

Audit Committee Characteristics, Board Structure, and Bank Risk: Evidence from Indonesia

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ABSTRACT

This study seeks to assess how the characteristics of the audit committee, board of commissioners, and size of a bank influence its risk. This study employed linear regression analysis to evaluate the impact of independent variables, which include accounting or financial expertise, the presence of women on the audit committee, the size of the audit committee, the independence of the board of commissioners, the size of the board of commissioners, and the size of the bank, on the dependent variable, bank risk. The findings indicate that accounting or financial expertise, female audit committee members, the size of the board of commissioners, and bank size significantly reduce bank risk. The independence of the board of commissioners has a negative but insignificant impact on bank risk, while the size of the audit committee has a positive but insignificant effect on bank risk.

Keywords: audit committee characteristic, board of commissioners characteristic, bank size, bank risk

INTRODUCTION

All bank activities are constantly faced with risks. The increasingly rapid changes in the business environment can make banking risk more complex. Therefore, banks must control risks in conducting their business activities to adapt to a dynamic environment. Based on existing phenomena, the risks faced by banking companies listed on the Indonesia Stock Exchange (IDX) are measured by the standard deviation of daily stock returns. The banking company with the highest risk had a rate of 5.15%, whereas the lowest risk was 0.86%. Risk supervision is an important aspect to be considered in facing the complexity of risks in existing banking companies. The board of commissioners plays a significant role in supervising the company, both in general and/or specifically according to the articles of association, as well as providing advice to the board of directors. The board of commissioners can form committees authorized by decision letters from the board of commissioners to support the company's supervisory duties and responsibilities. One of the board of commissioners' committees is the audit committee. Generally, the audit committee is tasked with examining financial information that will be released by public companies and reviewing risk management activities carried out by the board of directors. The success of the audit committee in carrying out its responsibilities related to risk oversight in banking companies is influenced by various characteristics of the audit committee's members. The characteristics of the audit committee can be reviewed from various aspects, such as educational background, gender, and size. Diversity in audit committee characteristics is considered a competitive advantage that can produce better corporate strategies (Carter et al. 2003). The audit committee requires special expertise in finance or accounting to face the various challenges in performing its duties and responsibilities. The 2015 Financial Services Authority regulation stipulates that companies listed on the Indonesia Stock Exchange (IDX) are required to form an audit committee, at least one of whose members must possess accounting or financial expertise. Accounting or financial expertise refers to knowledge and experience in finance or accounting.

The presence of accounting or financial expertise in the audit committees of banking companies in Indonesia is high. During the period 2011-2015, 19.46% of banking company audit committees had all their members with accounting or financial expertise, while 80.53% did not have all members of the audit committee with accounting or financial expertise. In Indonesia, there has been an increase in the proportion of women on audit committees, as measured by the ratio of female members to the total number of audit committee members in banking companies during the period 2011-2015. The average percentage of women in the audit committees of banking companies listed on the Indonesia Stock Exchange (IDX) in 2011 was 9.77%, which increased to 14.77% in 2015. Audit committees must have sufficient resources to carry out their duties and functions. The number of audit committee members required by each banking company varies according to the company's conditions and complexity. The Financial Services Authority has issued circular letter number 16/SEOJK.05/, which stipulates the minimum number of audit committee members that each company is required to have, namely at least 3 (three) members consisting of independent commissioners and parties from outside the issuer or public company. During the period 2011-2015, the average number of audit committee members in banking companies listed on the Indonesia Stock Exchange (IDX) was four. Several researchers have demonstrated the influence of audit committee characteristics on corporate risk. Sun and Liu (2013) found that accounting or financial expertise, female audit committee membership, and audit committee size did not significantly influence bank risk. Gulamhussen and Santa (2015) found a negative influence of female audit committee membership on risk. Garcia et al. (2016) showed different results; accounting or financial expertise in audit committees negatively influenced risk. Based on the background described above, the research problem posed in this study is whether audit committee characteristics (as proxied by accounting or financial expertise, female audit committee membership, and audit committee size), board of commissioners characteristics (as proxied by board of commissioners independence and board of commissioners size), and company size affect the risk of banking companies listed on the Indonesia Stock Exchange.

LITERATURE REVIEW

The characteristics of the audit committee, board of commissioners, and bank size significantly influence banks' risk-taking behavior and overall risk profile. The audit committee's effectiveness, independence, size, and expertise play a key role in constraining bank risk. In conventional banks, an independent audit committee with financial expertise and regular meetings tends to reduce risk-taking, reflecting higher governance effectiveness. This constraint on risk-taking arises because the audit committee enhances supervision and financial oversight, reducing opportunistic behavior by the management (Nguyen, 2021). Moreover, audit committee effectiveness can improve bank efficiency, thereby reducing risk indirectly. Studies in ASEAN countries have found that more effective audit committees are associated with lower bank risk-taking through enhanced operational efficiency (Nguyen, 2022). However, too-frequent audit committee meetings may lead to inefficiencies; therefore, a balanced approach to meeting frequency is important (Karim et al., 2024).

The composition and performance of the board of commissioners influence the bank's financial stability and risk. In Indonesian Islamic banks, the board of commissioners positively impacts banks' ROA but shows a limited effect on risk indicators such as non-performing financing, indicating a more modest role in risk control than other governance bodies (Darwanto & Chariri, 2019). In broader research, increased board independence and female representation on boards have been associated with lower credit risk, suggesting that diverse and independent boards strengthen monitoring and decision-making, which reduces risk exposure (Lu & Boateng, 2017).

Bank size influences risk in a nuanced manner. While larger banks generally have greater resources for risk management and may diversify risk better, their complexity can introduce challenges in governance. Empirical evidence from Islamic banks in OIC countries showed that bank size does not significantly affect risk levels, indicating that other governance factors may have a stronger influence on risk-taking

behaviors (Aslam & Haron, 2021). Conversely, some studies have associated larger board sizes with increased credit risk, possibly due to coordination difficulties or diluted responsibility (Lu & Boateng, 2017). In summary, strong and independent audit committees with adequate expertise and appropriate meeting frequencies are crucial for monitoring and limiting bank risk. The board of commissioners contributes positively to financial performance and, when composed of independent and diverse members, reduces credit risk. The effect of bank size on risk is complex, showing mixed evidence; size alone may not reduce risk unless accompanied by effective governance frameworks. These governance structures collectively enhance oversight, transparency, and accountability, thereby reducing banks' risk-taking (Aslam & Haron, 2021; Darwanto & Chariri, 2019; Lu & Boateng, 2017; Nguyen, 2021, 2022).

HYPOTHESIS DEVELOPMENT

Definition of Risk and Its Measurement

In conducting business activities, every bank's operations are inevitably exposed to risks. Risks arise due to the uncertainties faced by a company, such as uncertain economic conditions, political situations, and investment climates. If a company can manage risks well, it can reduce them. According to Hanafi (2012:1), risk is the possibility that the actual results will differ from what is expected, while Sudana (2011:34) defines risk as the variability of actual investment returns compared with expected returns. Risk assessment is measured using the standard deviation of stock returns, which is calculated using the following formula:

$$SD = \sqrt{\frac{\sum ([R_{it} - E(R_{it})]^2)}{n - 1}} \dots \dots \dots (1)$$

Keterangan

- SD : Standard deviation of the return of bank i in period t
- R_{it} : *Actual return* saham bank i pada periode t
- E(R_{it}) : Average daily stock return of bank i in period t
- n : Number of active trading days on the stock exchange in a year.

The greater the value of the standard deviation, the higher the risk of a company; conversely, the lower the value of the standard deviation, the lower the company's risk (Hanafi, 2012:264).

Definition and purpose of the audit committee

The audit committee is a committee established by and responsible to the board of commissioners to assist in carrying out the duties and functions of the board of commissioners. (Bapepam Number: Kep-29/PM/2004). According to the Circular Letter of the Financial Services Authority number 16/SEOJK.05/2015, the audit committee is a committee formed and responsible to the board of commissioners to assist the board of commissioners in monitoring and ensuring the effectiveness of the internal control system and the performance of internal and independent/external auditors.

According to the National Committee on Good Corporate Governance (2002), the objectives of the audit committee are as follows: to oversee the financial reporting process; to supervise the financial reporting process by emphasizing that the company complies with and implements applicable financial standards and policies; to provide oversight of risk management; to identify all related risks and oversee the implementation of the company's risk management; to supervise the implementation of corporate governance; and to oversee the practice of corporate governance within the company and ensure that the company complies with applicable laws and regulations.

Characteristics of the audit committee and their impact on risk

In carrying out its responsibilities, the characteristics of the audit committee influence the oversight of company policies, which impacts the company's risk. The audit committee characteristics referred to in this study are accounting or financial expertise, the presence of women on the audit committee, and the committee size.

Accounting or financial expertise

Accounting or financial expertise refers to individuals who have served as executive directors in the accounting or finance departments of other companies, have been members of audit committees in other companies, and have undergone training in accounting and finance (Garcia et al., 2016). According to Bank Indonesia (2013), audit committee members are considered to have expertise in finance or accounting if they possess knowledge in the field of finance and/or accounting and have at least five (5) years of work experience in finance and/or accounting. In this study, accounting or financial expertise is measured using the following equation:

$$ACEXP = \frac{\text{Number of Accounting or Financial Expertise}}{\text{Number of Audit Committee}} \dots \dots \dots (2)$$

This ratio shows the proportion of accounting or financial expertise in a company's audit committee. A higher number of accounting or financial experts on the audit committee indicates that more committee members have a good understanding of the complexities of the company's operations and the associated risks faced by banking companies in conducting their business. As a result, the audit committee is better able to assist the board of commissioners in identifying the risks faced by the company and allows the audit committee to provide better and more efficient oversight (Guner et al. 2008; Alzoubi and Selamat 2012). This can help prevent opportunistic behavior by the board of directors and reduce the risk to the company.

H1: *Accounting or financial expertise has a negative effect on risk.*

Women audit committee

The neuroscience theory of sex differences explains the influence of the amygdala on emotional differences between women and men. The amygdala is a structure in the human brain that can affect negative emotions, such as fear and depression. Women have a larger amygdala volume than men, resulting in higher levels of fear and depression among women than among men. The presence of women on audit committees can benefit companies, such as monitoring risks more closely than men and improving risk management quality in banks (Watson, Kumar, & Michaelsen, 1993). In this study, the proportion of women on audit committees was measured using the following equation:

$$FAUDIT = \frac{\text{Number of Female Audit Committee}}{\text{Number of Audit Committee}} \dots \dots \dots (3)$$

The FAUDIT ratio is the proportion of women on a company's audit committee. A higher FAUDIT ratio indicates a greater number of female members on the audit committee. Differences in characteristics between women and men can influence decision-making. Women tend to be more cautious, risk-averse, and meticulous in their decision-making; therefore, having more women on the audit committee can enhance the committee's risk oversight and reduce opportunistic behavior by the board of directors (Adams and Ferreira, 2009), thereby lowering the company's overall risk.

H2: *Female audit committees have a negative impact on risk.*

Audit committee size

The size of the audit committee refers to the total number of members. The number of audit committee members is closely related to the amount of resources allocated to address a company’s issues. The audit committee must have adequate resources and authority to carry out its increased responsibilities (DeFond and Francis, 2005). In this study, the size of the audit committee is measured using the following equation:

$$ACSIZE = \text{Number of Audit Committee Members} \dots\dots\dots(4)$$

A larger ACSIZE indicates a greater number of audit committee members in a company. An increasing number of audit committee members in a company can make communication and coordination among members more difficult, thereby slowing down the decision-making process of the audit committee (Baxter 2009) and making it less dynamic. As a result, the supervisory role of the audit committee becomes less effective, and the risk for banking companies increases.

H3: The size of the audit committee has a positive effect on risk.

Characteristics of the board of commissioners and their impact on risk

The board of commissioners is a corporate body responsible for carrying out general and/or specific supervision in accordance with the articles of association and providing advice to the board of directors. The characteristics of the board of commissioners can influence the implementation of supervisory duties and responsibilities, which, in turn, can impact the company's risk. This study uses two characteristics of the board of commissioners: board of commissioners independence and board of commissioners size.

Board of commissioners independence

According to Financial Services Authority Regulation Number 33/POJK.04/2014, an independent commissioner is a commissioner who does not own shares either directly or indirectly, has no affiliated relationships, and has no business relationships either directly or indirectly related to the issuer or the public company. In this study, independent commissioners were measured using the following equation:

$$BDIND = \frac{\text{Number of Board of Commissioners Independence}}{\text{Number of Board of Commissioners}} \dots\dots\dots(5)$$

A higher BDIND ratio indicates a greater number of board commissioners not affiliated with the company. An increasing number of independent commissioners can resolve agency problems and enhance the board of directors’ oversight of company management, as decisions made by independent commissioners tend to be objective and not influenced by any particular interest (Hermalin and Weisback, 2003). Moreover, a greater number of independent commissioners can supervise the board of directors more effectively to protect their own reputation in the labor market (Fama, 1980), thereby reducing the risk faced by banking companies.

H4: The independence of the board of commissioners has a negative effect on risk.

Board of commissioners size

The size of the board of commissioners refers to the number of board members in a company (Guo & Kumara, 2012). Board size is considered effective if it aligns with the type of company, company size, corporate culture, and the needs of the board itself in managing the company (Council on Foundation Board Briefing, 2006). In this study, the size of the board of commissioners is measured based on the total number of commissioners in a company, as follows:

$$BDSIZE = \text{Number board of commissioners} \dots\dots\dots(6)$$

The larger the BDSIZE, the greater the number of members on the board of commissioners of the company. A large number of board members allows the company to obtain adequate resources with diverse perspectives, expertise, experience, and skills, thereby improving the quality of the board of commissioners' decision-making, as it draws from various viewpoints. This can lead to a reduced company risk (Kogan and Wallach, 1964).

H5: The size of the board of commissioners has a negative effect on risk.

Company size and its influence on risk

In addition to the characteristics of the audit committee and the board of commissioners, the risks faced by banking companies are also influenced by company size. Company size indicates how large or small a company is and its ability to bear the risks that may arise from its activities. Company size can be measured using total assets, company sales, or market capitalization. In this study, company size is measured using the following equation:

$$SIZE = \text{Logarithm Natural Total Assets} \dots\dots\dots(7)$$

The larger this ratio, the greater the total assets owned by the company and the larger its size. A larger company size indicates that the management's ability to manage the company and diversify risk is increasingly improved. Larger companies tend to have more stable stock prices and lower stock return variability than smaller companies. This leads to a lower company risk (Nicolo, 2000).

H6: Company size has a negative effect on risk.

Model Analysis

The analysis model to determine the influence of audit committee characteristics, board of commissioners characteristics, and company size on risk in banking companies listed on the Indonesia Stock Exchange is formulated as follows:

$$RISK_{it} = \alpha_0 + \alpha_1 ACEXP_{it} + \alpha_2 FAUDIT_{it} + \alpha_3 ACSIZE_{it} + \alpha_4 BDIND_{it} + \alpha_5 BDSIZE_{it} + \alpha_6 SIZE_{it} + \epsilon_i$$

Keterangan:

- $RISK_{it}$ = Total risk of bank i in period t.
- $ACEXP_{it}$ = Accounting or financial expertise pada komite audit bank i pada periode t.
- $FAUDIT_{it}$ = Female audit committee of bank i in period t.
- $ACSIZE_{it}$ = The size of the audit committee of bank i in period t.
- $BDIND_{it}$ = Board of commissioners independence bank i in periode t.
- $BDSIZE_{it}$ is the size of the board of commissioners of bank i in period t.
- $SIZE_{it}$ = Size of bank i in period t.
- ϵ_i = Residual error

RESEARCH METHOD

Sample Determination

The sample used in this study was selected using purposive sampling based on the following considerations: banking companies listed on the Indonesia Stock Exchange (IDX) during the 2011-2015 period. Banking companies that have annual financial reports for the research period, which is 2011-2015. Banking companies have data on the variables used in this study during the 2011-2015 period. Daily stock data of banking companies during the 2011-2015 period.

Operational Definition of Variables

To provide a clear description of the variables used in this study, the variables employed are defined as follows: Risk refers to the variability of actual stock investment returns in comparison to expected stock investment returns. Risk measurement uses the standard deviation of daily stock returns, calculated using the following formula:

(1) Accounting or financial expertise (ACEXP) is the proportion of audit committee members who have served as executive directors in the accounting or finance departments of other companies, have been audit committee members at other companies, and have attended training in

the fields of accounting and finance compared to the total number of audit committee members in the company. This accounting or financial expertise variable is measured using equation

(2) Female audit committee (FAUDIT): the proportion of female audit committee members to the total number of audit committee members in the company. This variable is measured with equation

(3). Audit committee size (ACSIZE) refers to the total number of audit committee members in a company. This variable is measured using equation

(4) Board of commissioners independence (BDIND) is the proportion of independent commissioners to the total number of commissioners on the company's board. The board of commissioners independence variable is measured using equation

(5) Board of commissioners size (BDSIZE) is the total number of members on the company's board. This variable is measured using equation

(6) Company size (SIZE) indicates how large or small a company is, as reflected by its total assets.

In this study, Company size is measured using Equation (7).

RESULTS AND DISCUSSION

The initial number of observations was 170; however, some data did not meet the normality assumption, prompting the researcher to remove outlier data to avoid bias in data analysis. The removal of outlier data reduced the number of observations in this study to 135 observations. Table 1 presents the statistical descriptions of the research variables used in this study, including the minimum, maximum, mean, and standard deviation for each variable observed.

Table 1
Description of Research Variable Statistics

Variabel	N	Minimum	Maximum	Mean	Std. Deviation
RISK	135	0,0086	0,0515	0,0246	0,0081
ACEXP	135	0,2	1	0,6509	0,2369
FAUDIT	135	0	0,6667	0,1267	0,1683
ACSIZE	135	3	8	4	1,1781
BDIND	135	0,5	0,75	0,5709	0,077
BDSIZE	135	2	9	5,2962	1,8571
SIZE	135	28,3431	34,4445	31,4818	1,6119

Analysis and Hypothesis Testing

The test results in Table 2 show that the variables of accounting or financial expertise (ACEXP), female audit committee (FAUDIT), board of commissioners independence (BDIND), board of commissioners size (BDSIZE), and company size (SIZE) have a negative effect on bank risk, while audit committee size (ACSIZE) has a positive effect on bank risk. The hypothesis test results indicate that accounting or financial expertise, female audit committees, board of commissioners size, and company size have a significant effect on bank risk, while audit committee size and board of commissioners independence do not have a significant effect on bank risk, at a 5% significance level.

Table 2
Results of the Analysis of the Influence of Audit Committee Characteristics, Board of Commissioners Characteristics, and Company Size on Bank Risk

Variabel	Koefisien	Std Error	T	Sig
Constant	0,079	0,018	4,468	0,000*
ACEXP	-0,006	0,003	-2,219	0,028*
FAUDIT	-0,008	0,004	-2,15	0,033*
ACSIZE	0,001	0,001	0,843	0,401
BDIND	-0,003	0,009	-0,306	0,76
BDSIZE	-0,001	0,001	-2,043	0,043*
SIZE	-0,001	0,001	-2,281	0,024*
R-Square		0,295		
Sig F		0,000		

*Significant at the 5% significance level

Source: Data output from SPSS Statistics (version 15).

Accounting or financial expertise in the audit committee has a significant negative impact on bank risk. This is because accounting or financial expertise provides strong competence and understanding of the complexities of operations and risks faced by banking companies in conducting their business. Accounting or financial expertise in the audit committee can assist the board of commissioners in identifying the risks faced by the company; therefore, the audit committee tends to conduct stricter monitoring and risk control. This can lead to a more effective supervisory role performed by the board of commissioners, thereby reducing the opportunistic behavior of the board of directors and preventing high-risk decisions that could endanger the company. Consequently, the company's overall risk decreases. The findings of this study are consistent with those of Garcia et al. (2016). The presence of women on the audit committee has a significantly negative influence on bank risk. This is because women tend to be more thorough and cautious and are more likely to make less risky decisions. Consequently, having more women on the audit committee can help the board of commissioners implement stricter risk oversight within the company, which can lead to lower bank risk. These findings are consistent with those of Gulamhussen and Santa (2015). The size of the audit committee has a positive but insignificant effect on bank risk. This is because a larger number of audit committee members can slow down the decision-making process within the committee owing to differences in each member's perspective. In addition, having more audit committee members can result in less dynamic decisions because coordination and communication among members become more difficult. The variable of audit committee size has an insignificant effect on bank risk because the oversight carried out by the audit committee is influenced not only by its size but also by the quality of the committee. These findings are consistent with those of Sun and Liu (2013). The size of the board of commissioners has a significant negative effect on bank risk. This is because a larger number of board members can enhance the supervision of company management, as the company benefits from sufficient resources and diverse expertise. In addition, a larger board of commissioners can strengthen the board's roles and functions in overseeing the company, thereby reducing opportunistic behavior among the board of directors. This can lead to a lower company risk. These findings are consistent with those of Pathan (2009) and McNulty et al. (2013). The independence of the board of commissioners has a negative but insignificant effect on bank risk. This is because an increasing number of independent commissioners can enhance the oversight of the board of directors regarding company management, and the decisions made by independent commissioners tend to be more objective and do not favor any particular party. In addition, independent commissioners are more concerned with maintaining their reputation and are therefore capable of supervising and controlling any opportunistic actions by the board of directors. In this study, the board of commissioners' independence

variable does not have a significant effect on bank risk because the presence of independent commissioners in a company is often only to fulfill regulatory requirements, and most do not possess the necessary competencies. The results of this study are consistent with those of Brick and Chidambaran (2008) and Pathan (2009). Company size has a significant negative effect on the bank's risk. This is because the larger the bank, the better the management's ability to manage and diversify, resulting in more stable income for the bank. Consequently, the risk faced by the company decreases. The results of this study are consistent with the research of Garcia, et al. (2016), Niu (2010), Pathan (2009), Rajhi et al. (2011), and Sun (2013).

CONCLUSION

The audit committee's attributes, particularly its accounting or financial expertise, play a crucial role in reducing bank risk. This expertise equips them with a deep understanding of the company's operational complexities and the associated risks. Enhanced monitoring and risk management within the company contribute to a decrease in bank risks.

The presence of female members on the audit committee significantly reduces bank risk, as women are generally thorough, careful, and averse to risk, which helps mitigate bank risk. The size of the audit committee has a positive, yet insignificant, impact on bank risk because the effectiveness of risk oversight by the audit committee depends not only on its size but also on its quality. A larger board of commissioners significantly decreases bank risk, as more members can improve the supervision of company management, thus lowering bank risk. The independence of the board of commissioners has a negative but insignificant effect on bank risk, as independent commissioners are primarily included to meet regulatory requirements, and most board members lack the necessary competence.

Company size has a significant negative effect on bank risk because as the size of a bank increases, management's ability to manage and diversify improves, thus reducing the risks faced by the company. The R² value in this study is 0.295, which indicates that the variables of audit committee characteristics, board of commissioners characteristics, and company characteristics in the regression model of this research can explain 29.5% of the variation in bank risk variables, while the remaining 70.5% is explained by other variables not examined in this study.

SUGGESTION

The board of commissioners for banking institutions should consider the attributes of the audit committee, such as financial or accounting expertise and the inclusion of women, when appointing its members, as these factors significantly impact the bank's risk profile. Investors are advised to evaluate the elements that affect company risk, including the characteristics of the audit committee, board of commissioners, and company size, prior to making investment choices. Future studies should incorporate additional variables not covered in this research, as the R-squared value in this study is still regarded as low.

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