

Functioning Proxies of Audit Committees-Fixed Effects Implications for Corporate Market Valuation

**Dr. Shivan Sarpal*

ABSTRACT

First set of investigation seeks to determine whether the indicators proxying the audit committee functioning influences the market valuation of Indian corporates whilst second set intends to analyze the moderating effects of firm-specific and committee-specific factors on market valuation consequences of audit committee functioning. An empirical investigation has been conducted by employing fixed effects panel regression on the data set of top BSE listed firms in India. Robustness testing has been performed by applying Wald test and other statistical operations. Outcomes concluded that only the audit committee activity and the extent of diligence of executive directors have exhibited positive associations with firm market valuation. However, the present study has divulged insignificant relationship between audit committee financial expertise or literacy and the market valuation irrespective of the use of different operationalizations employed in the analysis. Analysis of interaction effects revealed that the inside ownership tends to improve the market valuation of firms having independent chairman status in audit committees. Higher meeting attendance by executive directors tends to improve the firm market performance and thus, signifies positive market response towards the firm-specific expertise of inside (executive) board members. The insensitivity of other variables such as audit committee financial literacy/expertise and chairman leadership structure towards market valuation has offered surprising results in light of the Revised Clause 49 II(A)(ii) and (iii) requirements of the Listing Agreement. All in all, the audit committee leadership structure could only demonstrate the interaction effect along with inside ownership upon market valuation and thus, offers substantive evidence that the insouciant behavior of some of the audit committee (regressor) characteristics can be attributed to their inability to yield main effects on the market valuation (regressand). The quality of the empirical evidences manifested herein is reflected from its gloss of novelty in the extant Indian corporate governance literature.

Keywords: Audit Committee, Functioning proxies, Market Valuation, Financial Expertise, Financial literacy, Independent status, Fixed effects, Main effects, Interaction Effects.

1. Conceptual Framework and Hypothesis Development

The formation of a well-structured audit committee is linchpin in raising the standards of corporate governance. The role of the this committee is primarily to oversee the accuracy of processes and procedures of financial reporting systems in order to maintain the correctness and reliability of the financial statements of the company as well as to assess the effectiveness of internal financial controls and manage risks through internal audit function. A number of past research studies have viewed audit committees as a vital constituent of the corporate governance mechanism which include Mansor et al. (2013), Al-Baidhani (2014) and others. Thus, the role of audit committee in corporate governance has been very well endorsed in the past literature (Crisan & Fulop, 2014). Moreover, the repercussions of various audit committee characteristics have also been witnessed on the corporate governance (Choi et al., 2014), may it be to discourage the managers' opportunistic behavior (Xie et al., 2003; Choi et al., 2014) or financial stress (Salloum et al., 2014) or to reinforce the corporate reporting practices (Madi et al., 2014) etc. Past research recognizes the relevance of

audit committee characteristics in establishing the monitoring effectiveness of these committees (Mangena & Pike, 2005; Salloum et al., 2014). In particular, the role effectiveness of the audit committee can be explained by its various characteristics, like meeting frequency (Salloum et al., 2014), financial expertise (Albring et al., 2014), leadership structure (Aldamen et al., 2012) etc.

Keeping in view the afore-stated arguments, the brief explanation of some of the crucial audit committee functioning characteristics is as follows:

1.1 Audit Committee Activity

Past research emphasizes the significance of audit committees' meetings or activity as it determines their level of monitoring intensity (Menon & Williams, 1994; Greco, 2011). Conger et al. (1998) argues that 'to make effective decisions, directors need sufficient, well-organized periods of time together as a group' (p.142). In other words, meeting frequency constitutes an important aspect in improving the effectiveness of these committees (Mcmullen & Raghunandan, 1996), which may be in terms of, higher audit coverage (Lee & Mande, 2005), financial reporting quality (Suarez et al., 2013) and many other factors. Empirical literature concerning the relationship

**Assistant Professor, Khalsa College (Autonomous), Amritsar*

between audit committee meeting frequency and firm performance has offered quite mixed results. For example, some studies have reported positive relationship (Azam et al., 2010; Hoque et al., 2013), while adding to this controversy, few research papers have even demonstrated insignificant association between audit committee meeting frequency and firm performance which include the studies by Aldamen et al. (2012), Al-Matari et al. (2012b), Bouaziz (2012) and Al-Mamun et al. (2014). Previous literature had used number of frequency of meetings of the audit committee to represent the activity (Menon & Williams, 1994; Collier & Gregory, 1999; Kang et al., 2011). In fact, some studies conducted in the past have used number of audit committee meetings to determine the degree of audit committee diligence (Raghunandan & Rama, 2007; Barua et al., 2010; Braswell et al., 2012). This study also attempts to investigate the impact of audit committee activity which refers to the frequency (number) of audit committee meetings conducted in a financial year (Xie et al., 2003; Al-Matari et al., 2012b), the null hypothesis of which is formulated as below:

Hypothesis 1: Audit committee activity is not related to firm market valuation

1.2 Audit Committee Diligence (Attendance in Committee Meetings)

Apart from the meeting frequency of the audit committee, attendance of committee members in such meetings also reflects the functioning of audit committees, more particularly, their level of activeness and participation (Mbobo & Umoren, 2016). Lipton and Lorsch (1992) argued that the lesser attendance of directors in board meetings is the most visible consequence which occurs due to the lack of having adequate time to perform their duties. In fact, directors' attendance in meetings evinces the monitoring quality of the corporate boards (Lin et al., 2014). More particularly, Min and Verhoeven (2013) have taken into account only the attendance of outsiders in board meetings to represent the board monitoring and strongly proved its viability in reflecting the conation of outsiders for supervising the insiders. Also, empirical literature has recognized that attendance in board meetings by the directors improves the firm performance (Chou et al., 2013; Lin et al., 2014; Min & Verhoeven, 2013). Even Francis et al. (2012) has too revealed that during the crisis period, firms having poor attendance at the board meetings exhibit significantly bad performance in comparison to ones having good attendance records. In addition to the above, few studies have presented the results in other way round stating no relationship between directors' meeting attendance and firm performance (Wang & Liang, 2012). Although the research focus on attendance in audit committee meetings has been started increasing (Haron et al., 2005; Ormin et al., 2015;

Mbobo & Umoren, 2016; Dakata et al., 2017), however, the determination of its statistical impact on the firm performance is receiving lesser research attention. The present study has used the term 'diligence' for attendance in committee meetings as it is one of the important process factor in determining the effectiveness of the audit committees (DeZoort et al., 2002). Thus, keeping into mind conceptual and empirical arguments for meetings' attendance, the present study has formulated the following null hypothesis for the audit committee diligence (meeting attendance):

Hypothesis 2: Audit committee diligence (of all directors/ members) is not related to firm market valuation.

Moreover, since the regulatory system has assigned significant recognition to the independent directors in the audit committee, it becomes imperative to analyze separately the attendance pattern of independent directors from the attendance pattern of other directorial categories of audit committee members. Therefore, considering this viewpoint, this study has contrived separate meeting attendance measures which reflect the average attendance of executive directors (ACATTEEXEC), of independent directors (ACATTIND) and the attendance of grey directors (ACATTGREY). The relevant null hypotheses for all the directorial categories have been framed as below.

Hypothesis 2a: Audit committee diligence of executive directors/members is not related to firm market valuation.

Hypothesis 2b: Audit committee diligence of independent directors/members is not related to firm market valuation.

Hypothesis 2c: Audit committee diligence of grey directors/ members is not related to firm market valuation.

1.3 Financial Literacy (or expertise) of Members of the Audit Committee

In addition to the frequency and attendance of audit committee meetings, the effectiveness of the audit committees also depends upon the financial literacy of the members of the audit committee (DeZoort et al., 2002; Rahmat et al., 2009; Albring et al., 2014). Extending the above, audit committee financial expertise/literacy significantly reduces the underpricing of IPOs (Bedard et al., 2008) and also helps in attenuating management opportunistic behavior (Choi et al., 2014). Moreover, audit committee members having expertise or knowledge in accounting and financial management is positively related to the quality of financial reporting (Felo et al., 2003; Kibiya et al., 2016). Extending the above, audit committee financial expertise facilitates the greater level of

external audit coverage (Ghafran & O'Sullivan, 2013) and also influences the monitoring effectiveness of the financial reporting process by increasing the level of interim disclosure (Mangena & Pike, 2005). Past research further documents that accounting financial expertise in the audit committee provides a number of benefits in terms of strong governance (Defond et al., 2005), improved analysts' earnings forecast accuracy (Abernathy et al., 2013) and increased timeliness in financial reporting (Abernathy et al., 2014).

Audit committees with members having financial literacy are found to have positive relationship with the accounting performance of the firms (Aldamen et al., 2012). Even market also reacts positively to the appointment of financial experts in the audit committees (Davidson et al., 2004; Defond et al., 2005), and accordingly, the firm value increases (Davidson et al., 2004). Moreover, Chan and Li (2008) also found that firm value increases with the presence of expert-independent directors in the audit committee. It also observed that finance-trained directors also results in greater firm value and even five times more than the independent audit committee in a situation when the expert-independent directors constitute the majority. On the flipside, research evidences provide that audit committee members' financial expertise do not help in increasing the value of companies (Chan et al., 2011) and therefore, report no discernible impact on the firm performance (Al-Mamun et al., 2014). Keeping into mind the above arguments, the relevant null hypothesis is framed as below:

Hypothesis 3: Audit committee financial literacy/chairman financial expertise is not related to firm market valuation

1.4 Audit Committee Leadership Structure

The independent status of chairman in the audit committee has been used to proxy for audit committee leadership structure which is a dummy variable coded as '1' if the chairman of audit committee is an 'independent director' or '0' otherwise. Some of research articles, for example, Aldamen et al. (2012) and Glover-Akpey and Azembila (2016) has used the similar criteria to define this measure. According to Revised Clause 49 II A (iii) of the Listing Agreement (2004), the chairman of the audit committee shall be an independent director. Therefore, it becomes crucial to analyze the impact of audit committee leadership structure on the firm performance, the null hypothesis of which is stated as below:

Hypothesis 4: Audit committee leadership structure (chairman independent status) is not related to firm market valuation

Apart from the above, there are other variables which have been taken as control variables in the model specifications so as to perform the empirical analysis. The control variables include size, leverage and beta, the selection of which has been guided by various studies such as Aldamen et al. (2012), Al-Matari et al. (2012b), Bouaziz (2012), Amer et al. (2014), Glover-Akpey and Azembila (2016) etc. Moreover, the analysis has also incorporated the impact of audit committee independence in all the models in line with the studies Babatunde and Olaniran (2009), Aldamen et al. (2012) and Bouaziz (2012). A bird's eye view of all the above stated variables is presented in table 1.

Table 1: Operationalization of the Variables

S. No.	Variables	Definition	ACRONYM
1	Market Valuation	Tobin's Q- The sum of market value of equity, book value of preference share capital, total borrowings and current liabilities divided by the book value of total assets.	TOBINQ
2	Audit committee activity	Total number of meetings held by the audit committee in a financial year/Natural logarithm of total number of meetings held by the audit committee in a financial year	ACMEET/ LACMEET
3	Audit Committee Diligence	Attendance 1: A binary indicator 'one' where attendance percentage of executive directors (members) on the audit committee crosses 75 percent and 'zero' otherwise	ACATTEXC
		Attendance 2: A binary indicator 'one' where attendance percentage of grey directors (members) on the audit committee crosses 75 percent and 'zero' otherwise	ACATTGREY
		Attendance 3: A binary indicator 'one' where attendance percentage of independent directors (members) on the audit committee crosses 75 percent and 'zero' otherwise	ACATTIND

S. No.	Variables	Definition	ACRONYM
4	Audit Committee Financial Literacy	A dummy variable coded as '1' if any member of the audit committee possesses financial literacy or '0' otherwise.	ACFINLIT
5	Audit Committee Leadership Structure	A dummy variable coded as '1' if the chairman of audit committee is an 'independent director' or '0' otherwise.	ACCHAIR
6	Audit Committee Chairman Financial Expertise	A dummy variable coded as '1' if the chairman of audit committee also possesses financial expertise or '0' otherwise.	ACCHFINEXP
7	Audit Committee Composite Measure 1	A dummy variable coded as '1' if the audit committee has an independent chairman and at least one of its member also possesses financial literacy or '0' otherwise.	ACINDCHFINLIT
8	Audit Committee Composite Measure 2	A dummy variable coded as '1' if the chairman of audit committee is an independent director and also possesses financial expertise or '0' otherwise.	ACINDCHFINEXP
9	Audit Committee Independence	Proportion of independent directors on the audit committee	ACIND
10	Firm Size	Natural logarithm of book value of total assets.	LSIZE
11	Leverage	Leverage as measured by the ratio of total debt to total assets.	LEVERAGE
12	Beta	Risk as measured by beta	BETA

Source: Definitions Developed from the Past Corporate Governance Literature

2. Research Design and Statistical Model Development

2.1 Sample Structure

The sample for the study has been derived after sorting the market capitalization as on 31st March, 2010 of entire companies comprising the universe of the study. Initially top 200 companies have been drawn from which banking and finance companies, companies not been listed on BSE even for one of the five-year period covered in the study and one company, popularly known as the Satyam Computer Services Limited (former name) are excluded. Thus, the final sample consists of 114 non-financial companies listed on Bombay Stock Exchange (BSE) which has resulted into a total of 570(114*5) firm-year observations for the five year period ranging from 2005-06 to 2009-10.

2.2 Statistical Model Equation

This part describes the development of the model to be empirically tested in the current analysis. The basic model equation has been presented as below:

$$Y_{it} = \beta ACFit + \beta X_{it} + \mu_{it}$$

Where, Y_{it} = Value of a dependent variable which reflects market valuation of a company i in a specific year t (i and t denotes individual and time dimension respectively).

β = Regression Coefficient

ACFit = Reflects a set of audit committee functioning proxies (activity, diligence, financial literacy, leadership structure, chairman financial expertise)

X_{it} = Reflects a set of control variables, i.e. size, leverage and risk

μ_{it} = disturbance term/error term

2.4 Statistical Research Design and Testing Operations

2.4.1 Preliminary Testing

Preliminary testing has been performed by means of tested various assumptions for the absence of multicollinearity, heteroskedasticity and autocorrelation in the data by applying Variance Inflation Factor (VIF), Likelihood-ratio and Wooldridge tests respectively. In some cases, the presence of time fixed effects has been tested by relying on the null hypothesis that all the year dummies are jointly equal to zero to identify whether the time fixed effects are required in the fixed effect models or not (Torres-Reyna, 2007).

2.4.2 Regression Testing Operations: Fixed Effects Regression

This regression encompasses the fixed effects to indicate that intercepts of each of the different entities (subjects) can

be time-invariant in nature (Gujarati et al., 2012, p. 627). The variables of the model specification under within effects (fixed) are mean-corrected (deviations from the sample mean) which ultimately increase the degrees of freedom. More specifically, these type of estimators account for the individual heterogeneity between the cross-sections by means of using sample means and differencing the observations, thus results in 'mean-corrected' or 'de-meanded' values (Gujarati et al., 2012, p. 630). Wintoki et al. (2012) has also added that fixed effects (within estimation) take into account the time-invariant (fixed) portion of unobservable heterogeneity.

2.4.3 Regression Testing Operations: Random Effects Regression

This model is also called error-component model wherein the composite error term (w_{it}) is comprised of two parts, i.e. individual specific error (β_i) and cross-section and time series error (μ_{it}) (idiosyncratic term). The intercept of this model indicates the mean of all intercepts of the cross-sections and the random error term reflects the deviation of individual intercept from the mean. More specifically, the variation across the subjects is assumed to be random and the individual specific error (β_i) is a random error term carrying a mean value of zero and a variance of βe^2 (Gujarati et al., 2012, p. 633). Moreover, it is assumed that the composite error term is uncorrelated with the explanatory variables of this model.

2.4.4 Regression Testing Operations: Choice between Fixed and Random Effects

Hausman test has been performed in order to make choice between fixed and random effects. In this case, it tests whether the error component (β_i) is uncorrelated (correlated) with the explanatory variables (or regressors), and if it is, then random (fixed) effects are consistent and appropriate (Wooldridge, 2002, p. 252; Gujarati et al., 2012, p. 637). More specifically, the null hypothesis states that random effects model is preferred relative to the alternate which favors the fixed effects modeling structure.

3. Statistical Results and Analyses

The regression model equation stated in the above section has been tested on STATA 11.0 statistical software whereby the parameters of the variables have been estimated after testing the presence of heteroskedasticity and autocorrelation. For this purpose, likelihood ratio test was performed to detect the presence of panel-level heteroskedasticity (if any). This test compares the log likelihood (through Chi-square value) of two cross sectional time-series FGLS regression model specifications whereby one model specification was firstly run by taking into consideration the panel-level heteroskedasticity with the help of IGLS method, i.e. Iterated Generalised Least Squares in the form of cross-sectional time-series FGLS regression (i.e. heteroskedastic) and then the concerned model specification was run without considering for heteroskedasticity (i.e. homoskedastic). Thus, if the chi-square value comes out to be statistically significant, then the particular model specification is subject to the presence of heteroskedasticity. Table 2 reports an acute problem of heteroskedasticity in all the concerned model specifications as the p-value is significant in all the model specifications. Thereafter, Wooldridge test has been performed to test the null hypothesis of no first-order autocorrelation in the selected model specifications. Results of table 2 further indicates that F statistic is significant in all the concerned model specifications and thus, rejects the null hypothesis by confirming the presence of first-order autocorrelation in the idiosyncratic errors of panel data models. Therefore, to address the issues of heteroskedasticity and autocorrelation, the robust standard errors have been used in the analysis after clustering at the firm level. The results have been presented in the following section with the respective coefficients of the parameters along with the standard errors (in the parentheses) and some of the model specifications also incorporate the time-fixed effects.

Table 2: Results of Likelihood-Ratio and Wooldridge Test: Testing of Heteroskedasticity and Autocorrelation

Cases	Heteroskedasticity		Autocorrelation	
	LR chi2	Prob>chi2	F	Prob>F
Case 1	619.77	0.0000	18.284	0.0000
	Present/ Absent	Present	Present/ Absent	Present
Case 2	618.00	0.0000	18.216	0.0000
	Present/ Absent	Present	Present/ Absent	Present
Case 3	622.02	0.0000	17.897	0.0000
	Present/ Absent	Present	Present/ Absent	Present
Case 4	619.88	0.0000	17.846	0.0000
	Present/ Absent	Present	Present/ Absent	Present

Source: Computed from STATA 11.0 Software

Table 3: Results of Hausman Test: Testing of Fixed or Random Effects

Cases	Choice of Fixed Over Random Effects or vice-versa		
Case 1	chi2	29.96	Fixed
	Prob>chi2	0.0009	
Case 2	chi2	30.20	Fixed
	Prob>chi2	0.0008	
Case 3	chi2	29.29	Fixed
	Prob>chi2	0.0006	
Case 4	chi2	29.55	Fixed
	Prob>chi2	0.0005	

Source: Computed from STATA 11.0 Software

In addition, the study has applied Hausman test to test the null hypothesis according to which random effects model is preferred relative to the alternate which favors the fixed effects modeling structure. Table 3 below presents the results of Hausman test for four different cases, Case 1, Case 2, Case 3 and Case 4 whereby Case 1 covers ACMEET, ACATTIND, ACATTGREY, ACATTEXC, ACFINLIT, ACCHAIR, ACIND, LSIZE, LEVERAGE & BETA, Case 2 includes ACMEET, ACATTIND, ACATTGREY, ACATTEXC, ACCHFINEXP ACCHAIR, ACIND, LSIZE, LEVERAGE & BETA, Case 3 deals with ACMEET, ACATTIND, ACATTGREY, ACATTEXC, ACINDCHFNLIT, ACIND, LSIZE, LEVERAGE & BETA and last case (Case 4) covers ACMEET, ACATTIND, ACATTGREY, ACATTEXC, ACINDCHFEXP, ACIND, LSIZE, LEVERAGE & BETA as variables in four different model equations respectively. This table shows that fixed effects model is preferred in all the cases as the corresponding probability values are significant at conventional significance levels.

Table 4 shows whether the time fixed effects are significant to be included in the fixed effect model. To diagnose the same, all the year dummies have been set to zero (by default in STATA) and examines through a joint test whether all the year dummies are equal to zero (null hypothesis). If the p-value is found to be statistically insignificant, then all the year dummies are considered as jointly equal to zero, hence, no time fixed effects are required to be included under fixed effect model. Since the results from table 4 reveal that the time-fixed effects are significant in all the model specifications, thus rejecting the null that all years coefficients are jointly equal to zero. Hence, it becomes essential to analyze the models with the inclusion of time-fixed effects. The next section elucidates the impact of audit committee functioning (by using several proxies) on the financial performance of selected companies.

3.1 Analysis of Main Effects

This section presents the findings discerning the impact of selected audit committee functioning characteristics on the market performance by relying upon the model specifications developed in the above section. Table 5 presents the fixed effects regression results for Tobin Q

Table 4: Results of Joint Parameter Test: Testing of Time Fixed Effects

Cases	Presence/Absence of Time-Fixed Effects	
Case 1	F	26.52
	Prob>F	0.0000
	Present/ Absent	Present
Case 2	F	26.51
	Prob>F	0.0000
	Present/ Absent	Present
Case 3	F	26.32
	Prob>F	0.0000
	Present/ Absent	Present
Case 4	F	26.30
	Prob>F	0.0000
	Present/ Absent	Present

Source: Computed from STATA 11.0 Software

and reports that the audit committee meeting frequency after being measured in logarithmic term, has exhibited significant positive association with Tobin's Q. This connotes that increasing audit committee meeting frequency leads to higher market valuation of firms and thus, the null hypothesis (1) which states that audit committee activity is not related to firm market valuation stands rejected. This significant positive association is in line with the past empirical research (Bansal & Sharma, 2016), that too argues for higher frequency of audit committee meetings. However, it contradicts with the studies that have not located statistically significant association between the two (Amer et al., 2014). This positive association holds even after taking into account several alterations (inclusion or exclusion of time dummies and use of alternate financial literacy/ chairman financial expertise and composite measures) in the model specification. Adding to the above, the coefficient of ACATTEXC has come out to be

statistically significant in the positive direction. It connotes that higher audit committee meeting attendance of executive directors' results in better firm market valuation. Moreover, inclusion of time-dummies and alternate composite measures could not affect the significance of the ACATTEXC-TOBINQ relationship. This result can be attributed to the greater market recognition of the executive directors' firm-level expertise in audit committee decision making. In other words, the hypothesis (2a) which states that audit committee diligence of executive directors/members is not related to firm market valuation is rejected at the conventional levels of significance. However, the analysis has noted some differences with respect to audit committee meetings attendances by independent and executive directors. In particular, findings could not generate any significant impact of independent directors' attendance on the firm market valuation. Thus, this insignificance could not lead to the rejection of the hypothesis (2b) that audit committee diligence of independent members is not related to firm market valuation. Moreover, in contrast to the expectations, the sign of the coefficient of ACATTIND has come out to be in negative direction.

However, the insignificant coefficient of grey directors' committee meeting attendance indicates that grey directors' meeting attendance could not significantly explain the variation in firm market valuation, thus do not reject hypothesis (2c). In addition to above, both members' financial literacy/chairman financial expertise (ACFINLIT/ACCHFINEXP) and chairman independent status (ACCHAIR) in audit committee have turned out as insignificant predictors of firm market performance. In other words, it indicates that the existence of audit committee member(s) with financial literacy or chairman with accounting/related financial management expertise does not affect the firm market valuation. This result is similar to other research studies namely Amer et al. (2014) which also could not discover significant relationship between the two. However, the positive but insignificant coefficient of audit committee financial expertise bears greater dissimilitude with the significant positive market response reported in the past governance literature (Defond et al., 2005; Aldamen et al., 2012). To sum up, neither the audit committee financial literacy/chairman financial expertise nor the chairman independent status is tied to the market valuation of firms.

Apart from the above, the composite variable (i.e. ACINDCHFINLIT) was introduced in some of the models, which has been coded as '1' if the audit committees have independent chairman and also have audit committee member(s) with financial literacy or accounting/related financial management expertise and '0' is coded otherwise. Results of the analysis have not divulged any significant effect of this composite measure on the market valuation of the firms, thus could not offer substantive evidence that market valuation significantly influences with the presence of an independent chairman and a financial

literate or an accounting/related financial management expert in the audit committees of the companies' boards. Thereafter, in some of the models, another operationalization (i.e. ACINDCHFINEXP) of composite measure has been tested to which value '1' has been assigned if the audit committee chair is an independent director and also has accounting or related financial management expertise. The coefficient of this composite measure for Tobin Q has also been found to be surprisingly insignificant which infers that the financial expertise as well as independence status of the committee chairman is not tied to the firm market valuation. In other words, it highlights that market valuation of firms is not influenced by having independent and financial expert chairman on the audit committees of the boards.

To conclude, only the logarithmic term of audit committee meeting frequency and executive directors' attendance appear to be significant positive determinants of Tobin's Q in the above model specifications. Moreover, the present study has also divulged insignificant relationship between audit committee financial expertise or literacy and the market valuation irrespective of the use of alternate operationalizations used in the analysis.

3.2 Analysis of Interaction Effects and other Robustness Tests

- (i) Testing of Moderating Effects of Audit Committee Size, Family Firm Status and Audit Committee Leadership Structure

The analysis exhibited in the earlier section has been extended under table 6 by employing several model specifications in order to analyze the moderating effects of audit committee size, family firm status and audit committee leadership structure. In particular, the study has attempted to test the moderating effect of audit committee size (ACSIZED) on the LACMEET-TOBINQ relationship (Model 3 & 4) to ferret out whether the audit committee meeting frequency-firm accounting performance relationship is moderated by the size of audit committee. To probe into the same, size of the audit committee was transformed into a binary variable, whereby 'one' score was allotted to a firm-year observation having size of the committee beyond three members and 'zero' was allotted otherwise (ACSIZED) and along with it, an interaction term (ACMEET/LACMEET*ACSIZED) has also been incorporated into the model specifications. Herein, the values having 'one' (zero) score represent 'larger' (smaller) audit committees. Results however, could not reveal significant coefficient of the interaction term which denotes the differential impact of audit committee activity on firm market performance for smaller and larger audit committees. Moreover, even the variation in the use of composite measures (from ACINDCHFINLIT to ACINDCHFINEXP) is unable to prove any moderating effect of audit committee size on audit committee activity-firm market valuation relationship. Hence, the results indicates that the effect of audit committee activity on firm

Table 5: Impact of Audit Committee Functioning on Market Valuation (TOBINQ): Testing of Main Effects

Variables	TOBINQ	TOBINQ	TOBINQ	TOBINQ	TOBINQ	TOBINQ	TOBINQ	TOBINQ	TOBINQ	TOBINQ
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
	ICs	ICs	ICs	ICs	ICs	ICs	ICs	ICs	ICs	ICs
Constant	10.5723 *** (2.7364)	10.6220 *** (2.7021)	10.8686 *** (2.7346)	10.9255 *** (2.7033)	10.095* ** (2.7979)	10.1513 *** (2.7611)	12.0101 *** (1.7121)	10.3681 *** (2.7842)	12.0339 *** (1.7157)	10.4322 *** (2.7500)
ACMEET	0.0632 (0.0390)	0.0626 (0.0391)	0.0604 (0.0377)	0.0597 (0.0377)						
LACMEET					0.5615* * (0.2551)	0.5586* * (0.2553)	0.6729* ** (0.2507)	0.5583* * (0.2621)	0.6735* ** (0.2504)	0.5555* * (0.2620)
ACATTIND	-0.0378 (0.1087)	-0.0409 (0.1090)	-0.0078 (0.1105)	-0.0110 (0.1108)	-0.0404 (0.1078)	-0.0437 (0.1081)	-0.0852 (0.1267)	-0.0117 (0.1092)	-0.0873 (0.1271)	-0.0150 (0.1095)
ACATTGREY	-0.0252 (0.1646)	-0.0265 (0.1647)	0.0083 (0.1805)	0.0063 (0.1807)	-0.0348 (0.1653)	-0.0363 (0.1654)	-0.1159 (0.1789)	-0.0025 (0.1800)	-0.1168 (0.1790)	-0.0046 (0.1802)
ACATTEXC	0.3588 (0.2452)	0.3602 (0.2456)	0.4198* (0.2337)	0.4201* (0.2338)	0.3698 (0.2449)	0.3710 (0.2453)	0.5458* * (0.2464)	0.4283* (0.2373)	0.5463* * (0.2466)	0.4286* (0.2374)
ACFINLIT	0.0345 (0.1785)				0.0221 (0.1781)					
ACCHFINEXP		0.0829 (0.1991)				0.0725 (0.1985)				
ACCHAIR	0.6955 (0.7192)	0.6941 (0.7203)			0.6711 (0.6807)	0.6703 (0.6819)				
ACINDCHFINLIT			0.0016 (0.1724)				0.1180 (0.1808)	-0.0093 (0.1720)		
ACINDCHFINEXP				0.0462 (0.1912)					0.1461 (0.2039)	0.0375 (0.1904)
ACIND	0.0957 (0.5046)	0.1007 (0.5062)	0.6737 (0.4942)	0.6720 (0.4944)	0.0732 (0.5056)	0.0773 (0.5071)	0.6067 (0.4551)	0.6311 (0.4647)	0.6091 (0.4557)	0.6289 (0.4649)
LSIZE	- 0.8324* ** (0.2731)	- 0.8387* ** (0.2698)	- 0.8422* ** (0.2743)	- 0.8486* ** (0.2714)	- 0.8325* ** (0.2836)	- 0.8394* ** (0.2802)	- 1.0027* ** (0.1714)	- 0.8415* ** (0.2849)	01.0061 *** (0.1721)	- 0.8486* ** (0.2819)
LEVERAGE	-0.9552 (0.9917)	-0.9542 (0.9900)	-1.0048 (1.0318)	-1.0027 (1.0307)	-1.0080 (0.9780)	-1.0073 (0.9763)	-1.5088 (0.9662)	-1.0587 (1.0146)	-1.5039 (0.9662)	-1.0568 (1.0134)
BETA	0.3874 (0.3609)	0.3851 (0.3602)	0.3815 (0.3632)	0.3792 (0.3625)	0.3686 (0.3607)	0.3661 (0.3601)	0.3017 (0.3490)	0.3623 (0.3628)	0.3014 (0.3484)	0.3598 (0.3622)
Time-fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
F	21.44	21.46	23.06	23.09	21.26	21.27	4.57	22.72	4.59	22.75
Prob>F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-sq	32.40	32.42	32.06	32.07	33.01	33.03	16.63	32.70	16.65	32.71

Source: Computed from STATA 11.0 Software (***, ** & * denotes levels of significance at 1, 5 and 10 percent respectively)

market valuation in larger audit committees is similar to that of smaller audit committees.

Thereafter, a binary indicator family firm status (FAMDUM) has been added in the basic modeling structure along with its interaction with the audit committee independence

(ACIND*FAMDUM). The variable, family firm status (FAMDUM) assumes the value of '1' if the promoters' ownership of a firm is more than its sample median (family firm) and '0' otherwise (non-family firm). Herein, the interaction term reflects the differential impact of audit committee independence on market valuation for family

Table 6: Impact of Audit Committee Functioning on Market Valuation (TOBINQ): Testing of Interactive Effects

Variables	Tobin Q Model 1	Tobin Q Model 2	Tobin Q Model 3	Tobin Q Model 4	Tobin Q Model 5	Tobin Q Model 6	Tobin Q Model 7	Tobin Q Model 8	Tobin Q Model 9	Tobin Q Model 10
Constant	10.2678 *** (2.7730)	10.3263 *** (2.7452)	10.1492 *** (2.8030)	10.2073 *** (2.7745)	10.0706 *** (2.7323)	10.1250 *** (2.7021)	15.7446 *** (3.8181)	32.9412 *** (11.7535)	15.7559 *** (3.7972)	32.8942 *** (11.7585)
ACMEET					0.0603 (0.0368)	0.0597 (0.0368)	0.0615 (0.0381)	0.0600 (0.0384)	0.0611 (0.0381)	0.0596 (0.0385)
LACMEET	0.5634* * (0.2661)	0.5607* * (0.2658)	0.6574* * (0.3457)	0.6549* * (0.3459)						
ACSIZE	-0.1082 (0.1614)	-0.1069 (0.1618)	0.2213 (0.6272)	0.2234 (0.6280)						
LACMEET* ACSIZE			-0.1988 (0.3437)	-0.1992 (0.3442)						
ACATTIND	-0.0214 (0.1105)	-0.0242 (0.1106)	-0.0224 (0.1112)	-0.0252 (0.1113)	-0.0172 (0.1128)	-0.0207 (0.1132)	-0.0706 (0.1107)	-0.0699 (0.1128)	-0.0740 (0.1111)	-0.0733 (0.1131)
ACATTGREY	0.0073 (0.1860)	0.0054 (0.1864)	0.0142 (0.1886)	0.0122 (0.1891)	0.0493 (0.1782)	0.0473 (0.1784)	0.0601 (0.1601)	0.0597 (0.1610)	0.0594 (0.1603)	0.0589 (0.1611)
ACATTEDEC	0.4559* * (0.2305)	0.4557* * (0.2305)	0.4505* * (0.2291)	0.4503* * (0.2292)	0.5095* * (0.2369)	0.5102* * (0.2370)	0.3667 (0.2555)	0.3612 (0.2583)	0.3692 (0.2562)	0.3636 (0.2590)
ACFINLIT							0.0988 (0.1900)	0.0957 (0.1873)		
ACCHFINEX P									0.1506 (0.2098)	0.1484 (0.2071)
ACCHAIR							6.4437* ** (2.3726)	28.0014 ** (10.8848)	6.4437* ** (2.3756)	27.9906 ** (10.8985)
INSOWN							0.0578 (0.0353)		-0.0574 (0.0354)	
LINSOWN								-5.0086* (2.6361)		-4.9884* (2.6388)
INSOWN* ACCHAIR							0.0839* * (0.0325)		0.0839* * (0.0326)	
LINSOWN* ACCHAIR								6.4795* * (2.5534)		6.4765* * (2.5566)
ACINDCHI NLIT	-0.0149 (0.1704)		-0.0142 (0.1709)		0.0307 (0.1730)					
ACINDCHI NEXP		0.0254 (0.1902)		0.0262 (0.1909)		0.0788 (0.1911)				
ACIND	0.6901 (0.4859)	0.6872 (0.4862)	0.6809 (0.4804)	0.6781 (0.4807)	0.9806 (0.6583)	0.9753 (0.6566)	0.1876 (0.4845)	0.1774 (0.4865)	0.1965 (0.4859)	0.1861 (0.4877)
FAMDUM					1.0480* * (0.5351)	1.0473* * (0.5333)				
ACIND* FAMDUM					-0.2672 (0.6977)	-0.2619 (0.6967)				
LSIZE	0.8312* ** (0.2826)	0.8376* ** (0.2802)	0.08346 *** (0.2839)	0.8410* ** (0.2814)	0.8369* ** (0.2660)	0.8432* ** (0.2626)	0.7947* ** (0.2704)	0.7968* ** (0.2689)	0.7996* ** (0.2668)	0.8020* ** (0.2652)
LEVERAGE2	-1.0884 (1.0011)	-1.0865 (1.0001)	-1.0570 (0.9816)	-1.0551 (0.9806)	-0.9862 (0.9783)	-0.9833 (0.9767)	-0.9531 (0.9319)	-0.9849 (0.9382)	-0.9526 (0.9293)	-0.9848 (0.9356)
BETA	0.3640 (0.3671)	0.3617 (0.3666)	0.3594 (0.3687)	0.3572 (0.3682)	0.4280 (0.3500)	0.4261 (0.3494)	0.4010 (0.3441)	0.4003 (0.3450)	0.3999 (0.3432)	0.3991 (0.3440)
Time-fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F	21.76	21.76	20.41	20.41	20.79	20.80	18.14	17.38	18.15	17.39
Prob>F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-sq	32.84	32.84	32.90	32.90	33.58	33.60	35.90	35.59	35.94	35.64

Source: Computed from STATA 11.0 Software (***, ** & * denotes levels of significance at 1, 5 and 10 percent respectively)

firms and the non-family ones. Results report that family firm status has positive relationship with firm market valuation, meaning thereby, family firms has higher market valuation than their counterparts (non-family firms). However, results cannot divulge significant differential impact of audit committee independence on the market valuation (TOBINQ) for family and non-family firms as the interaction term comes out to be statistically insignificant.

Further, it has been observed from table 5 that audit committee leadership structure (ACCHAIR) could not yield any significant impact (or main effect) on firm market valuation. Moreover, considering the fact that the ownership structure of Indian corporates is more of a concentrated nature, for example, promoters having higher ownership stakes in Indian Listed companies (INSOWN), this paper also intends to explore the influence of inside ownership (along with audit committee functioning characteristics) on the firm market valuation. Therefore, in addition to the main effects analysis, the present research seeks to examine its interaction effect by testing whether the audit committee leadership structure has any moderating effect on the relationship between

chairman and those having independent chairman in their audit committees. Moreover, the coefficient of inside ownership also comes out to be negative and statistically significant, hence suggests that the increase in inside ownership is associated with decrease in market valuation of firms having non-independent chairman in their audit committees.

(ii) Robustness Testing: Moderating Effect of Audit Committee Leadership Structure on Inside Ownership-Market Valuation Relationship

In order to check the robustness of the results, the analysis further tests whether the sum of the two coefficients (i.e. LINSOWN and LINSOWN*ACCHAIR) is equal to zero. Results show that the sum of these two coefficients is significantly different from zero as the t-value comes out to be significant (t ratio = 1.7873), (t ratio = 1.7615) in table 6. It implies that inside ownership exerts positive influence on performance among firm shaving independent chairman status in audit committees.

Figure 1 shows the moderating effect of audit committee leadership structure on inside ownership-firm performance relationship

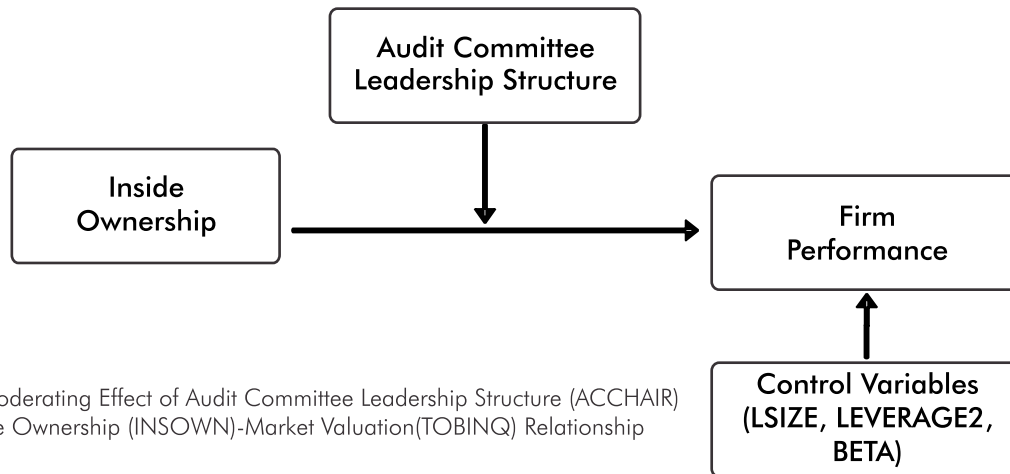


Figure 1: Moderating Effect of Audit Committee Leadership Structure (ACCHAIR) on Inside Ownership (INSOWN)-Market Valuation(TOBINQ) Relationship

inside ownership and firm market valuation. In order to test the above conjecture, inside ownership (INSOWN/LINSOWN) was introduced in basic modeling structure along with its interaction with the dummy variable representing audit committee leadership structure (ACCHAIR*INSOWN/LINSOWN) whereby inside ownership represents the percentage of shares owned by the promoters (promoter and promoter group) in a company. Results, as shown in table 6, have reported significant coefficient of the interaction term of inside ownership and audit committee leadership structure, thus highlights that the influence of inside ownership on the market valuation differs for firms having non-independent

Wald test was also applied to test the null hypothesis that the sum of the parameters of interest (LINSOWN and LINSOWN*ACCHAIR) is equal to zero (by default in STATA) by way of formulating parameter constraints. Results suggest that F-statistic becomes significant (F = 4.11, prob > F = 0.0451), (F = 4.21, prob > F = 0.0425) in table 6. Which states that the sum of the parameters of interest is not equal to zero, meaning thereby that in firms having independent chairman status in audit committees, the inside ownership tends to improve the firm market performance.

4. Discussion and Implications of the Study

The outcomes derived here under demonstrates significant positive relationship between audit committee meeting frequency and firm market valuation which implies that increasing activity on the part of the audit committees, in terms of holding sufficiently large number of meetings, receive good response from the market. Analysis has also revealed that the higher meeting attendance by executive directors tends to improve the firm market performance and thus, signifies positive market reaction towards the firm-specific expertise of inside (executive) board members. Fama and Jensen (1983) also highlighted that executive directors represent an important source of firm-specific knowledge and that their presence on the board can lead to more effective decision-making. However, the insensitivity of other variables such as audit committee financial literacy/expertise and chairman independent status for market valuation (which continue to hold for all model specifications) has offered surprising results in light of Revised Clause 49 II A (ii) and (iii) requirements which states that all members of audit committee shall be financially literate and at least one member of the committee shall have accounting or related financial management expertise and furthermore, the requirement of having an independent director as Chairman of the audit committee.

Additional investigation has demonstrated that the representation of independent directors, neither on its own, nor along with the effect of existence of family firm status has any significant bearing on the market valuation of the firms. It appears that this finding is in contrast to the greater independent directors' representation in the audit committees prescribed under Clause 49 II A (i) requirement that states that two-thirds of the members of audit committee shall be the independent directors. It conveys the impression that independent directors' representation in the audit committee might produce significant positive consequences on the accounting numbers rather than upon the market valuation proxies and thus, warrants further investigation.

Analysis of moderating effects also divulges that some of the audit committee characteristics (say, independent leadership structure) which could not earlier explain any variation (as main effect) in the market valuation, has emerged as a significant proxy in establishing the moderating effects in the analysis. Moreover, it also highlights the significance of interaction of board committee-level and firm ownership-level factors in better explaining the market performance indicators.

Overall, the present research has contributed towards the underresearched aspect of corporate governance literature in India by exploring market valuation consequences of audit committees' functioning and also by highlighting the significant moderating effect of audit committee leadership structure in explaining the effect of inside ownership on the firm market valuation. This

indicates that analyzing only the main effects of audit committee characteristics on the firm market performance is not suffice, and hence testing their interaction effects can be materially useful in understanding the dynamics of the audit committees' operations.

5. Conclusion

The corporates can develop sound governance framework, to a greater extent, by relying upon the consistent and reliable financial reporting standards. In the drive towards improving the disclosure of financial statements and bringing more transparency in the business transactions, the Indian government has developed a framework for achieving the harmonization of Indian accounting standards with International Financial Reporting Standards (IFRS), as developed by International Accounting Standards Board (IASB). The inclusion of best practices in the process of converging Indian Generally Accepted Accounting Principles (GAAP) with International Financial Reporting Standards (IFRS) has been made to ameliorate the corporate governance standards.

In this light, apart from conforming to the new accounting standards, i.e. IND-AS, in an attempt to improve their financial reporting, the corporates should take into account the level of board functioning, especially the audit committees, as it is also one of the essential ingredients in designing the governance structure of a company. Although the process of convergence was formally initiated in 2011, yet some of the companies covered in the present analysis have made an initiative to follow the new financial reporting practices with an intendment to disclose transparent and sound governance frameworks. Moreover, relying upon the outcomes of the governance structures (audit committees) in the present study, the corporates should recognize and value the firm-level expertise of their inside (executive) audit committee members and the significance of holding constructive meeting discussions in improving their stock valuations in the market. Therefore, companies implementing new financial reporting practices must also oversee audit committee functioning, which in turn, adds the icing on the cake in the era of developing sound corporate governance standards.

In particular, the present research seeks to identify whether the indicators representing the audit committee functioning influences the market valuation of Indian corporates. Moreover, it also examines whether the variation in the operationalizations of audit committee financial expertise affects its association with the firm market valuation. Results suggest that only after measuring into logarithmic terms, audit committee meeting frequency has demonstrated positive relationship with firm market valuation. Moreover, the extent of diligence of executive directors has also exhibited positive associations with firm market valuation, thus signifies positive market response towards the firm-specific expertise of inside (executive) board members. However, the present study has divulged

insignificant relationship between audit committee financial expertise or literacy and the market valuation irrespective of the use of different operationalizations in the analysis. Coupled with the above fact, analysis of moderation effects has revealed that audit committee leadership structure exerts positive influence on market valuation of firms having independent chairman status in the audit committees of their boards. Thus, it offers substantive evidence that the casual behavior of some of the audit committee (regressor) characteristics can be attributed to their inability to yield main effects on the market valuation (regressand). All in all, the results concluded that the audit committee characteristics which could not yield significant main effects, should not be contemplated as immaterial ones, rather their interaction effects should also be studied in order to fully comprehend the dynamics prevailing in the audit committees. The outcomes of the analysis offer guidelines for the policy makers and regulators in order to design effective legal governance framework for the well-functioning of corporate boards, in general and for the audit committees, in particular.

References

1. Abernathy, J. L., Beyer, B., Masli, A. and Stefaniak, C. (2014). The association between characteristics of audit committee accounting experts, audit committee chairs, and financial reporting timeliness. *Advances in Accounting*, Vol. 30 No. 2, pp. 283-297.
2. Abernathy, J. L., Herrmann, D., Kang, T. and Krishnan, G. V. (2013). Audit committee financial expertise and properties of analyst earnings forecasts. *Advances in Accounting, Incorporating Advances in International Accounting*, Vol. 29 No. 1, pp. 1-11.
3. Al-Baidani, A. M. (2014). The role of audit committee in corporate governance: Descriptive study. available at: from SSRN https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2487167
4. Albring, S., Robinson, D. and Robinson, M. (2014). Audit committee financial expertise, corporate governance, and the voluntary switch from auditor-provided to non-auditor-provided tax services. *Advances in Accounting*, Vol. 30 No. 1, 81-94.
5. Aldamen, H., Duncan, K., Kelly, S., McNamara, R. and Nagel, S. (2012). Audit committee characteristics and firm performance during the global financial crisis. *Accounting and Finance*, Vol. 52 No. 4, pp. 971-1000.
6. Al-Mamun, A., Yasser, Q. R., Rahman, M. A., Wickramasinghe, A. and Nathan, T. M. (2014). Relationship between audit committee characteristics, external auditors and economic value added (EVA) of public listed firms in Malaysia. *Corporate Ownership and Control*, Vol. 12 No. 1, pp. 899-910.
7. Al-Matari, Y.A., Al-Swidi, A. K., Fadzil, F. H. and Al-Matari, E. M. (2012b). Board of directors, audit committee characteristics and performance of Saudi Arabia listed companies. *International Review of Management and Marketing*, Vol. 2 No.4, pp. 241-251.
8. Amer, M., Ragab, A.A. and Shehata, S.E. (2014). Audit committee characteristics and firm performance: Evidence from Egyptian listed companies. *Proceedings of 6th Annual American Business Research Conference*, available at: [www.aast.edu/pheed/staffadminview/pdf_retrieve.php?url=17945_157_2_1401859517_116-Mrwan%20\(2\).pdf](http://www.aast.edu/pheed/staffadminview/pdf_retrieve.php?url=17945_157_2_1401859517_116-Mrwan%20(2).pdf)
9. Azam, M. N., Hoque, M. Z. and Yeasmin, M. (2010). Audit committee and equity return: The case of Australian firms. *International Review of Business Research Papers*, Vol.6 No. 4, pp. 202-208.
10. Babatunde, M. A. and Olaniran, O. (2009). The effects of internal and external mechanism on governance and performance of corporate firms in Nigeria. *Corporate Ownership and Control*, Vol. 7 No. 2, pp. 330-344.
11. Bansal, N. and Sharma, A. K. (2016). Audit committee, corporate governance and firm performance: Empirical evidence from India. *International Journal of Economics and Finance*, Vol. 8, No. 3, pp. 103-116.
12. Barua, A., Rama, D. V. and Sharma, V. (2010). Audit committee characteristics and investment in internal auditing. *Journal of Accounting and Public Policy*, Vol. 29 No. 5, pp. 503-513.
13. Bedard, J., Coulombe, D. and Courteau, L. (2008). Audit committee, underpricing of IPOs, and accuracy of management earnings forecasts. *Corporate Governance: An International Review*, Vol. 16 No. 6, pp. 519-535.
14. Bouaziz, Z. (2012). The impact of the presence of audit committees on the financial performance of Tunisian companies. *International Journal of Management and Business Studies*, Vol. 2 No. 4, pp. 57-64.
15. Braswell, M., Daniels, R. B., Landis, M. and Chang, C. (2012). Characteristics of diligent audit committees. *Journal of Business and Economics Research*, Vol. 10 No. 4, pp. 191-205.
16. Chan, K. C. and Li, J. (2008). Audit committee and firm value: Evidence on outside top executives as expert-independent directors. *Corporate Governance: An International Review*, Vol. 16 No. 1, pp. 16-31.
17. Chan, R. S. Y., Lau, C. K. S. and Ng, A. W. (2011). Compliance and value relevance of audit committees: Evidence from Hong Kong. *Journal of Financial Reporting and Accounting*, Vol. 9 No. 1, pp. 74-97.

18. Choi, Y. K., Han, S. H. and Lee, S. (2014). Audit committees, corporate governance, and shareholder wealth: Evidence from Korea. *Journal of Accounting and Public Policy*, Vol. 33 No. 5, pp. 470-489.
19. Chou, H., Chung, H. and Yin, X. (2013). Attendance of board meetings and company performance: Evidence from Taiwan. *Journal of Banking & Finance*, Vol. 37 No. 11, pp. 4157-4171.
20. Collier, P. and Gregory, A. (1999). Audit committee activity and agency costs. *Journal of Accounting and Public Policy*, Vol. 18 No. 4, pp. 311-332.
21. Conger, J. A., Finegold, D. and Lawler, E. E. (1998). Appraising boardroom performance. *Harvard Business Review*, Vol. 76 No. 1, pp. 136-148.
22. Corporate Governance in Listed Companies – Clause 49 of the Listing Agreement (2004). (2004, October 29), available at: http://www.sebi.gov.in/legal/circulars/oct-2004/corporate-governance-in-listed-companies-clause-49-of-the-listing-agreement_13153.html
23. Crisan, A. R. and Fulop, M. T. (2014). The role of the audit committee in corporate governance – Case study for a sample of companies listed on BSE and the London Stock Exchange - FTSE 100. *Procedia Economics and Finance*, Vol. 15, pp. 1033-1041.
24. Dakata, M. N., Hasnah, K., Malak, A. and Delima, S. S. (2017). Audit committee attendance and earnings management in Nigeria. *Asian Journal of Multidisciplinary Studies*, Vol. 5 No. 3, pp. 47-54.
25. Davidson, W. N., Xie, B. and Xu, W. (2004). Market reaction to voluntary announcements of audit committee appointments: The effect of financial expertise. *Journal of Accounting and Public Policy*, Vol. 23 No. 4, pp. 279-293.
26. Defond, M. L., Hann, R. N. and Hu, X. (2005). Does the market value financial expertise on audit committees of boards of directors? *Journal of Accounting Research*, Vol. 43 No. 2, pp. 153-193.
27. DeZoort, F. T., Hermanson, D. R., Archambeault, D. S. and Reed, S. A. (2002). Audit committee effectiveness: A synthesis of the empirical audit committee literature. *Journal of Accounting Literature*, Vol. 21, pp. 38-75.
28. Fama, E. F. and Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, Vol. 26 No. 2, pp. 301-325.
29. Felo, A.J., Krishnamurthy, S. and Solieri, S.A. (2003). Audit committee characteristics and the perceived quality of financial reporting: An empirical analysis. available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=401240
30. Francis, B. B. Hasan, I. and Wu, Q. (2012). Do corporate board affect firm performance? New evidence from the financial crisis. Bank of Finland Research Discussion Paper No. 11/2012, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2041194
31. Ghafran, C. and O' Sullivan, N. (2013). The governance role of audit committees: Reviewing a decade of evidence. *International Journal of Management Reviews*, Vol. 15 No. 4, pp.381-407.
32. Glover-Akpey, I. and Azembila, A.B. (2016). The effect of audit committees on the performance of firms listed on the Ghana stock exchange. *IOSR Journal of Business and Management (IOSR-JBM)*, Vol. 18 No. 11, pp. 55-62.
33. Greco, G. (2011). Determinants of board and audit committee meeting frequency: Evidence from Italian companies. *Managerial Auditing Journal*, Vol. 26 No. 3, pp. 208-229.
34. Gujarati, D. N., Porter, D. C. and Gunasekar, S. (2012), *Basic Econometrics* (5th ed.), Tata McGraw-Hill Education Private Limited, New Delhi.
35. Haron, H., Jantan, M. and Pheng, E.G. (2005). Audit committee compliance with Kuala Lumpur Stock Exchange listing requirements. *International Journal of Auditing*, Vol. 9 No. 3, pp. 187-200.
36. Hoque, M. Z., Islam, M. R. and Azam, M. N. (2013). Board committee meetings and firm financial performance: An investigation of Australian companies. *International Review of Finance*, Vol. 13 No.4, pp. 503-528.
37. Kang, W. S., Kilgore, A. and Wright, S. (2011). The effectiveness of audit committees for low- and mid-cap firms. *Managerial Auditing Journal*, Vol. 26 No. 7, pp. 623-650.
38. Kibiya, M. U., Che-Ahmed, A. and Amran, N. A. (2016). Audit committee independence, financial expertise, share ownership and financial reporting quality: Further evidence from Nigeria. *International Journal of Economics and Financial Issues*, Vol. 6 No.57, pp. 125-131.
39. Lee, H. Y. and Mande, V. (2005). The relationship of audit committee characteristics with endogenously determined audit and non-audit fees. *Quarterly Journal of Business and Economics*, Vol. 44 No. 3/4, pp. 93-112.
40. Lin, Y., Yeh, Y. M. C. and Yang, F. (2014). Supervisory quality of board and firm performance: A perspective of board meeting attendance. *Total Quality Management and Business Excellence*, Vol. 25 No. (3-4), pp. 264-279.
41. Lipton, M. and Lorsch, J. W. (1992). A modest proposal for improved corporate governance. *The Business Lawyer*, Vol. 48 No. 1, pp. 59-77.

42. Madi, H. K., Ishak, Z. and Manaf, N. A. A. (2014). The impact of audit committee characteristics on corporate voluntary disclosure. *Procedia-Social and Behavioral Sciences*, Vol. 164, pp. 486-492.
43. Mangena, M. and Pike, R. (2005), "The effect of audit committee shareholding, financial expertise and size on interim financial disclosures", *Accounting and Business Research*, Vol. 35 No. 4, pp. 327-349.
44. Mansor, N., Che-Ahmad, A., Ahmad-Zaluki, N.A. and Osman, A.H. (2013), "Corporate governance and earnings management: A study on the Malaysian family and non-family owned PLCs", *Procedia Economics and Finance*, Vol. 7, pp.221-229.
45. Mbobo, M. E. and Umoren, A. O. (2016), "The influence of audit committee attributes on the quality of financial reporting: Evidence from Nigerian banks", *International Journal of Economics, Commerce and Management*, Vol. 4 No. 7, pp. 116-141.
46. McMullen, D. A. and Raghunandan, K. (1996). Enhancing audit committee effectiveness. *Journal of Accountancy*, Vol. 182 No. 2, pp. 79-81.
47. Menon, K. and Williams, J. D. (1994), "The use of audit committee for monitoring", *Journal of Accounting and Public Policy*, Vol. 13 No. 2, pp. 121-139.
48. Min, B., and Verhoeven, P. (2013), "Outsider board activity, ownership structure and firm value: Evidence from Korea", *International Review of Finance*, Vol. 13 No. 2, pp. 187-214.
49. Ormin, K., Tuta, M. B. I. and Shadrach, M. (2015), "Audit committee independence, meeting frequency, attendance and financial reporting quality of listed deposit money banks in Nigeria", *Research Journal of Finance and Accounting*, Vol. 6 No. 18, pp. 183-190.
50. Raghunandan, K. and Rama, D. V. (2007), "Determinants of audit committee diligence", *Accounting Horizons*, Vol. 21 No. 3, pp. 265-279.
51. Rahmat, M.M., Iskandar, T. M. and Saleh, N. M. (2009), "Audit committee characteristics in financially distressed and non-distressed companies", *Managerial Auditing Journal*, Vol. 24 No. 7, pp. 624-638.
52. Salloum, C., Azzi, G. and Gebayel, E. (2014), "Audit committee and financial distress in the Middle East context: Evidence of the Lebanese financial institutions", *International Strategic Management Review*, Vol. 2 No. 1, pp. 39-45.
53. Suarez, J. A., Garcia, E. C., Mendez, C. F. and Rodriguez, C. (2013), "The effectiveness of the audit committee in Spain: implications of its existence on the auditor's opinion", *SERIEs*, Vol. 4 No.3, pp. 333-352.
54. Torres-Reyna, O. (2007), "Panel data analysis: Fixed and random effects using Stata", available at: <https://www.princeton.edu/~otorres/Panel101.pdf>
55. Wang, D. L. and Liang, P. J. (2012), "Empirical study on the independent director system' effectiveness on the corporate performance of listed companies in Shenzhen Stock Exchange", *Advanced Materials Research*, Vol. 468-471, pp. 1595-1598.
56. Wintoki, M.B., Linck, J.S. and Netter, J.M. (2012), "Endogeneity and the dynamics of internal corporate governance", *Journal of Financial Economics*, Vol. 105 No. 3, pp. 581-606.
57. Wooldridge, J. M. (2002), *Econometric Analysis of Cross Section and Panel Data*, The MIT Press, Cambridge.
58. Xie, B., Davidson, W. N. and DaDalt, P. J. (2003), "Earnings management and corporate governance: The role of the board and the audit committee", *Journal of Corporate Finance*, Vol. 9 No.3, pp. 295-316.