STUDY REGARDING THE IMPACT OF THE AUDIT COMMITTEE CHARACTERISTICS ON COMPANY PERFORMANCE

ANGHEL Ioana

Valahia University of Târgoviște, Romania

MAN Mariana

University of Petroșani, Romania

Abstract:

Regardless of the type of management system, there is stringent necessary to establish a balance of power so that no group or individual has unlimited control over the company. The audit committee is that corporate governance structure responsible for upholding company value maximizing, ensuring transparency, controlling and monitoring management as well as preventing managers to acquire personal benefits. This study examines the correlations between the characteristics of the audit committee and the performance indicators of companies listed on the Bucharest Stock Exchange on the first category. This research approach is based on statistical processing the selected data in accordance with the addressed general theoretical issues.

Key words: *audit committee, professional experience, company performance*

1. Introduction

Interest in company governance has increased in tune with the increasing number of bankruptcies caused by error or by financial accounting fraud (Enron, Global Crossing, WorldCom, Tyco). Underlying these fraud cases stood the lack of integrity of the company management members which led to the adoption of creative accounting practices, the increased interest in personal gain or fraudulent reporting in order to influence share price or to obtain financial benefits. Thus, grew the concern for perfecting verification means regarding management activity, in addition to emphasizing the importance of supervisory committees and audit committees.

The audit committee is the most important advisory committee due to its role of protecting shareholders' interests alongside financial supervision and control (Mallin, 2007). Moreover, it plays a key role in corporate governance and it is a value generator

by assuring financial information transparency and by building and upholding the confidence of stakeholders and the general public.

While the concept of audit committee was introduced for the first time in 1939 by the New York Stock Exchange, only by 1979 the same stock exchange started requesting as a listing requirement that all members of the committee should be independent.

2. Literature review and empirical analysis

The main defining characteristics of audit committees are the number of members, the audit committee structure in terms of the proportion of non-executive members, annual frequency of meetings, the members' professional experience in finance and accounting, members' independence and the position of the audit committee regarding corporate governance (namely the entity's compliance with the Corporate Governance Code).

Although there is no consensus on a number of members that is suited for all types and sizes of economic entities, Karamanou and Vafeas (2005) argue that the number of members of the Audit Committee should not be too high in order to avoid dispersion of responsibility. Chan and Li (2008) proved that members' independence has a positive impact on company performance.

It is anticipated that the frequency of meetings is a key element in the effectiveness of the company's activity, however, there have been few studies that identify a link between the number of sessions and the performance of the company. Abbott (2000) suggests that entities whose audit committee was formed only of independent members were rarely sanctioned by the tax authorities, and likewise Beasley et al. (2000) claim that the committee should be composed mainly of external independent members. Particularly, Abbott (2000) argues that there is an association between audit committee members' independence and the drop in fraud cases and that the dimension of the audit committee and the professional expertize of its members do not influence the reduction of cases of distorted income reporting. Whereas other studies show that audit committee members must be independent (Cadbury, 1992) and must be financial accounting, audit and control professionals (Cohen et al., 2000).

Considering all the above, we formulated a series of six study hypotheses:

H_1: The size of the audit committee does not influence ROA and ROE, the alternative hypothesis that the size of the audit committee influences ROA and ROE.

H_2: The structure of the audit committee does not influence ROA and ROE, the alternative hypothesis that the structure of the audit committee influences ROA and ROE.

H_3: The frequency of meetings of audit committee does not influence ROA and ROE, the alternative hypothesis that the frequency of meetings of audit committee influences ROA and ROE.

H_4: The professional expertise of audit committee members does not influence ROA and ROE, the alternative hypothesis that the professional expertise of audit committee members influences ROA and ROE.

H_5: The independence of audit committee members does not influence ROA and ROE, the alternative hypothesis that the independence of audit committee members influences ROA and ROE.

H_6: The position of the audit committee does not influence ROA and ROE, the alternative hypothesis that the position of the audit committee influences ROA and ROE.

The central objective of the study is to identify correlations between the characteristics of the Audit Committee and company performance measured by the return on assets (ROA) and by the return on equity (ROE). Regarding research methodology, quantitative research methods were used in developing the case study, in order to systemize the necessary information regarding the selected sample of companies, building statistical regression models appropriate to the studied phenomenon, with the aim of testing the established hypotheses. The multiple linear regression model is used to study the relationship between a dependent variable and one or more independent variables.

Firstly, we decided to apply the study to the companies listed on the Bucharest Stock Exchange in first category. From the initial sample of twenty-eight entities preliminary analyzed during data collection, only eighteen make public definite and comprehensive information on corporate governance and their audit committee. Of the ten companies excluded from the sample at this stage, six have chosen not to establish an audit committee and the remaining four do not provide complete information on the characteristics of their audit committee.

During the data collection phase, for each company we consulted a number of public official documents: their own corporate governance regulations, articles of incorporation, CVs of the audit committee members, statement of compliance with the Bucharest Stock Exchange Corporate Governance Code (the "Comply or explain" Statement), board annual report, annual financial statements and, where applicable, internal regulations regarding advisory committees, all available on the companies' websites. In most cases, the necessary data were very scattered, in multiple sources and types of documents, making the process of data collection very difficult, an obstacle to potential investors. The data used describe the year 2012, since the last annual financial statements published at the date of the analysis was related to 2012, moreover, the paper is based on official information provided by the analyzed listed companies and by the Bucharest Stock Exchange.

Subsequently, based on pooled data, we determined the rates of return on assets and equity for each selected company. In order to statistically process the data, using Pearson correlation and multiple linear regression, we have chosen use the SPSS software in order to determine the extent to which the characteristics of the audit committee influence company profitability indicators. In addition, analysis was carried

out in two directions: identifying the influences on ROA and identifying the influences on ROE.

We used the multiple linear regression (or multifactorial linear regression) to identify what type of relationships there are between the characteristics of the audit committee and the return on assets (ROA) and then between the characteristics of the audit committee and the return on equity (ROE).

The equation of the prime linear model, where y is the dependent variable (or resultant variable), $x_1 - x_6$ are the independent variables (predictor or determinant variables) and α is the coefficient vector is:

$$y = \alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_3 + \alpha_4 x_4 + \alpha_5 x_5 + \alpha_6 x_6$$

In the first part of the study, regarding the ROA variable, the multiple linear regression analysis led to the following results:

Table 1: ANOVA statistical test - dependent variable ROA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,023	6	,004	,847	,560[b]
	Residual	,049	11	,004		
	Total	,071	17			

a. Dependent Variable: ROA

b. Predictors: (Constant), Position, Dimension, Experience, Meetings, Structure, Independence

Source: Authors' projection in SPSS

Analyzing table 1, we noticed that the Sig. level is higher than the level of significance (of 0.1) which shows that the model should be narrowed and redesigned using only those independent variables comprising the most relevant correlation with the return on assets, since this initial form of the multiple linear regression is not significant. Thus, we proceeded to analyze the table of correlations between the considered characteristics of the audit committee and the return on assets for the analyzed companies:

Table 2: Correlations between the independent variables (the characteristics of the Audit Committee) and the dependent variable (ROA)

Correlations

		ROA	Dimension	Structure	Meetings	Experience	Independence	Position
Pearson Correlation	ROA	1,000	,001	,062	-,171	,417	,036	-,010
	Dimension	,001	1,000	-,121	,246	-,195	-,148	,022
	Structure	,062	-,121	1,000	-,086	,292	,139	-,302
	Meetings	-,171	,246	-,086	1,000	,223	-,012	,294
	Experience	,417	-,195	,292	,223	1,000	,389	,162
	Independence	,036	-,148	,139	-,012	,389	1,000	,449
	Position	-,010	,022	-,302	,294	,162	,449	1,000
Sig. (1-tailed)	ROA	.	,499	,403	,248	,043	,443	,485
	Dimension	,499	.	,317	,162	,219	,280	,466
	Structure	,403	,317	.	,368	,120	,291	,111

Meetings	,248	,162	,368	.	,186	,482	,118
Experience	,043	,219	,120	,186	.	,056	,261
Independence	,443	,280	,291	,482	,056	.	,031
Position	,485	,466	,111	,118	,261	,031	.

Source: Authors' projection in SPSS

It is noted that for the explanatory variables Dimension, Structure, Meetings, Independence and Position the determined Sig. exceeds the maximum accepted level of 0.1 for their influence to be considered significant. Consequently, we accept as valid assumptions H_1, H_2, H_3, H_5, H_6 and we conclude that the dimension, the structure, the frequency of meetings, members' independence and the position of the audit committee did not influence the return on assets of the sample companies.

We rebuilt the statistical model and we narrowed the linear regression equation of ROA based only on the professional experience of the members of the Audit Committee:

$$y = \alpha_0 + \alpha_4 x_4$$

Table 3: ANOVA statistical test - dependent variable ROA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,012	1	,012	3,366	,085[b]
	Residual	,059	16	,004		
	Total	,071	17			

a. Dependent Variable: ROA

b. Predictors: (Constant), Experience

Source: Authors' projection in SPSS

The calculated value of F, in our case 3.366, tests the overall significance of the independent variable, while the Sig. value of the above ANOVA model is 0.085 below the significance threshold of 0.1. Therefore, the linear relation between the analyzed variables bears significance. Hence, following our analysis we rejected hypothesis H_4 and we accepted its alternative, namely that the professional experience of the audit committee members influences the entity's return on assets.

Examining the descriptive statistics table for the companies analyzed, we can conclude that in average 68,44% of the audit committee members have training and experience in the field of finance and accounting and that the average return on assets for the selected entities is 6,61%.

Table 4: Descriptive Statistics – dependent variable ROA

Descriptive Statistics

	Mean	Std. Deviation	N
ROA	,0661	,06482	18
Experience	,6844	,30303	18

Source: Authors' projection in SPSS

Moreover, from table 5, which describes the correlation between ROA and the members' professional experience using Pearson's coefficient, we can draw the conclusion that ROA is moderately and positively (or directly) correlated with experience, particularly, the two variables evolve in the same direction, namely, at an increase in the number of members with financial and accounting experience, ROA tends to increase as well. Also, the reverse situation is true. It should be noted that because Sig. is below the upper accepted limit, the above described connection is significant.

Table 5: Correlations – dependent variable ROA

Correlations

		ROA	Experience
Pearson Correlation	ROA	1,000	,417
	Experience	,417	1,000
Sig. (1-tailed)	ROA	.	,043
	Experience	,043	.
N	ROA	18	18
	Experience	18	18

Source: Authors' projection in SPSS

The model summary is presented by table 6, which comprises the correlation coefficient (R), the coefficient of determination (R^2), the standard error and the Durbin-Watson. The correlation coefficient (R) can range from -1 to +1 and it is intended to indicate the presence or absence of a correlation between the dependent variable (ROA in our case) and the independent variable (Experience in this case). The calculated value of R for our model is amid theoretical limits: 0.417. Moving on to the coefficient of determination, we can state that the independent variable of this regression explains the variance of ROA at a rate of merely 17.40%, therefore, we consider that there is a moderate correlation between ROA and professional experience.

The Durbin–Watson statistic is a procedure developed for testing for autocorrelation using the least squares residuals. In order to test whether the residuals are independent or dependent we used the Durbin-Watson test and because the calculated DW value is 1.380, which is greater than the upper threshold of theoretical statistics, 1.118 for a limit of 0.1 and 18 observations, we can strongly stet that the residues are not correlated.

Table 6: Model Summary – dependent variable ROA

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,417[a]	,174	,122	,06073	,174	3,366	1	16	,085	1,380

a. Predictors: (Constant), Experience
b. Dependent Variable: ROA
Source: Authors' projection in SPSS

Regarding coefficients, the following table (table 7) comprises estimates for model coefficients as well as statistical processing necessary to verify the assumptions regarding the coefficients. Unlike the F statistical test, the tests applied to coefficients are individual ones. The table rows refer to the model variables including the free term called constant term.

Column B contains the value of the coefficient, Std. Error renders the standard error of coefficient through the standard deviation in the random distribution of the coefficient, Beta is the value of the standardized coefficient and it indicates the change in ROA's standard deviation if the independent variable changes by one standard deviation, t is the expression of the significance test for the coefficient and Sig. is the test's critical probability. Consequently, a coefficient bears relevance if Sig. is under 0.1. Particularly, in our case, the Experience coefficient has the greatest relevance. Interpreting the above data, we attained the estimated model, namely the linear regression function:

$$y = 0,005 + 0,089 \, x_4, \text{ or ROA} = 0,005 + 0,089 * \text{Experience}$$

Table 7: Coefficients – dependent variable ROA

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	90,0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	,005	,036		,140	,890	-,058	,068					
Experience	,089	,049	,417	1,835	,085	,004	,174	,417	,417	,417	1,000	1,000

a. Dependent Variable: ROA

Source: Authors' projection in SPSS

The second part of the study follows the same methodology and is focused on identifying the impact of the audit committee characteristics on the return on equity (ROE).

Table 8: ANOVA statistical test - dependent variable ROE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,028	6	,005	,616	,714[b]
	Residual	,082	11	,007		
	Total	,110	17			

a. Dependent Variable: ROE

b. Predictors: (Constant), Position, Dimension, Experience, Meetings, Structure, Independence

Source: Authors' projection in SPSS

Analyzing table 8, we can note that the Sig. level is significantly superior to the 0.1 threshold, which indicates that the model must be rebuilt using only those independent variables comprising the most relevant correlation with ROE.

Furthermore, examining table 9, which shows the strength of the correlation links between all pairs of variables, it is clear that the only significant correlation is between ROE and Experience. Thus, the two variables correlate in a positive way, but to a minor extent (0.340) below the maximum limit for significance of 0.1 (0.083).

Table 9: Correlations between the independent variables (the characteristics of the Audit Committee) and the dependent variable (ROE)

Correlations

		ROE	Dimension	Structure	Meetings	Experience	Independence	Position
Pearson Correlation	ROE	1,000	,062	,036	-,091	,340	-,086	-,081
	Dimension	,062	1,000	-,121	,246	-,195	-,148	,022
	Structure	,036	-,121	1,000	-,086	,292	,139	-,302
	Meetings	-,091	,246	-,086	1,000	,223	-,012	,294
	Experience	,340	-,195	,292	,223	1,000	,389	,162
	Independence	-,086	-,148	,139	-,012	,389	1,000	,449
	Position	-,081	,022	-,302	,294	,162	,449	1,000
Sig. (1-tailed)	ROE	.	,404	,443	,360	,083	,367	,375
	Dimension	,404	.	,317	,162	,219	,280	,466
	Structure	,443	,317	.	,368	,120	,291	,111
	Meetings	,360	,162	,368	.	,186	,482	,118
	Experience	,083	,219	,120	,186	.	,056	,261
	Independence	,367	,280	,291	,482	,056	.	,031
	Position	,375	,466	,111	,118	,261	,031	.

Source: Authors' projection in SPSS

The influence of variables Dimension, Structure, Meetings, Independence and Position were rendered irrelevant and by consequence, we can safely state that assumptions H_1, H_2, H_3, H_5, H_6 are valid and subsequently we conclude that the dimension, the structure, the frequency of meetings, members' independence and the position of the audit committee did not influence the return on equity of the sample companies.

Accordingly, we rewrote the equation for the linear regression of ROE based only on the professional experience of the members of the Audit Committee:

$$y = \alpha_0 + \alpha_4 x_4.$$

Table 10: ANOVA statistical test - dependent variable ROE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,013	1	,013	2,098	,167[b]
	Residual	,097	16	,006		
	Total	,110	17			

a. Dependent Variable: ROE

b. Predictors: (Constant), Experience

Source: Authors' projection in SPSS

Therefore, the calculated value of the F test, 2.098, renders the global significance of the independent variable, while the value of Sig. from the ANOVA model is 0.167, which exceeds the significance threshold of 0.1. Because the linear relationship between the analyzed variables is not significant, therefore assumption H_4 is validated and accordingly we admit that for the analyzed entities, the professional experience of the members of audit committees' composition does not significantly influence the return on equity.

Table 11: Descriptive Statistics – dependent variable ROE

Descriptive Statistics

	Mean	Std. Deviation	N
ROE	,0917	,08031	18
Experience	,6844	,30303	18

Source: Authors' projection in SPSS

Table 11 summarizes the descriptive statistics of the new model and reveals that the average return on equity for the companies in the selected sample is 9.17%, while 68.44% of the members of audit committees are finance and accounting professionals. Analyzing the Pearson correlation coefficients, it appears that between ROE and Experience there is a direct, but weak correlation (positive correlation). Which means that at an increase in the proportion of financial and accounting professionals in the Audit Committee, we can expect an increase in return on equity and vice versa.

Table 12: Correlations – dependent variable ROE

Correlations

		ROE	Experience
Pearson Correlation	ROE	1,000	,340
	Experience	,340	1,000
Sig. (1-tailed)	ROE	.	,083
	Experience	,083	.
N	ROE	18	18
	Experience	18	18

Source: Authors' projection in SPSS

Regarding R^2, which indicates that only 11.60% of the variance of ROE is explained by the independent variable of the regression and therefore, the fact that there is a low correlation ROE and Experience is reiterated.

Table 13: Model Summary – dependent variable ROE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,340[a]	,116	,061	,07784	,116	2,098	1	16	,167	1,606

a. Predictors: (Constant), Experience

b. Dependent Variable: ROE

Source: Authors' projection in SPSS

Using the data summarized in table 14 regarding the regression coefficients, we can write the regression equation, but it is noted that both coefficients do not have significant values because for both Sig. exceeds the maximum level of 0.1:

$$y = 0.03 + 0.09 \ x_4, \text{ specifically ROA} = 0.03 + 0.09 * \text{Experience}$$

Table 14: Coefficients – dependent variable ROE

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	90,0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	,030	,046		,644	,529	-,051	,111					
Experience	,090	,062	,340	1,448	,167	-,019	,199	,340	,340	,340	1,000	1,000

a. Dependent Variable: ROE

Source: Authors' projection in SPSS

3. Conclusions

The importance of an effective audit committee was reiterated with every financial scandal linked to the bankruptcy of large companies, previously perceived to be financially sound. Audit committee characteristics affect the profitability of the entity, namely that numerous studies have found correlations between performance indicators and the membership, structure, frequency of meetings, professional experience, independence of the audit committee members and its position.

For the selected sample of entities, the correlation analysis revealed that the return on assets establishes a strong enough causal relationship only with the professional experience of the audit committee members. The determined correlation coefficients for all the other factors are almost nil, which shows that there is no precise link between the return on assets and the dimension, the structure, the frequency of meetings, members' independence and the position of the audit committee. Additionally, for the analyzed sample, the average return on assets is 6.61% and on average 68.44% of the audit committee members are finance and accounting professionals. Regarding the return on equity, similarly, it also establishes a causal relationship only with the professional experience of the audit committee members, but

to a considerably lower extent, while all the other selected variables do not influence its evolution. Furthermore, in this particular case, the average return on equity is 9.17%.

Of all of the audit committee characteristics analyzed by this study, the proportion of members which are financial and accounting professionals has the highest positive and significant impact on both the evolution of return on assets and return on equity. Therefore, the contribution of the audit committee to maximizing firm value and protecting shareholder interests becomes indisputable, with the amendment that its organization principles that define its characteristics must be respected thoroughly.

4. References

Abbott, L. J., Park, Y., & Parker, S. (2000) *The effects of audit committee activity and independence on corporate fraud, Managerial Finance*, Volume 26, p. 55–67;

Beasley, M. S., Carcello, J.V., & Hermanson, D.R. (2000) *Fraudulent financial reporting: 1987-1997, An analysis of U.S. public companies,* New York, Committee of Sponsoring Organizations of the Treadway Commission (COSO);

Cadbury, A. (2002) *Corporate Governance and Chairmanship: A Personal View,* London, Oxford University Press;

Chan, K. C., and J. Li (2008) *Audit committee and firm value: Evidence on outside top executives as expert-independent directors*, Corporate Governance: An International Review 16, p. 16-31.

Cohen, J. R., & Hanno, D. M. (2000) *Auditors' consideration of corporate governance mid management control philosophy in preplanning and planning judgments,* Auditing: A Journal of Practice & Theory, 19(2), p. 133-146;

Dima, I. C., Man, M. (2012) *Budgeting and Management Control in Industrial Companies*, LAP LAMBERT Academic Publishing, Germany, ISBN 978-3-8454-7975-0

Dima, I. C., Vlăduţescu, Ş. (2012) *Persuasion Elements Used in Logistical Negotiation*, LAP LAMBERT Academic Publishing, Germany, ISBN 978-3-659-25901-2

Herciu, M., Ogrean, C., Belaşcu, L. (2011) *A Du Pont Analysis of the 20 Most Profitable Companies in the World*, International Conference on Business and Economics Research, Vol. 1, IACSIT Press, Kuala Lumpur, Malaysia

Huang H.-W., Thiruvadi S. (2010) *Audit committee characteristics and corporate fraud,* International Journal of Public Information Systems, Volume 6, No. 1, p. 71-82;

Karamanou, I., Vafeas, N. (2005) *The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis*, Journal of Accounting Research, 43, p. 453-486;

Mallin, C. (2007) *Corporate governance,* New York, Oxford University Press.