

Adequacy of audit committees: A study of deposit banks in Turkey[☆]

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Abstract

The purpose of this study is to investigate the adequacy of the audit committees in Turkish Banking Sector. Considering national and international legislation, and best practices, audit committees' adequacy involves the issues regarding committees and the responsibilities of committees. Interviews and questionnaires in 6 deposit banks were carried out to investigate the adequacy of the audit committees. The data, collected through the interviews and questionnaires, were analyzed by frequency analyses, alfa test and t-tests. According to the results, a variety of deficiencies were determined in the audit committees' structure and responsibilities of internal control, risk management, accounting and financial reporting, independent auditing, valuation services, and rating bureaus. Although all the banks examined in the study were deposit banks, the adequacy of the audit committees varied according to the banks. Banks' board of directors and the audit committees should update their approach in order to carry out their duties more efficiently.

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1. Introduction

Economic activities in Turkey are mostly funded by banks. Due to the financing function of banks, problems that banks could encounter in the banking system will cause serious effects on the economy. For this reason, auditing of banks efficiently is a requirement (Zengin & Yüksel, 2016).

There are many auditing activities performed in banks. These audit activities are performed mostly by an internal control and internal audit departments internally (Banking Law, 2005). In addition to the internal control and internal audit, banks are audited by independent auditors and public

auditors externally (Yurtsever, 2009). One of the important points in auditing is to ensure the independence of auditors. Reporting of internal auditors to audit committees and the responsibility of independent auditors towards audit committees are important. In order to provide auditor independence, establishment of audit committees in the board of directors in banks is a common practice and quite widespread.

Besides enabling the independence of auditors, audit committees take a variety of important responsibilities in companies especially in banks. These responsibilities can be divided into 9 categories which are internal control, internal audit, risk management, ethics and code of conduct, accounting and financial reporting, independent audit, support services, valuation services, and rating bureaus (Banking Law, 2005; Banking Regulation and Supervision Agency (BRSA, 2014). In order to fulfill their responsibilities best, audit committees should be structured very well, should work effectively and efficiently and should work with high

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performance. These mentioned issues all together form the adequacy of audit committees.

The history of audit committees goes back to 1940s in the world. It is possible to say that audit committees emerged as a result of the scandals of accounting and auditing, and bankruptcies especially in the United States of America (USA). Scandals and bankruptcies result in re-querying governance structure, independent audit and audit committees (Dalgıç, 2005). Some scandals and bankruptcy cases between 2001 and 2008 are included in Appendix A (Aksoy, 2007; Cuebas, 2010).

Scandals and bankruptcies have caused to query the effectiveness of the internal and external financial reporting and audit activities in corporations. Audit committees were included in this discussion because of the fact that they are responsible for the supervision of financial reporting and audit activities in companies. Audit committees were criticized much more harshly, especially because of providing independence to auditors in terms of supervising accounting and financial reporting.

After the scandals and bankruptcies related with accounting and auditing in global areas, various countries and international institutes began to focus on audit committees. New regulations were made and came into force after the discussions as a result of the studies of the countries and international institutes. Sarbanes-Oxley Act is one and the most important regulation in the world affecting audit committees.

Similar to the countries which have faced crises and bankruptcies, Turkey has also faced crises and bankruptcies. The hardest banking crisis Turkey had ever experienced was in 2001. In this crisis, 17 banks went bankrupt, which cost Turkey the amount of billion dollars (SDIF, 2017). After this experience having destructive effects, the governance and audit structure of banks became the subject of discussions in Turkey as in other countries. The Banking Law dated 1999 numbered 4389 was renewed by the new Banking Law dated 2005 numbered 5411 taking into consideration the discussions, regulations, and trends in the world and the bank bankruptcies seen in Turkey. In the new Banking Law numbered 5411, audit committees are regulated as compulsory to be established in all banks operating in Turkey although there was not an obligation in the Banking Law numbered 4389 (Banking Law, 2005). After that time, banks started to set up audit committees in Turkey. Additional regulations regarding audit committees in banks were made by BRSA in the year 2006 (BRSA, 2006a; BRSA, 2006b). In these regulations, BRSA explains some details about audit committees. According to these regulations, banks operating in Turkey started to set up audit committees. Although audit committees have existed in western countries for a long time, they are relatively new in Turkey. The relative newness of audit committees is an important factor that limits audit committees' adequacy in Turkey with regard to audit committees abroad.

The published studies in Turkey have examined either a part of the responsibility of audit committees or one of the

components, which are the structure, efficiency, effectiveness, and performance of audit committees. These studies are organized around the national regulations and audit committees' charter. For example, Uzun (2006) completed his study based on the audit committee charter and necessities that should be included in the audit committee charter. The studies regarding audit committees, which have a similar approach, was published by Eliuz (2007), Akyüz (2008), Gerekan and Pehlivan (2009), Akbulut (2010), Külte (2013), and Yakar (2014) in Turkey. When the studies abroad are examined, it can be seen that audit committees were dealt with in many different ways including the best practices and how an audit committee practice could be developed. In addition, there are a limited number of studies dealing with audit committees in Turkey. On the other hand, there are no academic studies examining all the issues related with audit committees including issues regarding audit committees and issues regarding audit committees' responsibilities. Also, there is a widespread belief about audit committees which pose some questions like, "Have banks in Turkey set up audit committees just to meet legal provisions? Are there full time members of audit committees? Are audit committees structured to perform efficiently and effectively? Are audit committee practices of Turkish banks compliant with international best practices? Do banks pursue good practices or not?" These are the basic motivations that drive us to do this research under the term of adequacy of audit committees. We did the research to examine the audit committees comprehensively in banks in Turkey. It was anticipated that the deficiencies in practices would be determined if a comprehensive research was done.

In the studies abroad, interesting results are stated regarding audit committees. For example, Abdullatif, Ghanayem, Ahmad-Amin, Al-shelleh, and Sharaiha (2015) researched the performance of audit committees and stated that audit committees possessed the necessary characteristics and the performance of their duties was also to a limited extent. Drogalas, Arampatzis, and Anagnostopoulou (2016) studied the relationship between corporate governance and audit committees and concluded that corporate governance is positively associated to the audit committees. Susanto (2016) studied the effects of audit committees on earnings management and concluded that the characteristics of audit committees have an effect on earnings management. The gender and education of audit committee, audit committees' meetings, and board of directors, independent commissioners, managerial ownership, firm size and losses have an influence to earnings management. Dodo (2017) researched roles and effectiveness of audit committees and concluded that many corporate failures are associated with the ineffectiveness of audit committees, and audit committees could have prevented the occurrence of corporate failures if they had been efficient. In this study, audit committees were examined as a whole under the term of adequacy. In this context, adequacy was approached in two sections, which are the issues regarding committees and issues regarding the areas audit committees are responsible for. This study contributes to the literature in certain ways. First, to our knowledge, there has been no study

done about the adequacy of audit committees in Turkey. So, this study has brought the term of adequacy of audit committees to the literature. Second, this is an empirical study to do research on the adequacy of the audit committees in the banks in Turkey. Third, the study includes two main parts which are issues regarding audit committees and issues regarding audit committees' responsibilities. Audit committees' structure, efficiency and effectiveness, and performance were examined under issues regarding audit committees. Audit committees' responsibilities consisting of internal control, internal audit, risk management, ethics and codes of conduct, accounting and financial reporting, independent audit, support services, valuation services and ratings bureau were examined under issues regarding audit committees' responsibilities. Totally 12 components in two main sections were handled in the study. Fourth, it was possible to provide recommendations to improve audit committee practices in Turkey as a whole by doing this research due to fact that this research was done comprehensively and all the components were examined in selected banks and they were compared with each other and with the best practices. These can be summarized as the study's contribution to the literature.

The study consists of six sections and is organized as follows. After the introduction, Section 2 gives details about the contextual background. Section 3 reviews the related literature upon the audit committees in Turkey and abroad. Section 4 describes the data and methodology used in the study. Section 5 reviews the research results of the study. Section 6 summarizes the results of the study.

2. Contextual background

Audit committees are defined as an administrative structure that supports the independence of auditors and lends assistance to independent auditors (Uzay, 2003; Banking Law, 2005; BRSA, 2014). In Sarbanes-Oxley Act, audit committees are described as an internal body to be created in order to supervise the accounting and financial reporting and auditing of financial statements (Pashkoff & Miller, 2002). According to the American Institute of Certified Public Accountants, audit committees are described as commissions (Uzun, 2006). Securities and Exchange Commission determines audit committees as committees to be selected to take role in audit of financial structure (Active, 2003).

Audit committees are responsible for the supervision of internal controls and external financial reporting process (Uzay, 2003). Members of audit committees are selected among the members of board of directors (Pashkoff & Miller, 2002). Audit committees generally consist of outside directors and 3–5 members (Uzay, 2003; Uzun, 2006).

In Turkey, audit committees are regulated by Banking Law, legislations made by BRSA and Capital Market Board (CMB). Banking Law states the minimum requirements that audit committees in banks must have. BRSA and CMB legislations show other details regarding audit committees. The current Banking Law was adopted in 2005. BRSA took a Board Decision on the qualifications of members of the audit committee

and published a charter including articles about the qualifications of members, authority and responsibilities of audit committees in banks (BRSA, 2006a; BRSA, 2006b). CMB made some regulations regarding audit committees and their responsibilities in publicly held banks. When Banking Law, BRSA and CMB regulations are evaluated together, it is concluded that the establishment of an audit committees is a legal obligation for all banks operating in Turkey which are publicly held or non-publicly held.

Audit committees are constituted in order to assist the board of directors to fulfill its audit and supervision task and responsibilities in Turkey (Banking Law, 2005). The members of audit committees are selected among the members of the board of directors. Audit committees should have at least 2 non-executive directors (BRSA, 2014; Banking Law, 2005). CMB's regulation about committees responsible for audit is the same as BRSA's rules (CMB, 2013).

One of the most important points regarding audit committees is how they should be structured, how their efficiency and effectiveness are provided, and how they perform. In addition to these, they take a variety of important responsibilities in banks. These responsibilities can be divided into 9 categories which are internal control, internal audit, risk management, ethics and code of conduct, accounting and financial reporting, independent audit, support services, valuation services, and rating bureaus according to current legislations in Turkey (BRSA, 2014; Banking Law, 2005). Audit committees in banks have significant roles and responsibilities considering an overwhelming majority of economic activities are funded by banks, and auditing and supervision of activities are highly important. For this reason, the structuring and organizational positioning of audit committees in banks are important. Audit committees' organizational positioning in banks according to the current legislation of Turkey can be seen in Fig. 1.

The audit committees are one of the most important organizational structures in banks after the board of directors and some functions report directly to audit committees as can be seen in Fig. 1. Audit committees are important in terms of

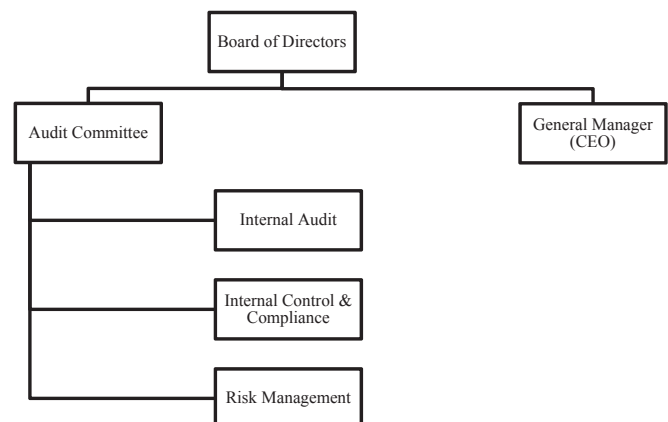


Fig. 1. Audit committees' organizational position in banks in Turkey. Source: Yakar, 2014.

performing efficiently and effectively, protecting assets, in accordance with the legislation and supervision of the preparation of the reliable financial reporting of banks.

Adequacy is expressed as the suitability of knowledge, skill and competence (Vocational Qualification Institute, 2015). In other words, adequacy refers to having the knowledge and competence to provide the power to do a job and can be summarized as the sum of knowledge and skills. In order to be adequate, audit committees should be structured very well, should work effectively and efficiently, should work with high performance, and should fulfill responsibilities best. These mentioned issues together form the adequacy of audit committees. When audit committees have adequacy or audit committees are described as adequate, this means that they are structured very well, they work effectively and efficiently, they work with high performance, and they fulfill their responsibilities best. These mentioned issues together form the adequacy of audit committees.

3. Literature review

There are not any studies regarding the adequacy of audit committees in the literature. However, the literature on audit committees and responsibilities of audit committees is very rich and diversified. In the context of the literature review, the studies on audit committees and their responsibilities were examined.

There are studies examining audit committees from the structural perspective. Al-Mudhaki and Joshi (2004) examined the corporations in India. They determined that 68.3% of the audit committees of the corporations have from 3 to 6 members; 14.6% of the corporations have independent audit committee members. Also, it was stated that the frequency of audit committee meetings has an effect on the internal audit activity. Uyar (2004) researched the audit committees in Turkey. He stated that audit committees should be constituted by independent and expert members; the members of audit committees should be selected by the general assembly and they should have trainings about corporations and the activities of corporations. Uzun (2006) investigated the audit committees in Turkey. He determined that audit committees should be constituted of at least 3 members. Gerekan and Pehlivan (2009) pointed out that audit committees should have 5 members. Financial Reporting Council (2012) studied the audit committees in England. It was determined that audit committees should be composed of at least 2 independent members in small corporations, and 3 independent members in medium and large corporations. In addition, it was recommended that the duty term of audit committees should be fixed as 3 years and should be extended maximum to 3 years more; the frequency of audit committee meetings should be stated and audit committees should meet at least 3 times a year.

Another group of studies examined audit committees from the perspective of effectiveness. Song and Windram

(2000) handled audit committees from the financial perspective in England. They stated that audit committees has a significant role in the accuracy of the contents of financial reports and concluded that knowing the financial structure has a determinant effect on the effectiveness of audit committees. Sori, Hamid, and Nassir (2006) examined audit committees from the perspectives of accounting information, good governance and auditor independence in Malaysia. They determined that a developed accounting knowledge, reviewing financial statements, good governance and auditor independence should be provided for effective audit committees. Çatıkkaş, Okur, and Balkan (2012) reviewed audit committees from the credit perspectives in Turkey. They reached a conclusion that effective audit committees decrease nonperforming loans and hence they have a positive effect on banks.

A number of studies examined audit committees from the perspectives of written charter and responsibilities. These studies tried to determine the minimum requirements that should be in the charters of audit committees. Uyar (2004) stated that audit committees should have a written charter and enough authority and resources. Sinnar (2006) identified that audit committees decrease misstatements and fraud possibility in financial transactions and financial reports by taking an active role in the supervision and auditing of a financial reporting process. Hence, audit committees prevent an unexpected corporation bankruptcy and frauds at management levels. Uzun (2006) determined that audit committees should have a charter; the head of audit committees and head of the board of directors should be different people. Uzun (2007) indicated that audit committees should have a charter which describes audit committees' tasks, authority and responsibilities in Turkey. It was stated that audit committees' charter should also be approved by the board of directors. Balkan (2008) reached a conclusion that an audit committee should have a secretariat. Also, it was stated that the members of audit committees should be experts in the corporations' activities. Gerekan and Pehlivan (2009) defined that at least 3 members of audit committees should have accounting and finance expertise. In addition, audit committees' members should be selected from the outside of corporations. Sariçam (2009) identified that audit committees have an important role for the internal and external shareholders of corporations in the accuracy of the financial reporting process. He also defined that audit committees' characteristics (education level, number of members, members' ages) have a relationship with the performance of banks (return on equity, return on asset, net interest rate margin). Uzun (2009) concluded that audit committees should investigate whether there is any conflict of interest affecting the auditors' independence. Akbulut (2010) concluded that audit committees should be constituted of experts, have financial expertise and be independent, and stated that an audit committee should have a right in independent auditing process. Yakar (2014) determined that audit committees should have a

written charter and AC members should have enough training for responsibility to operate effectively.

Another group of studies examined audit committees from the perspectives of independence and performance. [Akyüz \(2008\)](#) stated that performance criteria should be determined for performance measurement and performance results should be followed up by the board of directors. Also, it was recommended that performance measurement should be added to the legislation as compulsory. [Balkan \(2008\)](#) defined that the members of audit committees should be independent. The members of audit committees should be selected by the general assembly instead of the board of directors in order to provide independence. [Gerekan and Pehlivan \(2009\)](#) determined that audit committee members should be selected from the outside of corporations to enable independence. [Yakar \(2014\)](#) identified that audit committees should be constituted of independent members.

The last group of studies in the literature examined audit committees by handling multi-focus points from various perspectives. [Zhang, Zhou, and Zhou \(2007\)](#) concluded that there is a relation between audit committees' quality, independence and internal control deficiency. [Vafeas and Waegelien \(2007\)](#) identified that audit committees' size, members' expertise and independence are directly proportional while long term compensation to the Chief Executive Officer is inversely proportional with the compensation level of audit committees. [Engel, Hayes, and Wang \(2009\)](#) determined that the demand of reviewing financial reporting processes is one of the determinants of the compensation of audit committees. [IIA & PWC \(2011\)](#) stated that 2008 global crisis increased focusing on the accuracy of disclosure. [KPMG \(2013\)](#) reached a conclusion that audit committees should understand how digitalization and social media transform the business environment. In this study, it was also stated that the effects of digitalization and social media on corporations and supervision role of the board of directors should be understood by audit committees. [Külte \(2013\)](#) concluded that detailed regulations should be made related with the independence of audit committees in order to generalize audit committee practice in nonpublic companies. [Lisic and Zhou \(2013\)](#) determined that when audit committees are independent, have financial expertise and governance, the dismissal risk of independent auditors decrease if independent auditors publish a report which contains significant internal control deficiencies. This could be evaluated as one of the most important function of audit committees in the sense of auditing. [ECIA & FERMA \(2014\)](#) determined that the role and responsibilities of audit committees will be increased in some areas such as reporting about audit committees' efficiency, supervision of financial reporting process, reliability of financial reporting and independent auditing activities. [KPMG \(2015\)](#) stated that some risks, such as IT and cyber security have been increasing the workload of audit committees. [Doğan \(2016\)](#) identified that audit committees raise the quality of financial reporting.

4. Data and methodology

By the end of 2016, there were a total of 52 banks in Turkey. As The Royal Bank of Scotland has now pulled out of Turkey, there are 51 banks currently operating in Turkey. Turkish Banking Sector's current situation is demonstrated in [Fig. 2](#). As can be seen in [Fig. 2](#), the banks are categorized into three groups based on their scope, as deposit banks, development and investment banks, and participation banks. The other details and the number of the banks in relation to their categories can be seen in [Fig. 2](#).

Turkish Banking Sector reached TL 2.3 trillion total asset size, TL 27.3 billion total net profit volume and TL 261.9 billion total shareholder's equity by the end of 2015. When analyzing the size of the assets, net profit and shareholders' equity of Turkish Banking Sector, the distribution of the components mentioned can be summarized as in [Table 1](#).

The distribution of the total assets, total net profits and total shareholders' equity has similar shares for the year 2016 and for the period, September 2017. Considering deposit banks have the highest share in Turkish Banking Sector, the research area was determined as deposit banks. When analyzing the deposit banks in Turkish Banking Sector, it was seen that 2 deposit banks were under Savings and Deposit Insurance Funds Management, 6 banks have one branch in Turkey, and 5 banks have lower internal systems personnel which are expected to be participants in the questionnaires. As a result, 21 deposit banks were suitable to do research in. Although 21 banks were contacted, only 6 banks gave permission to do research.

6 banks, in which research was done, represent 40% total assets, 34% total net profit and %34 of total shareholders' equity of deposit banking in Turkey. The banks' names are hidden and nicknames are used due to the fact that using the banks' names is not permitted by Turkish Banking Law. For this reason, the basic characteristics of the banks are shown in [Table 2](#).

4.1. Issues regarding audit committees

The issues regarding audit committees can be divided into 3 groups, which are structure, effectiveness and efficiency, and performance. Interviews were carried out with the members of the audit committees of the banks in order to examine the structure, effectiveness and efficiency, and performance of the banks' audit committees. The questions, which were used in the interviews, were prepared considering the national and international legislations and best practices. 12 questions for the structure of the audit committees, 15 questions for the effectiveness and efficiency of the audit committees and 15 questions for the performance of the audit committees were used in the interviews. In this subunit, 42 questions for 3 components were used. The questions are included in [Appendix B](#). The responses to the interview were digitized and evaluated on the basis of [Table 3](#) in order to compare the banks with each other.

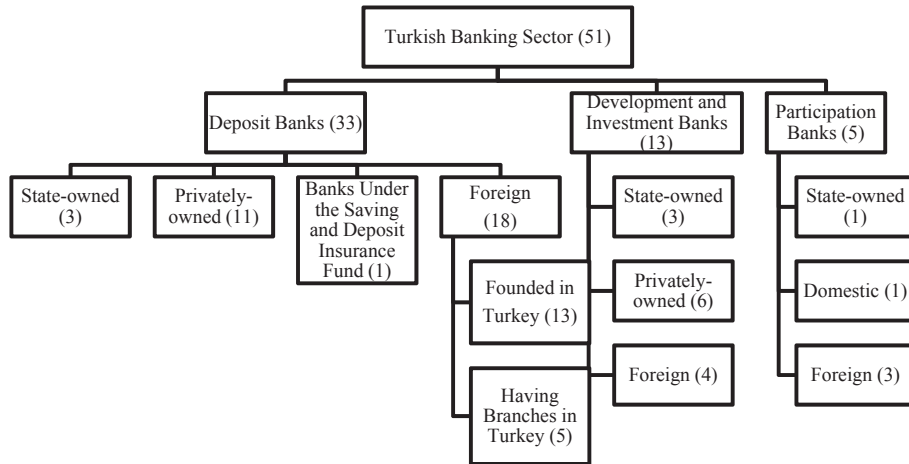


Fig. 2. Number of banks operating in Turkey based on bank types.

Source: BRSA, 2017.

Table 1
Main indicators of banking groups' shares in Turkish banking sector in 2015.

Main Groups	Bank Number	Total Asset Share (%)	Total Net Profit (%)	Total Shareholder's Equity (%)
Deposit	33	90.64	89.74	87.08
Participation	5	4.82	3.84	3.96
Development and Investment	13	4.54	6.42	8.96
Total	51	100.00	100.00	100.00

Source: BRSA, 2015.

Table 2
Basic characteristics of banks in which research was done.

Bank Nickname	Banka Type	Main Shareholder	Publicly Held	Bank Scale
Bank A	Deposit Bank	Privately-owned	Yes	Big
Bank B	Deposit Bank	Privately-owned	No	Medium
Bank C	Deposit Bank	Privately-owned	Yes	Medium
Bank D	Deposit Bank	Privately-owned	Yes	Big
Bank E	Deposit Bank	Privately-owned	No	Small
Bank F	Deposit Bank	State-owned	Yes	Big

Table 3
Evaluation scale of interview responses regarding issues about audit committees.

Components	Number of Questions	Score Interval	Maximum Score
Structure	12	0-5-10	120
Effectiveness and efficiency	15	0-5-10	150
Performance	15	0-5-10	150

When digitizing the responses to the interviews (the information collected from the banks) the following digitizing methods were used:

- 10 points if the bank fully covered the question,

- 5 points if the bank partially or minimally covered the question,
- 0 point if the bank did not cover the question.

4.2. Issues regarding audit committees' responsibilities

There are a lot of responsibilities of audit committees. The areas of responsibility of audit committees can be classified into 9 main components. These are internal control, internal audit, risk management, ethics and codes of conduct, accounting and financial reporting, independent audit, support services, valuation services and ratings bureau. The questionnaires were given to the personnel of the internal system departments, which are internal control, internal audit and risk management. The personnel of these departments work closely with the audit committee and they are expected to have the most information about the audit committees in banks. The questions, which were used in the questionnaires, were prepared by considering national and international legislations and best practices.

The questionnaires were graded by using the scale shown below:

- Fully agree: 2
- Agree: 1
- Irresolute: 0
- Disagree: -1
- Fully disagree: -2

8 questions for the responsibilities of the internal control, 8 questions for the responsibilities of the internal audit, 8 questions for the responsibilities of the risk management, 7 questions for the responsibilities of the ethics and codes of conduct, 5 questions for the responsibilities of the accounting and financial reporting, 5 questions for the responsibilities of the independent audit, 3 questions for the responsibilities of the support services, 3 questions for the responsibilities of

the valuation services and 3 questions for the responsibilities of the ratings bureau. In this subunit, 50 questions for 9 components were used. The questions are included in Appendix C.

The questions in the questionnaires were evaluated by a hypothesis testing using one tailed *t*-test. The hypotheses were tested according to whether the average answer of each question is equal to 1 and high, or not. That is why the hypothesis 1 and high average shows that the participants agreed to the questions. One hypothesis example is shown as below;

- H0: Average of question "Audit Committees provide the necessary resources for the internal control department to fulfill their responsibilities" ≥ 1 .
- H1: Average of question "Audit Committees provide the necessary resources for the internal control department to fulfill their responsibilities" < 1 .

5. Analysis and empirical results

5.1. Issues regarding audit committees

The issues regarding the structure, effectiveness and efficiency, and performance of audit committees were evaluated according to the evaluation scale in Table 3. The evaluations were made based on each bank and each component. The questions and evaluation details are included in Appendix B.

Table 4 demonstrates the total scores and Table 5 the total percentages based on the banks and components which were calculated according to the information gathered in the interviews.

As can be seen in Tables 4 and 5, the results of the issues regarding the audit committees vary according to the banks. Bank C and Bank E are the best banks in the structure of audit committees, Bank B is the best bank in the effectiveness and efficiency of the audit committees, and Bank B and Bank C are the best banks in the performance of the audit committees.

Table 4
Total score results of issues regarding audit committees.

Components/Banks	A	B	C	D	E	F
Structure	70	75	80	70	80	55
Effectiveness and Efficiency	105	135	125	120	125	110
Performance	115	135	135	120	125	125

Table 5
Total percentage results of issues regarding audit committees.

Components/Banks	A	B	C	D	E	F
Structure	58	63	67	58	67	46
Effectiveness and Efficiency	70	90	83	80	83	73
Performance	77	90	90	80	83	83
Average (Arithmetic)	68	81	80	73	78	67
Banks Rank	5	1	2	4	3	6

Table 6
Descriptive statistics.

Characteristics	Detail	Frequency	%
Education	High school	1	0,4
	Bachelor	171	71,0
	Post graduate	68	28,2
	Doctorate	1	0,4
	Total	241	100,0
Department	Internal control	90	37,3
	Internal audit	137	56,8
	Risk management	14	5,8
	Total	241	100,0
Status	Supervisor	52	21,6
	Personnel	189	78,4
	Total	241	100,0
Bank experience (year)	1–5	133	55,2
	6–10	68	28,2
	11–15	28	11,6
	16+	12	5,0
	Total	241	100,0

When making an overall evaluation in the issues regarding the audit committees, Bank B is the best bank and has the highest adequacy considering the components of structure, effectiveness and efficiency, and performance of audit committees. Bank C is the second, Bank E is the third, Bank D is the fourth, Bank A is the fifth and Bank F is the sixth bank as a result of the overall assessment in having adequacy.

5.2. Issues regarding responsibilities of audit committees

The issues regarding the responsibilities of the audit committees were evaluated to examine the questionnaire results by using *t*-tests. The questions in the questionnaire are included in Appendix C, critical values (*t*-values and *p*-values) are included in Appendix D, and the results of the *t*-tests are included in Appendix E. A total of 241 participants participated in the questionnaire. Table 6 demonstrates the participants' descriptive statistics about their education level, departments they have been working in, status, and experience.

As can be seen in Table 6, the most of the participants have a bachelor degree and 1–5 years' experience, and have been working in the internal audit department and they are the personnel who do not have a supervisory role.

5.2.1. Cronbach alfa test

Before analyzing the questionnaires, the internal consistency should be analyzed. Cronbach Alfa (alfa) test was used to analyze the internal consistency in this study. Alfa test shows that whether the questions in scale are homogeneous and show a whole or not. Alfa index takes value between 0 and 1. Depending on the alfa index, the internal consistency of the questionnaires can be shown as follows (Kalaycı, 2009):

- If $0.00 \leq (\alpha) < 0.40$, then scale cannot be reliable,
- If $0.40 \leq (\alpha) < 0.60$, then scale is low reliable,
- If $0.60 \leq (\alpha) < 0.80$, then scale is reliable,
- If $0.80 \leq (\alpha) < 1.00$, then scale is highly reliable.

Table 7
Results of issues regarding responsibilities of audit committees.

Components	Number of Questions	Banks					
		A	B	C	D	E	F
Internal Control	8	0	6	3	6	6	2
Internal Audit	8	4	6	4	8	7	4
Risk Management	8	0	5	5	8	8	4
Ethics and Code of Conduct	7	4	6	6	7	7	4
Accounting and Financial Reporting	5	0	4	4	5	5	2
Independent Audit	5	0	5	4	5	5	2
Support Services	3	0	3	3	3	3	2
Valuation Services	3	0	3	3	3	3	1
Ratings Bureau	3	0	3	3	3	3	0
Total	50	8	41	35	48	47	21
Bank Rank	-	6	3	4	1	2	5

Table 8
Total percentage results of issues regarding responsibilities of audit committees.

Components	Number of Questions	Banks (%)					
		A	B	C	D	E	F
Internal Control	8	0	75	38	75	75	25
Internal Audit	8	50	75	50	100	88	50
Risk Management	8	0	63	63	100	100	50
Ethics and Code of Conduct	7	57	86	86	100	100	57
Accounting and Financial Reporting	5	0	80	80	100	100	40
Independent Audit	5	0	100	80	100	100	40
Support Services	3	0	100	100	100	100	67
Valuation Services	3	0	100	100	100	100	33
Ratings Bureau	3	0	100	100	100	100	0
%	-	16	82	70	96	94	42
Bank Rank	-	6	3	4	1	2	5

In the study, the alfa value was calculated as 0.96. This shows that the internal consistency of the questionnaires is highly reliable.

Table 9
Consolidated results.

	Components	Banks (%)					
		A	B	C	D	E	F
Issue regarding audit committees	Structure	58	63	67	58	67	46
	Effectiveness and Efficiency	70	90	83	80	83	73
	Performance	77	90	90	80	83	83
Issue regarding responsibilities of audit committees	Internal Control	0	75	38	75	75	25
	Internal Audit	50	75	50	100	88	50
	Risk Management	0	63	63	100	100	50
	Ethics and Code of Conduct	57	86	86	100	100	57
	Accounting and Financial Reporting	0	80	80	100	100	40
	Independent Audit	0	100	80	100	100	40
	Support Services	0	100	100	100	100	67
	Valuation Services	0	100	100	100	100	33
	Ratings Bureaus	0	100	100	100	100	0
	Average (Arithmetic)	26,00	85,17	78,08	91,08	91,33	47,00
Banks Rank	6	3	4	2	1	5	

5.2.2. T-test results

Hypotheses were tested at 95% confidence interval and error margin was calculated as 6%. Hypothesis test results regarding the audit committees' responsibilities about which the banks fulfill which responsibilities are included in Appendix E based on each bank, each component and each question. A summary of the *t*-test results are included in Table 7 and Table 8 demonstrates the total percentages based on the banks and components which were calculated according to the results of the *t*-test results.

As can be seen in Tables 7 and 8, similar to the issues regarding the audit committees, the issues regarding the responsibilities of the audit committees vary according to the banks. Bank B, Bank D and Bank E are the best banks in the internal control component; Bank D is the best bank in the internal audit component; Bank D and Bank E are the best banks in the risk management, ethics and codes of conduct and accounting and financial reporting components; Bank B, Bank D and Bank E are the best banks in the independent audit component; Bank B, Bank C, Bank D and Bank E are the best banks in the support services, valuation services and ratings bureau component.

When making an overall evaluation of the issues regarding the responsibilities of the audit committees, Bank D is the best bank and has the highest adequacy taking into consideration the responsibilities of the audit committees which are the internal control, internal audit, risk management, ethics and codes of conduct, accounting and financial reporting, independent audit, support services, valuation services and ratings bureau. Bank E is the second, Bank B is the third, Bank C is the fourth, Bank F is the fifth and Bank A is the sixth bank as a result of the overall assessment in having adequacy.

5.3. Consolidated evaluation

After making separate evaluations for the issues regarding the audit committees and the issues regarding the

responsibilities of the audit committees, it is a need to make a consolidated evaluation in order to compare the banks with each other as a whole in having adequacy. The consolidated results are included in [Table 9](#).

As can be seen in [Table 9](#), considering all the components regarding the audit committees, which are the structure, effectiveness and efficiency, and performance; and the responsibilities of the audit committees, which are the internal control, internal audit, risk management, ethics and codes of conduct, accounting and financial reporting, independent audit, support services, valuation services and ratings bureau, Bank E is identified as the best bank. Bank D is the second, Bank B is the third, Bank C is the fourth, Bank F is the fifth and Bank A is the sixth bank according to the consolidated results in having adequacy.

6. Conclusions

An audit committee is one of the most important administrative structures and one of the most important committees of the board of directors. Because of the fact that an audit committee takes responsibility of supervision on behalf of the board of directors, it can be said that an audit committee is the most important administrative structure and committee after the general assembly and board of directors in banks.

Audit committees were first seen in 1940s and they have been queried since the scandals and bankruptcies. Some legislative changes have been made in time by the regulatory bodies because of the scandals and bankruptcies seen. Audit committees have been affected mainly by Sarbanes-Oxley Act in the World in recent times. In addition, the regulations made by BRSA and CMB have affected the audit committees in Turkey.

Audit committees are responsible for the supervision of the internal control, internal audit, risk management, ethics and codes of conduct, accounting and financial reporting, independent audit, support services, valuation services and ratings bureau according to Banking Law and regulations made by BRSA in Turkey. In addition to these, the legislation includes the structure, characteristics and activities of audit committees.

Audit committees are important in terms of performing activities efficiently and effectively, protecting assets, in accordance with the legislation and preparing reliable financial reporting of banks. The adequacy of the audit committees consists of two main subparts which are the issues regarding the audit committees and the issues regarding the responsibilities of the audit committees. In the application part, the deposit banks were selected as the intended population because of the fact that deposit banking has nearly 90% industry share in Turkish banking sector. The research was performed in 6 deposit banks due to the fact that the other deposit banks did not give permission.

Firstly, the issues regarding the audit committees were analyzed. In this context, the structure, effectiveness and efficiency, and performance of the audit committees were examined. As a structural component of the audit committees, a committee charter was absent; the nomination committees were not constituted for the selection of the members of the audit committees; the succession and rotation planning were not composed; the full time members of the audit committees were not present; the members of the audit committees did not take trainings regularly in some banks. In relation to the effectiveness and efficiency component of the audit committees, the audit committees did not determine the responsibilities of the internal control and internal audit clearly; did not coordinate the audit activities between the internal control, internal audit and independent audit; did not invite the top managers of the operational units concerning the subjects that were discussed in the committee meetings in some banks. In relation to the performance component of the audit committees, the audit committees' performance was not measured; the performance measurement criteria were not determined in some banks.

Secondly, the issues regarding the responsibilities of the audit committees were analyzed. In this context, the audit committees' internal control, internal audit, risk management, ethics and codes of conduct, accounting and financial reporting, independent audit, support services, valuation services and ratings bureau responsibilities were examined. In relation to the internal system responsibility of the audit committees, the audit committees did not meet the internal systems employees; the audit committees did not supervise the internal systems employees' professional development; the audit committees did not carry out a risk assessment before and after a new product and services; the audit committees did not receive adequate reporting from the internal systems if the full time audit committees' member is not present; control activities were not reported to the audit committees as performed by the internal control staff and bank staff; there was not a direct communication channel between the audit committees and internal systems employees; there was not a communication channel for the bank personnel to inform the internal control and internal audit departments about problems, control issues and suspicious cases in some banks. In relation to the responsibility of the audit committees for the ethics and codes of conduct, the audit committees did not state processioning for the required immediate reporting and did not audit the reporting line in some banks. In relation with the accounting and financial reporting responsibility of the audit committees, the audit committees did not evaluate the effects of changing the Chief Financial Officer and the succession plan; internal controls structure of internal and external financial reporting; did not review reports coming from the regulatory bodies, compliance policy and program in some banks. In relation to the independent audit responsibility of the audit committees, the

audit committees did not regularly meet with the independent auditors; did not realize the necessary preliminary evaluation process in contract preparation in some banks. In relation to the support services, valuation services and ratings bureau responsibility of audit committees, the audit committees did not do risk assessment carefully before and after service procurement; did not offer proposals to the board of directors whether the services are obtained or not; did not follow up support services, valuation services and ratings bureau throughout the service periods in some banks. It was determined that the audit committees transferred their authority on the independent audit, support services, valuation services and ratings bureau process to the internal system departments generally. Delegating authority fully or generally could not be accepted in terms of good practices.

In this study, the deficiencies related to the audit committees were identified by conducting research in 6 deposit banks. It will be beneficial to take action for the improvement of audit committee practice considering the deficiencies and recommendations stated in the study by BRSA, CMB, and the main shareholders of banks, board of directors and audit committees of banks. It was also recommended that legislative changes should be made in order to strengthen audit committees' position in banks and BRSA should publish a guide containing good practices and good examples for the audit committees of banks including the results of this study.

In future studies, audit committees can be evaluated in view of shareholders, board of directors and 3rd party corporations. In addition to these, the effects of a powerful Chief Executive Officer in audit committees, effects and benefits of the presence of full time members of the audit committees, audit committee practices of small banks, participation banks, investment and development banks are recommended as new study subjects.

Contribution

This study was prepared as a doctoral dissertation by Mustafa Tevfik Kartal. Cemal İbiş and Özgür Çatıkkaş made critical contributions providing consulting in the preparation process of the doctoral dissertation. They provided a significant contribution in the designing of field work, shaping the survey questions and interpretation of the data. They also provided important support in writing the manuscript.

Disclosure statement

The authors certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest

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Appendices.

Appendix A. Some Scandals and Bankruptcy between 2001 and 2008.

Company	Country	Industry	Year
Enron	USA	Energy	2001
Arthur Andersen	USA	Independent Audit	2001
Pasific Gas	USA	Energy	2001
Worldcom	USA	Telecommunication	2002
Kmart	USA	Retail	2002
Tyco	USA	Electronic	2002
Global Crossing	USA	Telecommunication	2002
Adelphia Com.	USA	Electronic	2002
NTL Inc.	USA	Telecommunication	2002
Freddie Mac	USA	Mortgage Financing	2002
AOL	USA	Internet	2002
İmar Bank	Turkey	Banka	2003
AIG	USA	Insurance	2008
Bernard L. Madoff Investment Securities	USA	Securities	2008
AIG	USA	Insurance	2008

Appendix B. Questions and results of issues regarding audit committees

Audit Committees Structure

No	Questions	Banks					
		A	B	C	D	E	F
1	AC has a charter. The charter defines the committee's tasks, authorities and responsibilities. It also defines the characteristics that the members should have.	10	10	10	10	10	0
2	AC members are selected by the board of directors (BoD) upon the proposal of the nomination committee.	0	0	10	0	10	0
3	AC has a succession planning and rotation plan.	0	0	0	0	0	0
4	AC members have financial rights that are in line with their responsibilities.	10	10	10	10	10	0
5	AC members have enough experience and knowledge in the banking sector, their responsibilities, bank's activities, culture and organizational structure.	10	10	10	10	10	10
6	AC members have enough time and are generally in the bank in order to fulfill their responsibilities.	0	5	5	5	0	10
7	AC members have experience in the areas related with their responsibilities such as finance, auditing, internal system and professional certifications.	5	5	5	5	5	5
8	AC members have professional skepticism and are subject to the code of conducts.	10	10	10	10	10	10
9	AC members are independent and objective in fulfilling their tasks.	10	10	10	10	10	10
10	AC consists of at least 2 non-executive directors. The number of members of AC is determined in the view of the bank's needs (The average number of AC members is 4–5 in the world).	10	10	5	5	10	5
11	The duty period of AC members is defined reasonably in order to be independent. The duty period is defined according to the bank's needs (There are some practices like 3 + 1 years, 3 + 3 years).	0	0	0	0	0	0
12	AC members have regular trainings (seminars, conferences etc.) at the beginning of their duty and throughout their duty period.	5	5	5	5	5	5

Audit Committees Efficiency and Effectiveness

No	Questions	Banks					
		A	B	C	D	E	F
13	BoD and senior management get the audit committee's opinion before making significant decisions.	10	10	10	10	10	10
14	AC charter is an annual review and updated if necessary.	10	10	10	10	10	0
15	AC approves the charters and organizational structure and determines the organizational status of the internal control, internal audit and risk management.	10	10	10	10	10	10
16	AC regularly evaluates the effectiveness and adequacy of the internal control system, risk management system and internal audit activity.	10	10	10	10	10	10
17	AC does the preliminary work in appointing and dismissal, determining the compensation of the head of the internal systems by the BoD.	10	10	10	10	10	10
18	AC determines the internal systems' authorities and responsibilities clearly and this does not cause a conflict of interest.	5	5	5	5	5	5
19	AC takes the necessary measures against errors and deficiencies in the internal systems on time.	10	10	10	10	10	10
20	AC coordinates the internal control, internal audit and independent audit activities and hence prevents duplicate audit efforts.	5	5	5	5	5	5
21	AC gets the necessary information needed to do timely evaluations completely and properly.	10	10	10	10	10	10
22	AC invites the top managers of operational activities (such as Chief Information Officer related with cyber security) to audit the committee's meetings.	0	10	5	5	10	5
23	AC meets with the managers and personnel of the internal systems and independent audit in which the senior management exist or not.	5	10	10	10	10	10
24	AC obtains consulting (external service) for independent expert opinion on issues they need.	0	10	5	0	5	5
25	AC evaluates the compensation approach of the senior management whether it supports the long time performance of the bank or not.	0	5	5	5	0	0
26	AC communicates continually with the Chief Executive Officer, Chief Financial Officer, Chief Risk Officer and Chief Audit Executive in order to understand the attitude of the senior management and receives feedback from the independent and internal auditors.	10	10	10	10	10	10
27	AC shows awareness to new risks (reputation risk, struggling with bribery and corruption, effect of social media, cyber security, cloud computing, sustainability, internal capital adequacy assessment etc.). AC has enough sources for these significant risks.	10	10	10	10	10	10

Audit Committees Performance

No	Questions	Banks					
		A	B	C	D	E	F
28	Performance criteria are stated to make a performance assessment of AC.	0	0	0	0	0	0
29	AC performance is evaluated periodically taking into consideration its aim, duties, authorities and responsibilities.	0	10	10	0	0	0
30	AC transmits risky/important issues to the BoD without waiting for the meeting time and AC follows up these transmitted issues.	10	10	10	10	10	10
31	AC has an annual working schedule and meets regularly. AC allocates enough time to cover subjects.	10	10	10	10	10	10
32	AC holds non-periodical meetings if needed.	10	10	10	10	10	10
33	AC members participate in the meetings.	10	10	10	10	10	10
34	Subjects negotiated and decisions taken in meetings are registered and shared with the senior management.	10	10	10	10	10	10
35	AC informs BoD about the opinions and suggestions of the internal systems and independent audits regarding AC's responsibility areas.	10	10	10	10	10	10
36	AC evaluates the performance of the internal systems and heads of the internal systems periodically.	5	10	10	10	10	10
37	AC evaluates services realized by the internal systems and their cost compared to the budget.	5	10	10	5	10	10
38	AC evaluates the significant findings and actions taken. AC makes decisions rapidly about the subjects revived by the internal systems and independent audit.	10	10	10	10	10	10
39	AC takes and reviews the periodical reports from the internal systems and independent audit.	10	10	10	10	10	10
40	AC reports its activities and results to BoD. This report includes precautions that should be taken in the bank.	10	10	10	10	10	10
41	AC observes whether the people who have the authority to open credit in the bank participate in the credit evaluation and decision making process of the parties involved.	10	10	10	10	10	10
42	AC discloses much more information (the number of meetings, role of AC, characteristics of AC members etc.) considering the increasing interest of the investors, regulatory bodies and stakeholders.	5	5	5	5	5	5

Appendix C. Questions regarding responsibilities of audit committees

No	Internal Control Responsibilities
1	AC ensures that the internal control system is examined according to the international models (COSO, COCO, COBIT etc.).
2	AC ensures the independence of the internal control department. Internal control department is not exposed to the scope limitations by the management except for AC and BoD.
3	AC provides the necessary resources for the internal control department to fulfill its responsibilities.
4	AC evaluates the internal control staffs' professional education, adequacy level, independence and objectivity in order to fulfill their responsibilities compliant with professional standards.
5	AC provides a communication channel for the internal control staff to have communication directly with AC.
6	AC meets with the internal control staff at least 4 times a year.
7	AC provides a communication channel for the banks personnel to inform the internal control department about the problems they have encountered.
8	Internal control activities are reported to AC as performed by the internal control staff and bank staff.
No	Internal Audit Responsibilities
9	AC ensures the independence of the internal audit department. The internal audit department is not exposed to scope limitations by the management except for AC and BoD.
10	AC provides the necessary resources for the internal audit department to fulfill its responsibilities.
11	AC supervises the scope and adequacy of the risk assessment made by the internal audit. AC ensures that riskier areas are audited more frequently than the other areas.
12	AC demands special audits from the internal audit department besides periodical and risk based audits.
13	AC evaluates the internal audit staffs' professional education, adequacy level, independence and objectivity in order to fulfill their responsibilities compliant with professional standards.
14	AC provides a communication channel for the internal audit staff to have communication directly with AC.
15	AC meets with the internal audit staff at least 4 times a year.
16	AC provides a communication channel for the bank personnel to inform the internal audit department about control issues and suspicious cases or applications.
No	Risk Management Responsibilities
17	AC ensures the independence of the risk management department. The risk management department is not exposed to scope limitations by the management except for AC and BoD.
18	AC provides the necessary resources for the risk management department to fulfill its responsibilities.
19	AC evaluates the risk management staffs' professional education, adequacy level, independence and objectivity in order to fulfill their responsibilities.
20	AC provides a communication channel for the risk management staff to have communication directly with AC.
21	AC observes that the results of the stress test and risk measurement system are included in the necessary decision-making processes and takes measures against interpretation errors.
22	AC determines the application criteria for the recommendation, determination, monitoring and supervision of risk limits and transaction limits in the required areas.

- 23 AC ensures the establishment of a comprehensive reporting process consisting of periodic and non-periodic reports to be used in risk management, defining strategies and taking decisions.
- 24 AC ensures a careful risk assessment before and after service procurement.

No Ethics and Code of Conduct Responsibilities

- 25 AC examines the ethics and codes of conduct, policies, procedures, systems and processes periodically.
- 26 AC has set limits for emergency reporting (for a specific amount or position).
- 27 AC has created notification lines to notify non-compliant or ethically inappropriate transactions.
- 28 AC evaluates the effectiveness of the reporting line by receiving reports at least once a year or by having periodic meetings.
- 29 AC follows all the events related to the violations of ethics and code of conduct and abuses, and investigations and disciplinary actions to be carried out as a result of these events.
- 30 AC sets out the procedures to be followed in the examination and investigation activities and in receiving support from independent experts, reporting and archiving.
- 31 AC ensures that, following review and investigation activities, the management draws lessons from past events and undertakes remedial work in incomplete and problematic matters.

No Accounting and Financial Reporting Responsibilities

- 32 AC regularly reviews the soundness of accounting and financial reporting systems and the integrity of the information produced.
- 33 AC reviews the processes of the internal and external financial reporting and internal control structure (controls and procedures of disclosures, internal controls over the financial reporting etc.).
- 34 AC monitors the accuracy of the financial statements and the disclosures made to the public and ensures that all information to be reflected is covered and prepared in accordance with the legislation.
- 35 AC oversees the legal and regulatory issues which are likely to have a significant impact on the financial statements, the reports from the regulators, the bank's compliance policy and programs.
- 36 AC evaluates the CEO succession planning and the possible effects of the change in case of the appointment or dismissal of the CEO.

No Independent Audit Firm Responsibilities

- 37 AC does preliminary work in the selection of independent auditors, preparing of the independent audit contract and starting independent audit process.
- 38 AC determines the scope of the services to be received from the independent auditor and reviews the reports, fees and actual costs of the services provided by the independent auditor.
- 39 AC meets with the independent auditors about whether the financial reports accurately show the bank's financial state and whether accounting applications are compliant with the legislation or not.
- 40 AC meets with the independent auditors at least 4 times a year and has a special session if required.
- 41 AC inquiries about whether the independent auditor applies a top-down, risk-based approach to assessing internal controls on financial reporting and if not, why.

No Support Services Responsibilities

- 42 AC makes preliminary evaluations in the selection of support services by BoD.
- 43 AC reviews the activities of support services periodically selected by BOD and evaluates its adequacy periodically.
- 44 AC makes risk assessments of the support services that the bank can take.

No Valuation Services Responsibilities

- 45 AC makes preliminary evaluations in the selection of valuation services by BoD.
- 46 AC reviews periodically the activities of the valuation services selected by BOD and evaluates its adequacy periodically.
- 47 AC regularly assesses the independence and adequacy of the management, supervisors and staff of valuation services in relation to the bank.

No Ratings Bureau Responsibilities

- 48 AC makes preliminary evaluations in the selection of the ratings bureau by BoD.
- 49 AC periodically reviews the activities of the ratings bureau selected by BoD and evaluates its adequacy.
- 50 AC regularly assesses the independence and adequacy of the management, supervisors and staff of the rating bureau in relation to the bank.
-

Appendix D. Critical values (P-Values and T-Values)

No	Components	Banks											
		A		B		C		D		E		F	
		t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value
1	Internal Control	-4,160	0,000	4,310	1,000	-1,810	0,039	1,760	0,952	0,330	0,626	-1,760	0,043
2		-3,420	0,001	1,850	0,963	-3,510	0,001	2,970	0,996	1,450	0,919	-0,700	0,243
3		-2,850	0,003	0,400	0,655	-1,270	0,106	3,500	0,999	1,280	0,893	-0,960	0,171
4		-3,810	0,000	1,000	0,838	-1,900	0,032	0,900	0,809	0,000	0,500	-1950	0,029
5		-7,820	0,000	-2,010	0,027	-3,120	0,002	0,320	0,625	-2,750	0,006	-7450	0,000
6		-8,900	0,000	-3,110	0,002	-6,210	0,000	-3,550	0,002	-2,030	0,028	-8,440	0,000
7		-3,300	0,001	-0,550	0,293	-0,180	0,430	2,060	0,972	-0,460	0,324	-1,850	0,036
8		-4,780	0,000	-1,000	0,163	-1,310	0,099	-2,380	0,016	-1,430	0,086	-6,300	0,000

(continued on next page)

(continued)

No	Components	Banks												
		A		B		C		D		E		F		
		t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value	t-value	p-value	
9	Internal Audit	-1,780	0,042	2,330	0,987	-0,840	0,202	6,200	1,000	1,000	0,836	1,740	0,955	
10		-0,620	0,269	1,880	0,965	-3,180	0,001	6,200	1,000	1,450	0,919	-2,010	0,025	
11		-0,530	0,298	2,800	0,996	2,860	0,997	2,130	0,973	1,700	0,948	1,740	0,955	
12		-0,620	0,269	1,800	0,958	2,440	0,990	3,870	0,999	2,500	0,989	1,300	0,900	
13		-2,680	0,005	2,280	0,985	-2,380	0,011	3,210	0,996	0,000	0,500	0,220	0,585	
14		-5,640	0,000	-2,450	0,010	-2,420	0,010	0,430	0,663	-2,220	0,019	-7,520	0,000	
15		-5,560	0,000	-2,510	0,009	-5,420	0,000	2,730	0,993	-1,680	0,054	-7,460	0,000	
16		-0,900	0,188	0,530	0,699	-1,300	0,101	1,380	0,906	0,000	0,500	-1,880	0,034	
17	Risk Management	-4,200	0,000	-0,490	0,313	-1,800	0,042	1,770	0,948	0,290	0,614	-1,090	0,141	
18		-3,570	0,000	-0,530	0,301	0,630	0,732	1,410	0,903	-0,700	0,248	-1,160	0,127	
19		-3,770	0,000	-0,330	0,373	-0,770	0,224	1,410	0,903	-0,820	0,211	-1,640	0,055	
20		-6,150	0,000	-2,300	0,015	-1,000	0,163	0,550	0,703	-1,760	0,052	-6,980	0,000	
21		-4,140	0,000	-0,830	0,208	-1,990	0,029	-0,550	0,299	-1,390	0,095	-2,550	0,008	
22		-3,400	0,001	-1,550	0,067	-0,470	0,322	0,430	0,661	0,000	0,500	-1,860	0,036	
23		-3,160	0,002	-1,730	0,048	-0,300	0,384	1,430	0,901	0,000	0,500	-0,720	0,237	
24		-5,250	0,000	-2,130	0,022	-2,450	0,010	0,430	0,662	-0,810	0,217	-3,180	0,002	
25	Ethics and Code of Conduct	-0,500	0,311	-1,440	0,080	-0,850	0,201	3,060	0,996	1,720	0,948	-1,640	0,055	
26		-5,720	0,000	-1,900	0,035	-2,110	0,022	1,430	0,901	1,000	0,833	-4,390	0,000	
27		1,150	0,872	0,000	0,500	2,090	0,978	3,210	0,996	1,290	0,892	-1,840	0,037	
28		-4,840	0,000	-1,660	0,055	-0,570	0,287	2,500	0,977	-1,170	0,132	-2,150	0,019	
29		0,000	0,500	0,570	0,714	0,570	0,714	2,520	0,987	2,190	0,979	1,430	0,920	
30		-1,670	0,052	0,300	0,616	-0,470	0,322	2,940	0,994	1,370	0,906	0,000	0,500	
31		-3,190	0,001	-0,460	0,323	0,250	0,600	2,130	0,973	1,290	0,893	-1,100	0,139	
32		Accounting and Financial Reporting	-1,940	0,030	-0,900	0,188	-1,530	0,068	3,120	0,996	0,000	0,500	-2,080	0,022
33	-2,410		0,011	0,300	0,615	-0,680	0,251	3,500	0,998	-0,270	0,395	-1,750	0,044	
34	-1,960		0,029	-0,270	0,394	-1,000	0,163	3,210	0,996	0,000	0,500	-1,430	0,080	
35	-1,750		0,045	1,000	0,837	-0,650	0,261	3,060	0,996	-0,520	0,304	0,830	0,794	
36	-4,250		0,000	-5,330	0,000	-3,560	0,001	-1,630	0,089	-1,300	0,111	-6,150	0,000	
37	Independent Audit		-1,750	0,044	1,000	0,836	-0,700	0,246	2,090	0,972	0,000	0,500	-0,470	0,322
38			-2,510	0,008	0,700	0,753	-1,280	0,107	1,810	0,948	-0,250	0,403	-2,140	0,020
39			-2,050	0,024	0,700	0,754	0,000	0,500	2,110	0,973	-0,270	0,396	0,000	0,500
40		-3,240	0,001	-1,290	0,107	-2,060	0,028	0,000	0,500	-0,250	0,403	-4,450	0,000	
41		-5,010	0,000	-1,140	0,133	-1,370	0,093	0,690	0,748	-0,490	0,317	-3,220	0,001	
42		Support Services	-4,200	0,000	0,620	0,730	-1,230	0,117	2,820	0,993	-0,520	0,306	-0,720	0,237
43			-4,140	0,000	1,000	0,836	-1,070	0,147	1,570	0,932	0,000	0,500	-0,230	0,411
44		-2,540	0,008	1,450	0,919	-1,000	0,163	3,680	0,999	-0,520	0,306	-1,750	0,044	
45	Valuation Services	-5,550	0,000	-0,370	0,357	-1,560	0,068	1,480	0,917	0,000	0,500	-1,560	0,064	
46		-5,390	0,000	-0,370	0,358	-1,420	0,086	0,800	0,781	-0,250	0,403	-2,970	0,003	
47		-6,440	0,000	0,000	0,500	-1,420	0,086	0,800	0,781	0,000	0,500	-3,550	0,001	
48	Ratings Bureau	-5,930	0,000	-0,370	0,358	-1,290	0,107	1,150	0,863	0,760	0,770	-1,980	0,028	
49		-5,840	0,000	-0,330	0,374	-1,420	0,085	0,800	0,781	0,000	0,500	-2,280	0,015	
50		-4,120	0,000	-0,330	0,374	-1,450	0,081	0,800	0,780	0,270	0,603	-3,000	0,003	

Appendix E. Results of issues regarding responsibilities of Audit committees (T-Test Results)

No	Components	Banks					
		A	B	C	D	E	F
1	Internal Control	Rejected	Accepted	Rejected	Accepted	Accepted	Rejected
2		Rejected	Accepted	Rejected	Accepted	Accepted	Accepted
3		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
4		Rejected	Accepted	Rejected	Accepted	Accepted	Rejected
5		Rejected	Rejected	Rejected	Accepted	Rejected	Rejected
6		Rejected	Rejected	Rejected	Rejected	Rejected	Rejected
7		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
8		Rejected	Accepted	Accepted	Rejected	Accepted	Rejected

(continued on next page)

(continued)

No	Components	Banks					
		A	B	C	D	E	F
9	Internal Audit	Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
10		Accepted	Accepted	Rejected	Accepted	Accepted	Rejected
11		Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
12		Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
13		Rejected	Accepted	Rejected	Accepted	Accepted	Accepted
14		Rejected	Rejected	Rejected	Accepted	Rejected	Rejected
15		Rejected	Rejected	Rejected	Accepted	Accepted	Rejected
16	Risk Management	Accepted	Accepted	Accepted	Accepted	Accepted	Rejected
17		Rejected	Accepted	Rejected	Accepted	Accepted	Accepted
18		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
19		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
20		Rejected	Rejected	Accepted	Accepted	Accepted	Rejected
21		Rejected	Accepted	Rejected	Accepted	Accepted	Rejected
22		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
23	Ethics and Code of Conduct	Rejected	Rejected	Accepted	Accepted	Accepted	Accepted
24		Rejected	Rejected	Rejected	Accepted	Accepted	Rejected
25		Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
26		Rejected	Rejected	Rejected	Accepted	Accepted	Rejected
27		Accepted	Accepted	Accepted	Accepted	Accepted	Rejected
28		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
29		Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
30	Accounting and Financial Reporting	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
31		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
32		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
33		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
34		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
35		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
36		Rejected	Rejected	Rejected	Accepted	Accepted	Rejected
37	Independent Audit	Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
38		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
39		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
40		Rejected	Accepted	Rejected	Accepted	Accepted	Rejected
41	Support Services	Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
42		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
43		Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
44		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
45	Valuation Services	Rejected	Accepted	Accepted	Accepted	Accepted	Accepted
46		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
47		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
48	Ratings Bureau	Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
49		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected
50		Rejected	Accepted	Accepted	Accepted	Accepted	Rejected

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