

# The Role and Effectiveness of Audit Committee in Corporate Governance of Credit Institutions

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**Abstract**—The aim of this study is to analyze the role and effectiveness of internal mechanism (audit committee) of corporate governance on credit institutions performance in Croatia. Based on research objective, sample of 78 credit institutions listed on Zagreb Stock Exchange, from 2007 to 2012, has been collected and efficiency index of audit committee (EIAC) has been created. Based on the sample and created EIAC, conclusions are as follows: audit committees of credit institutions have medium efficiency, based on EIAC measurement; there is a significant difference in audit committee effectiveness, in observed period; there is no positive relationship between audit committee effectiveness and credit institution performance; there is a significant difference between level of audit committee effectiveness and audit firm type. Future research should contain increased number of elements in EIAC creation and increased sample, for all obligators who need to establish audit committee.

**Keywords**—Corporate Governance, Audit Committee, Financial Institutions, Efficiency Index of Audit Committee.

## I. INTRODUCTION

**E**FFECTIVE corporate governance and internal mechanisms provide an incentive for credit institution management in achieving their goals which are important for company, but also for all interested users, especially for shareholders [8].

The main aim of this paper is to analyze the role and effectiveness of internal mechanism in the system of corporate governance, i.e. the role and effectiveness of audit committee. It is assumed that effective mechanisms of corporate governance should contribute to more successful operations of credit institutions. The internal mechanism of corporate governance, which is important for its responsibilities and tasks, is audit committee.

The importance of audit committee in effective corporate governance is related to the key issues and tasks, performed by audit committee. The main tasks of audit committee are related on procedures for financial reporting and monitoring the effectiveness of internal audit, in order to achieve credit institutions objectives. According to the Audit Act, credit institutions should establish an audit committee, which is responsible to supervisory board [11]. The effectiveness of internal mechanisms of corporate governance (audit committee) aims to improve quality of reporting, to affect the

achievement of credit institutions objectives and to provide reliable information to all interested users of credit's institutions.

The remainder of the paper is structured as follows. Section two provides brief literature review on the issue. Third section discusses about efficiency index of audit committee. The results of empirical research are provided in the next section. The paper ends with concluding remarks.

## II. LITERATURE REVIEW

Using the importance of internal mechanisms of corporate governance in credit institutions operations, following studies are listed below.

Ajanthan, Balaputhiran, and Nimalathashan conducted a study in Sri Lanka on 'Corporate governance and performance of banks (private vs. state) in the banking sector of Sri Lanka' [1]. This study focused on four aspects of corporate governance: board size, board diversity, outside directors' percentage and board meeting frequency. Banking performance has been measured through return on equity (ROE) and return on assets (ROA).

Using multivariate analysis, conclusions are as follows: all variables of corporate governance that were included in study were positively associated with ROE in state banks; board diversity and board meeting frequency are positively associated with ROE in private banks, while board size and outside directors percentage have a negative relationship with ROE; board meeting frequency in public banks is positively associated with ROA, while board size, board diversity and outside directors' percentage have a negative relationship with these indicators; private banks have positive relationship between board diversity and ROA, while other variables of corporate governance have a negative relationship with ROA.

Bahrain and Mat Zain conducted a similar study in Malaysia in study of 'The impact of corporate governance on performance of the banking sector in Malaysia' [2]. This study covered 30 banks in Malaysia from 2005 to 2009. Bank performance has been measured by ROE and Tobin's Q. Variables of corporate governance included in this study are as follows: number and independence of board members, number and independence of audit committee and frequency of audit committee meetings.

Using descriptive statistics and multivariate analysis following conclusions has been adopted: board size, audit committee size and frequency of audit committee meetings have positive relationship with bank performance; percentage of independent non executive board of directors and

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percentage of independent non executive audit committee members have negative correlation with bank performance.

Hoque, Islam, Ahmed conducted a study on the same theme in Bangladesh [5]. Their study was conducted on 25 listed banks in Bangladesh, from 2003 to 2011. Bank performance was measured through the following indicators: ROA, ROE and Tobin's Q. Variables of corporate governance included in this study are as follows: company ownership, frequencies of audit committee meetings and independence of audit committee members.

Based on performed panel analysis, conclusions are as follows: general public ownership and frequencies of audit committee meetings are positively and significantly associated with return on assets (ROA), return on equity (ROE) and Tobin's Q. Independence of audit committee members have positive and significant effect on bank performance, measured by Tobin's Q.

Fidanoski, Mateska, and Simeonovsko also performed study on the same topic for banks in Macedonia [3]. Bank performances are measured with ROA and ROE. Variables of corporate governance included in this study are size and independence of supervisory and management board.

Based on performed OLS regression, conclusions are as follows: size of supervisory and management board is positively related to bank's profitability measured by ROA; there is significant impact in negative direction of board's independence, measured by the proportion of non-executive members seated in supervisory board to bank's profitability, measured with ROA and ROE.

In Croatia, the study related to mechanisms of corporate governance is performed by [9]. The title of this study is 'The role of the audit committee in enhancing the efficiency of external and internal mechanisms of corporate governance'.

Empirical research over 50 listed companies and 50 audit companies was conducted, from May 2007 to January 2008. Using descriptive statistics and t-test for independent samples, following conclusion is made: audit committee, as a subcommittee of supervisory board, has influence on greater efficiency of external audit and supervisory board.

Tušek, Filipović, and Filipović performed research related to the issues of relations between external and internal mechanisms of corporate governance, i.e. external auditing and supervisory board [10]. They conducted a study named 'Studies on the relationship of external auditing and supervisory board members in the Republic of Croatia'.

Empirical research over 50 listed companies and 50 audit companies was conducted, from May 2007 to January 2008. Using descriptive statistics and t-test for independent samples, following conclusions are made: external audit contributes to efficiency of supervisory board and supervisory board contributes to effectiveness of external audit.

### III. EFFICIENCY INDEX OF AUDIT COMMITTEE

The efficiency index of audit committee (EIAC) is index which measures existence of positive responses from the annual corporate governance code questionnaire, related to audit committee [4]. There are 10 questions related to audit

committee in the code of corporate governance, which means that EIAC comprises a total of 10 elements.

Questions from the annual corporate governance code questionnaire, which are related to audit committee, are as follows [4]:

- × Did supervisory or management board establish audit committee?
- × Was the majority of audit committee members selected from the group of independent members of the supervisory board?
- × Did audit committee monitor the integrity of the financial information of the company, especially the correctness and consistency of the accounting methods used by the company and the group it belongs to, including the criteria for the consolidation of financial reports of the companies belonging to the group?
- × Did audit committee assess the quality of the internal control and risk management system, with the aim of adequately identifying and publishing the main risks the company is exposed to (including the risks related to the compliance with regulations), as well as managing those risks in an adequate manner?
- × Has audit committee been working on ensuring the efficiency of the internal audit system, especially by preparing recommendations for the selection, appointment, reappointment and dismissal of the head of internal audit department, and with regard to funds at his/her disposal, and the evaluation of the actions taken by the management after findings and recommendations of the internal audit?
- × Did audit committee monitor the independence and impartiality of the external auditor, especially with regard to the rotation of authorised auditors within the audit company and the fees the company is paying for services provided by external auditors?
- × Did audit committee monitor nature and quantity of services other than audit, received by the company from the audit company or from persons related to it?
- × Did audit committee prepare rules defining which services may not be provided to the company by the external audit company and persons related to it, which services may be provided only with, and which without prior consent of the committee?
- × Did audit committee analyse the efficiency of the external audit and actions taken by the senior management with regard to recommendations made by the external auditor;
- × Did audit committee ensure the submission of high quality information by dependent and associated companies, as well as by third parties (such as expert advisors)?

The efficiency index of audit committee (EIAC) is calculated as ratio of the number of positive answers in the annual corporate governance code questionnaire ( $\Sigma AC$ ) and the maximum number of questions ( $MaxAC$ ).

Ratio is presented by:

$$EIAC = (\Sigma AC) / (MaxAC) \quad (1)$$

where EIAC – the efficiency index of audit committee,  $\Sigma AC$  – the number of positive answers in the annual corporate governance code questionnaire, MaxAC – the maximum number of questions.

For every positive answer, the value is 1, while for negative answer, the value is 0. Each item has same weight, so the coefficient of each item is 1. Maximum number is 10.

To get a level of efficiency, the measurement scale is made. The measurement scale of efficiency is divided into five levels and each level is associated with corresponding rank. Levels with the corresponding ranks are shown in following table.

TABLE I  
LEVEL OF EFFICIENCY AND AUDIT COMMITTEE RANKS

Level of efficiency	Rank
Full efficiency	81-100
High efficiency	61-80
Medium efficiency	41-60
Low efficiency	21-40
Large inefficiency	0-20

Analyzing the efficiency index of audit committee, we can conclude that effectiveness of audit committees in credit institutions listed on the Zagreb Stock Exchange is 55, i.e. audit committees have medium efficiency, on average.

Analyzing the annual corporate governance code questionnaire, following conclusions are made: 87% of credit institutions established audit committee; in 27% credit institutions, the majority of the committee members was selected from the group of independent members of the supervisory board; 73% of audit committees have been monitoring the integrity of financial information of the company, especially the correctness and consistency of the accounting methods used by the company and the group it belongs to, including the criteria for the consolidation of financial reports of the companies belonging to the group; 73% of audit committees assessed the quality of the internal control and risk management system, with the aim of adequately identifying and publishing the main risks the company is exposed to (including the risks related to the compliance with regulations), as well as managing those risks in an adequate manner; 68% of audit committees have been working on ensuring the efficiency of the internal audit system, especially by preparing recommendations for the selection, appointment, reappointment and dismissal of the head of internal audit department, and with regard to funds at his/her disposal, and the evaluation of the actions taken by the management after findings and recommendations of the internal audit; 68% of audit committees have been monitoring the independence and impartiality of the external auditor, especially with regard to the rotation of authorised auditors within the audit company and the fees the company is paying for services provided by external auditors; 33% of audit committees have been monitoring nature and quantity of services other than audit, received by the company from the audit company or from persons related to it? 9% of audit committees prepared rules defining which services may not be provided to the company by the external audit company and

persons related to it, which services may be provided only with, and which without prior consent of the committee; 68% of audit committees analysed the efficiency of the external audit and actions taken by the senior management with regard to recommendations made by the external auditor; 46% of audit committees ensured the submission of high quality information by dependent and associated companies, as well as by third parties (such as expert advisors).

#### IV. EMPIRICAL RESULTS

Empirical research was conducted for Croatian credit institutions, which are listed on Zagreb Stock Exchange (ZSE), from 2007 to 2012. In this period, on ZSE a total of 13 credit institutions were listed.

The data was collected from the annual corporate governance code questionnaire and from annual reports of credit institutions, taken from the website of Zagreb Stock Exchange. Related audit reports are taken from the register of annual financial statements [7].

To confirm or reject hypothesis, statistical methodology was used as follows: Kruskal-Wallis test, Mann-Whitney U-test and Pearson linear correlation coefficient. A computer program which was used is SPSS 18.0 (Statistical Package for the Social Sciences).

H1. There is a significant difference in audit committee effectiveness, measured by the EIAC, during the observed period.

× According to the Audit Act, public interest companies shall establish audit committee. Regarding that the research was carried over the period from 2007 to 2012. It can be assumed that effectiveness of audit committees was increased over the years [11].

In order to determine significant difference in audit committee effectiveness, during the observed period, Kruskal-Wallis test was used [6].

The following table shows that level of audit committee effectiveness was the largest in 2012, where average efficiency rank is 49, while the lowest was in 2009, where average efficiency rank is 28.

TABLE II  
AUDIT COMMITTEE EFFECTIVENESS (2007-2012)

Year	Mean rank
2012	49
2011	46
2010	45
2009	28
2008	37
2007	33

Kruskal – Wallis test  
(significance) 10%

Based on significance of 10%, we conclude that there is a significant difference in audit committee effectiveness, measured by EIAC, during the observed period. Efficiency growth of audit committee is visible through the mean rank.

H2. There is a significant relationship between audit committee effectiveness, measured by EIAC, and credit institution performances.

- × Corporate mechanisms and effective corporate governance should provide proper incentives to company in order to achieve objectives that are important for company and shareholders. Since the main aim of any company is successful and profitable business, it is assumed that effectiveness of corporate governance mechanisms, in this case, the audit committee, should contribute to more successful business of credit institutions.

In order to define connection between audit committee effectiveness and credit institutions success, the Pearson linear correlation coefficient ( $r$ ) was used [6].

TABLE III  
RELATIONSHIP BETWEEN EIAC AND PERFORMANCE INDICATORS

Performance indicators vs. EIAC	$r$	$\alpha^*$
ROA vs. EIAC	-0,04	68,9%
ROE vs. EIAC	-0,04	73,8%
EPS vs. EIAC	-0,18	10,9%
Profit/non profit vs. EIAC	-0,11	35,2%

Looking at all years together, we can see that significance ( $\alpha^*$ ) of Pearson correlation coefficient for all indicators (ROA and EIAC, ROE and EIAC, EPS and EIAC and profit/non-profit companies and EIAC) is higher than 5%.

Based on that, we conclude that there is no positive relationship between audit committee effectiveness, measured by EIAC, and performance indicators of credit institutions. The reason is that in observed period audit committee effectiveness was equal, on average, for all credit institutions.

H3. There is a significant difference between audit committee effectiveness and audit firm type.

- × According to the Audit Act, audit committee monitor independence of audit firms, especially contracts about facility, and make recommendations to shareholders on auditors selecting [11]. It can be assumed that credit institution with more effective audit committee will choose Big Four audit firms, because those are firms who provide higher audit quality and they are recognized as specialists in auditing financial institutions.

In order to define difference between audit committee effectiveness and audit firm type, Mann-Whitney U-test was used [6].

TABLE IV  
AUDIT COMMITTEE EFFECTIVENESS VS. AUDIT FIRM TYPE

Audit firm	Mean rank	Mann-Whitney U Test (significance) 4%
Big Four	45	
Non Big Four	34	

From this table, it can be seen that average rank of audit committee effectiveness in credit institutions, audited by Big Four audit firms, is 45, while the average rank of credit institutions, audited by other audit firms, is 34.

Based on significance of 4%, we conclude that there is a significant difference between level of audit committee effectiveness and audit firm type. Credit institutions audited by Big Four have a higher level of audit committee

effectiveness, than credit institutions, audited by other audit firms, which means that credit institutions with more effective audit committee choose Big Four audit firms.

## V. CONCLUSION

Research of audit committee effectiveness, as mechanisms of corporate governance, was conducted for 13 credit institutions, listed on Zagreb Stock Exchange, from 2007 to 2012, for total sample of 78 credit institutions. We collected data about credit institutions performance (from financial statements) and data about audit committee effectiveness (from annual corporate governance code questionnaire).

Audit committee effectiveness, for this paper, was measured by the efficiency index of audit committee, based on annual corporate governance code questionnaire. Looking at the efficiency index of audit committee, we concluded that average audit committee effectiveness of credit institutions is medium. 13% of credit institutions in this sample did not establish audit committee, which is not in accordance with the Audit Act.

Based on assumption that most of credit institution need to establish audit committee, we created first hypothesis and conclude that there is a significant difference in audit committee effectiveness, which was measured by the EIAC, during the observed period. Audit committee effectiveness increased over the years.

We also assumed that there will be a significant relationship between audit committee effectiveness and financial performance (business success). This hypothesis is rejected and it raises the question whether there is a significant impact of audit committee to credit institutions profitability.

In this paper, level of audit committee effectiveness and audit firm type was analyzed and we collude that there is a significant difference between level of audit committee effectiveness and audit firm type. This confirms assumption that credit institution with more effective audit committee will choose Big Four, because these firms provide higher quality and they are recognized as specialists in domain of financial institutions auditing.

This research showed importance of internal mechanisms of corporate governance in credit institutions. Problems in which authors were found in creation of database are insignificant number of information about importance of audit committee in credit institutions.

Future research regarding audit committee effectiveness may be conducted by primary research, i.e. a questionnaire to audit committee members. This way we will find new elements for the efficiency index of audit committee. With the new index created, we could expand sample for all credit institutions, but also to other companies with public interest which have an obligation to establish audit committee, in accordance with the Audit Act.

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