.672-	.507
Adjusted $R^2 = .307$			
$F$ -value = 5.573			
$P$ -value = .004			

**Bold** = significance at 1%, 5% and 10% (one-tailed significance)

Tables 4 displays that audit efficiency *AEF* is related positively to board activity *BDACT* ( $p$ -value < 0.006, one-tailed significance). This result indicates that the higher the audit report is delayed, the more the board meetings are held. Therefore, hypothesis  $H_1$  is accepted. Further, this result indicates that audit efficiency complements the board activity. Thus, hypothesis  $H_2$  is supported. In particular, the results of this study confirms that the more time and effort spent on auditing the financial statements indicates the increase on the overall monitoring costs, and as a result, the agency cost will increase. As a consequence, the board of directors increases their meetings to mitigate these problems, maintain the investors' confidence, and face the increased pressure to enhance its oversight activities.

## 5. Conclusion

The purpose of this study was to examine the relationship between audit efficiency and board activity among listed energy companies in Saudi Arabia. The final sample consists of 32 firm-year observations covering the period 2012-2019. The Pooled OLS regression results reveal that audit efficiency is positively related to board activity. In addition, audit efficiency as an external monitoring device complements the board activity which is an internal monitoring mechanism. This confirms that the more time and effort spent on auditing the financial statements indicates the increase on the overall monitoring costs, and as a result, the agency cost will increase. As a consequence, the board of directors increases their meetings to mitigate these problems, maintain the investors' confidence, and face the increased pressure to enhance its oversight activities.

This study will provide vital information that will help bridge the knowledge gap in the existing literature on board activities. The study will also be critical in the literature investigating the connection between board activity and audit efficiency. Additionally, the findings of this study might have practical implications for the Saudi stock market (Tadawul). These practical implications might gain new understanding regarding the extent to which the board of companies dealing in energy is active in such a way to practice their role of monitoring in protecting the interests of shareholders. Additionally, the external auditors and

the companies' management team will find the findings beneficial in understanding how the audit efficiency might influence the activities of the board.

This study acknowledges several limitations. First, the sample of the study consists of energy companies. Future research could include other industries such as the petrochemical sector, telecommunication sector and so far, second, this study examined one external monitoring mechanism as an independent variable. Future lines of research could include other corporate governance determinants such as board size, board independence, CEO duality, audit committee attributes, ownership types and audit quality. Finally, this study is carried out in the Saudi setting. Future lines of research could replicate the same model in different GCC countries and other Middle East countries.

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