



DOI: <https://doi.org/10.38035/dijefa.v7i3>  
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## Determinants of Audit Delay: The Moderating Role of Firm Size in Conventional Commercial Bank in Indonesia and Singapore (2021-2025)

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**Abstract:** This study investigates the effects of audit fee, audit committee, and firm age on audit delay, with firm size serving as a moderating variable in conventional commercial banks in Indonesia and Singapore during the 2021–2025 period. A quantitative approach with a causal-associative design was employed. The population consisted of conventional commercial banks listed on the Indonesia Stock Exchange (IDX) and commercial banks operating under the Monetary Authority of Singapore (MAS). The sample was selected using purposive sampling, and secondary data were collected from audited annual financial statements. Panel data regression analysis was used to test the proposed hypotheses. The findings indicate that audit fee and firm age do not have a significant effect on audit delay. In contrast, the audit committee significantly affects audit delay, suggesting that effective oversight and monitoring contribute to a more timely audit completion process. Simultaneously, audit fee, audit committee, and firm age significantly influence audit delay. The moderation analysis further reveals that firm size moderates the relationship between firm age and audit delay, indicating that larger and more established banks tend to complete audits more efficiently. However, firm size does not moderate the relationships between audit fee and audit delay or between audit committee and audit delay. Overall, the results highlight the importance of audit committee effectiveness and organizational capacity in enhancing audit timeliness within the banking industry.

**Keywords:** Audit fee, audit committee, firm age, firm size, audit delay.

## INTRODUCTION

Financial statements constitute one of the most important aspects of a company. They are used to measure and evaluate corporate performance and to support the sustainability of business operations, particularly for publicly listed companies. According to the Financial Accounting Standards (SAK) applicable in Indonesia since January 1, 2017, financial statements must be understandable, relevant, reliable, and comparable. However, financial

information loses its usefulness if the statements are not presented in a timely and accurate manner, as timeliness is a crucial element of financial reporting, especially for companies listed on the Indonesia Stock Exchange (IDX). On August 22, 2022, the Government of Indonesia issued Financial Services Authority Regulation (OJK) No. 14/POJK.04/2022 concerning the Submission of Periodic Financial Reports by Issuers or Public Companies (OJK, 2022). This regulation establishes new standards that public companies must comply with when preparing their financial statements. Delays in the publication of financial reports may reduce the relevance and usefulness of the information contained therein (Endri et al., 2024), as timeliness is one of the most important attributes supporting the relevance of financial information. The Financial Services Authority (OJK) has also issued regulations governing the deadlines for submitting financial reports by public companies. According to OJK Regulation No. 14/POJK.03/2022, auditors are required to complete the audit of interim financial statements within one month after the interim reporting date.

Furthermore, the Audit Committee's evaluation report regarding the provision of audit services by the Public Accountant must be submitted no later than May 31. Audit delay refers to the period of delay in issuing the audit report, which may arise due to transaction complexity, auditor capacity, or communication constraints between auditors and clients (Karnawati & Handayani, 2022). Under the regulations of the Accounting and Corporate Regulatory Authority (ACRA) and the amendments to the Singapore Companies Act 1967, private companies are required to hold their Annual General Meeting (AGM) within six months and submit their annual reports within seven months after the end of the fiscal year. Meanwhile, for publicly listed companies, the Singapore Exchange (SGX) imposes stricter requirements by mandating the announcement of annual financial results no later than 60 days after the fiscal year-end. This rigorous regulatory framework makes Singapore a relevant jurisdiction for examining the effectiveness of corporate governance mechanisms in mitigating financial reporting delays within the Southeast Asian region.

**Table 1. Audit Delay of Conventional Commercial Banks in Indonesia**

| No        | Company Code | Audit Delay (Hari) |       |       |       |       |
|-----------|--------------|--------------------|-------|-------|-------|-------|
|           |              | 2021               | 2022  | 2023  | 2024  | 2025  |
| 1         | BBRI         | 34                 | 37    | 31    | 43    | 57    |
| 2         | BMRI         | 26                 | 31    | 31    | 36    | 36    |
| 3         | BBNI         | 21                 | 20    | 25    | 22    | 33    |
| 4         | BBTN         | 38                 | 48    | 43    | 43    | 41    |
| 5         | BRIS         | 19                 | 30    | 30    | 35    | 35    |
| Rata-Rata |              | 28,00              | 31,40 | 34,40 | 33,00 | 37,20 |

Source: Indonesia Stock Exchange (2025)

Table 1. shows that audit delay among Indonesian state-owned and Islamic banks fluctuated during the 2021–2025 period. PT Bank Rakyat Indonesia (BBRI) experienced an increase in audit delay from 34 days in 2021 to 57 days in 2025, despite a temporary decline in 2023. Similarly, PT Bank Mandiri (BMRI) recorded a gradual increase from 26 days in 2021 to 36 days in both 2024 and 2025. PT Bank Negara Indonesia (BBNI) maintained the shortest audit delay among the sample banks, ranging from 20 to 33 days throughout the observation period. PT Bank Tabungan Negara (BBTN) exhibited relatively high audit delays, peaking at 48 days in 2022 before declining to 41 days in 2025. Meanwhile, PT Bank Syariah Indonesia (BRIS) reported an increase from 19 days in 2021 to 35 days in 2024 and 2025. Overall, the average audit delay of all sampled Indonesian banks increased from 28.0 days in 2021 to 37.2 days in 2025, indicating a general upward trend despite annual fluctuations. In contrast, commercial banks in Singapore reported relatively longer audit delays throughout the same period. Although fluctuations were observed, the average audit delay remained relatively

stable, ranging between 51.8 and 53.8 days from 2021 to 2025. These findings suggest that audit delay remains a persistent issue in both countries, although the magnitude and trend differ across banking institutions.

**Table 2. Audit Delay of Conventional Commercial Banks in Singapore**

| No               | Company Code      | Audit Delay (Hari) |              |              |              |              |
|------------------|-------------------|--------------------|--------------|--------------|--------------|--------------|
|                  |                   | 2021               | 2022         | 2023         | 2024         | 2025         |
| 1                | Bank of Singapore | 28                 | 32           | 32           | 45           | 41           |
| 2                | DBS               | 42                 | 41           | 37           | 38           | 37           |
| 3                | GXS Bank          | 90                 | 82           | 78           | 73           | 82           |
| 4                | OCBC              | 53                 | 54           | 58           | 56           | 55           |
| 5                | UOB               | 46                 | 53           | 52           | 49           | 54           |
| <b>Rata-Rata</b> |                   | <b>51,80</b>       | <b>52,40</b> | <b>51,40</b> | <b>52,20</b> | <b>53,80</b> |

Source: Monetary Authority of Singapore (2025)

Based on the data, DBS and OCBC exhibited relatively stable audit delays ranging from 37 to 58 days throughout the observation period. UOB also recorded relatively high audit delays, ranging between 46 and 54 days. Meanwhile, Bank of Singapore experienced a notable increase in audit delay in 2024 before declining in 2025. GXS Bank reported the longest audit delay among the sampled banks, reaching 90 days in 2021 and remaining above 70 days during the study period. Overall, audit delay among Singaporean commercial banks remained relatively stable but at a comparatively high level. In contrast, Indonesian commercial banks experienced greater fluctuations in audit delay, with several banks showing an increasing trend during certain years despite remaining within regulatory requirements. Several factors are believed to influence audit delay, including audit fees, audit committees, and firm age. Audit fees reflect the compensation paid for audit services and may indicate the quality and resources allocated to the audit process (Agustin & Triani, 2023). Higher audit fees generally enable auditors to deploy more competent teams and conduct audits more efficiently. Audit committees also play an important role in reducing audit delay by strengthening oversight and supporting the audit process (Ulfa & Ardiana, 2021; Weni et al., 2024). In addition, older firms tend to possess greater experience in financial reporting and audit preparation, which may contribute to shorter audit completion times (Lahundo & Budiantara, 2023).

Despite extensive research, findings regarding the determinants of audit delay remain inconsistent, indicating the existence of a research gap and the need for further investigation, particularly within the banking sector. To address this gap, the present study introduces firm size as a moderating variable. Firm size, commonly measured by the natural logarithm of total assets, may influence the relationship between audit fees, audit committees, firm age, and audit delay. Larger firms are generally subject to greater public scrutiny and possess more established systems, enabling auditors to complete their work more efficiently (Rusdiyanto et al., 2020). Previous studies have also found that firm size significantly affects audit delay (Pradewa & Priono, 2021; Saputra et al., 2020). Based on these considerations, the research questions of this study are formulated as follows:

1. Does audit fee have a significant effect on audit delay among commercial banks in Indonesia and Singapore?
2. Does the audit committee have a significant effect on audit delay among commercial banks in Indonesia and Singapore?
3. Does firm age have a significant effect on audit delay among commercial banks in Indonesia and Singapore?
4. Does firm size moderate the relationship between audit fee and audit delay among commercial banks in Indonesia and Singapore?

5. Does firm size moderate the relationship between the audit committee and audit delay among commercial banks in Indonesia and Singapore?
6. Does firm size moderate the relationship between firm age and audit delay among commercial banks in Indonesia and Singapore?

## **Theoretical Framework and Literature Review**

### **Theoretical Framework**

#### **Signaling Theory**

Signaling Theory was developed by Spence (1973) and explains that complete, relevant, accurate, and timely information is essential for investors in the capital market as a basis for making investment decisions. Information disclosed by a company serves as a signal that influences investors' perceptions and decisions (Sissah et al., 2023). In the context of this study, signaling theory is closely related to the accuracy and timeliness of financial reporting. The timely publication of audited financial statements provides a positive signal regarding a company's transparency and financial condition, whereas prolonged audit delay may be interpreted by investors as a negative signal that reflects potential problems within the company (Arifin & Meli, 2023). Given the highly regulated and information-sensitive nature of the banking industry, Signaling Theory is particularly relevant for explaining the occurrence and implications of audit delay.

### **Literature Review**

#### **Audit Delay**

Audit delay, also referred to as audit report lag, occurs in both large and small companies and may be caused by weaknesses in the quality or complexity of financial reporting (Kamil et al., 2023; Faraji et al., 2023). Audit delay is defined as the period required by auditors to complete the audit process after the end of a company's fiscal year (Özer et al., 2023). Since audited financial statements constitute an important source of information for capital market participants, the length of time required to complete the audit directly affects the usefulness and relevance of the information disclosed (Wandira & Pratiwi, 2023). Delays in financial reporting reduce the relevance of financial information and may negatively affect decision-making processes (Nadeak et al., 2024). Therefore, timeliness is considered a critical qualitative characteristic of financial reporting and is closely associated with audit delay (Lai, 2023).

#### **Audit Fee**

According to Agustin and Triani (2023), audit fees refer to the compensation received by auditors and reviewers for audit services provided during a particular financial reporting period. The Financial Services Authority (OJK) requires companies to disclose information regarding external auditors, including audit fees and audit engagement periods, in accordance with OJK Regulation No. 29/POJK.04/2016 concerning Annual Reports. Audit fees include both audit and non-audit service fees received by external auditors. Companies that pay higher audit fees generally have more complex operational activities and greater audit risks, which may require more extensive audit procedures and longer audit completion periods (Agustin & Triani, 2023; Fifah Nurcahya, 2025).

#### **Audit Committee**

According to Utama et al. (2023), the audit committee is a committee established by the board of commissioners to assist in overseeing the performance of directors and management in accordance with the principles of Good Corporate Governance (GCG). A larger audit committee may enhance the committee's ability to evaluate the roles, responsibilities, and work

performed by external auditors (DeZoort et al., 2002; Turley & Zaman, 2007). Furthermore, a larger audit committee provides access to a broader range of expertise and competencies, enabling more effective oversight and conflict resolution, including issues related to audit delay (DeZoort et al., 2003).

### **Firm Age**

According to Wati (2019), companies that have operated for longer periods tend to disclose more comprehensive information compared to newly established firms. Firm age reflects a company's ability to survive and adapt within a competitive business environment. Older firms generally possess greater experience in financial reporting and business operations, enabling them to better understand business challenges and implement more effective policies. As a result, experienced firms are often more capable of facilitating the audit process efficiently, which may contribute to shorter audit delays.

### **Firm Size**

Firm size refers to the scale of a company as measured by total assets, equity value, sales, or profits (Africano et al., 2023). Compared with smaller firms, larger and more complex companies generally require longer audit procedures due to the greater volume of transactions and operational complexity. However, large firms also face stronger pressure from investors, regulators, and other stakeholders to minimize audit delay and ensure the timely publication of financial reports (Polii et al., 2023). In addition, larger firms often possess more established internal control systems and reporting mechanisms that facilitate audit activities. Nevertheless, the greater number of transactions within large firms may require auditors to examine larger samples, potentially affecting audit completion time (Leventis et al., 2005).

## **METHOD**

This study used quantitative approach based on a deductive–inductive framework. The population consists of commercial banks listed on the Indonesia Stock Exchange (IDX), totaling 15 companies, and commercial banks listed on the Singapore Exchange (SGX), totaling 6 companies. The sampling technique used in this study is purposive sampling, a non-probability sampling method in which information is selected based on predetermined criteria. The total number of observations in this study is 75 data units, calculated from 15 companies observed over a five-year period (2021–2025). Secondary data were obtained from audited financial statements of Indonesian commercial banks and reports published by the Monetary Authority of Singapore (MAS) for the 2021–2025 period. The data were collected from the official websites of the Indonesia Stock Exchange (IDX) and the Monetary Authority of Singapore (MAS). All statistical analyses in this study were conducted using EViews software.

### **Data Analysis Technique**

#### **1. Descriptive Statistics**

Descriptive statistics are used to analyze data in order to describe the characteristics of the objects under investigation, whether based on samples or populations. The analysis generally focuses on individual variables and includes data collection, summarization, and presentation of analytical results (Sitoayu et al., 2020).

#### **2. Panel Data Model Selection**

The procedures used to determine the most appropriate panel data regression model are as follows:

- a. **Chow Test:** The Chow test is used to determine whether the Common Effect Model (CEM) or the Fixed Effect Model (FEM) is more appropriate for panel data analysis.

- b. Hausman Test: The Hausman test is a statistical procedure used to determine whether the Fixed Effect Model (FEM) or the Random Effect Model (REM) is more suitable for panel data regression.
- c. Lagrange Multiplier Test: The Lagrange Multiplier (LM) test is employed to determine whether the Common Effect Model (CEM) or the Random Effect Model (REM) provides a better fit for the panel data.

### 3. Classical Assumption Tests

Classical assumption tests are conducted when the selected model is either the Common Effect Model (CEM) or the Fixed Effect Model (FEM). If the Random Effect Model (REM) is selected, classical assumption testing is not required because the Random Effect Model is estimated using the Generalized Least Squares (GLS) method, which inherently accommodates these assumptions (Priyatno, 2023). The classical assumptions tested in this study include:

- a. Normality Test: The normality test is conducted to determine whether each variable is normally distributed.
- b. Multicollinearity Test: Multicollinearity refers to the existence of a perfect or near-perfect linear relationship among the independent variables in a regression model. Multicollinearity is considered present when the correlation coefficient between independent variables exceeds 0.90.
- c. Heteroscedasticity Test: Heteroscedasticity is tested using the Glejser Heteroscedasticity Test. If the significance value of each independent variable on the Absolute Residual (ARESID) is greater than 0.05, heteroscedasticity is not present; otherwise, heteroscedasticity is indicated.

### 4. Hypothesis Testing

Hypothesis Testing used panel data regression analysis. This method is applied to examine the extent to which the independent variables influence the dependent variable, F effect and Coefficient of Determination.

- a. F-Test (Simultaneous Test): The F-test is used to determine whether all independent variables included in the model simultaneously influence the dependent variable.
- b. t-Test (Partial Test): The t-test is employed to examine the individual effect of each independent variable on the dependent variable.
- c. Coefficient of Determination ( $R^2$ ): The coefficient of determination ( $R^2$ ) measures the extent to which the independent variables collectively explain variations in the dependent variable. A low  $R^2$  value indicates that the explanatory power of the independent variables is limited, whereas a value approaching one indicates that the independent variables provide substantial information for predicting variations in the dependent variable.

### 5. Moderating Effect Test

The moderating effect test is conducted to examine whether firm size is capable of moderating (strengthening or weakening) the relationship between the independent variables and the dependent variable.

## RESULTS AND DISCUSSION

### Results

#### Descriptive Statistics Result

Based on the data processing results, the descriptive statistical analysis is presented in the tables below.



**Table 3. Descriptive Statistics of Indonesian Commercial Banks**

|              | Y        | X1       | X2       | X3       | Z        |
|--------------|----------|----------|----------|----------|----------|
| Mean         | 36.46000 | 23.19938 | 4.540000 | 63.40000 | 33.94172 |
| Median       | 37.00000 | 23.01128 | 4.000000 | 66.00000 | 33.63500 |
| Maximum      | 57.00000 | 26.00000 | 9.000000 | 130.0000 | 35.58000 |
| Minimum      | 19.00000 | 21.14853 | 2.000000 | 0.000000 | 32.51420 |
| Std. Dev.    | 9.748281 | 1.166445 | 1.798072 | 39.72919 | 0.948870 |
| Skewness     | 0.046606 | 0.721564 | 0.540756 | 0.250544 | 0.205411 |
| Kurtosis     | 2.582333 | 3.554815 | 2.450913 | 2.199132 | 1.625949 |
| Jarque-Bera  | 0.381530 | 4.980079 | 3.064924 | 1.859329 | 4.284979 |
| Probability  | 0.826327 | 0.082907 | 0.216003 | 0.394686 | 0.117362 |
| Sum          | 1823.000 | 1159.969 | 227.0000 | 3170.000 | 1697.086 |
| Sum Sq. Dev. | 4656.420 | 66.66913 | 158.4200 | 77342.00 | 44.11731 |
| Observations | 50       | 50       | 50       | 50       | 50       |

Source: Processed using EViews, 2026

The descriptive statistics indicate that Audit Delay had an average of 36.46 days, ranging from 19 to 57 days. Audit Fee showed a mean value of 23.199, with values ranging from 21.148 to 26. The Audit Committee variable had an average of 4.54 members, with a minimum of 2 and a maximum of 9 members. Firm Age averaged 63.4 years, ranging from 0 to 130 years. Meanwhile, Firm Size had a mean value of 34.941, with values ranging from 32.514 to 35.58. These results reflect variations in audit timeliness, audit costs, governance structures, organizational maturity, and company scale among Indonesian commercial banks during the 2021–2025 period.

**Table 4. Descriptive Statistics of Singapore Commercial Banks**

|              | Y        | X1       | X2        | X3        | Z         |
|--------------|----------|----------|-----------|-----------|-----------|
| Mean         | 52.32000 | 16.28785 | 4.520000  | 50.00000  | 23.86980  |
| Median       | 52.00000 | 16.21341 | 5.000000  | 55.00000  | 24.38702  |
| Maximum      | 90.00000 | 17.59970 | 6.000000  | 93.00000  | 27.35819  |
| Minimum      | 28.00000 | 15.25440 | 3.000000  | 1.000000  | 18.98706  |
| Std. Dev.    | 16.94039 | 0.541801 | 1.122497  | 37.46665  | 3.210381  |
| Skewness     | 0.751018 | 0.436235 | -0.050802 | -0.123542 | -0.210352 |
| Kurtosis     | 2.676526 | 3.130673 | 1.684744  | 1.293609  | 1.385722  |
| Jarque-Bera  | 2.459109 | 0.810708 | 1.812730  | 3.096689  | 2.898839  |
| Probability  | 0.292423 | 0.666741 | 0.403990  | 0.212600  | 0.234706  |
| Sum          | 1308.000 | 407.1963 | 113.0000  | 1250.000  | 596.7450  |
| Sum Sq. Dev. | 6887.440 | 7.045149 | 30.24000  | 33690.00  | 247.3571  |
| Observations | 25       | 25       | 25        | 25        | 25        |

Source: Processed using EViews, 2026

The descriptive statistics show that Audit Delay had an average of 53.32 days, ranging from 28 to 90 days. Audit Fee recorded a mean value of 16.288, with values ranging from 15.254 to 17.60. The Audit Committee variable had an average of 4.52 members, with committee sizes ranging from 3 to 6 members. Firm Age averaged 50 years, with values ranging from 1 to 93 years. Meanwhile, Firm Size had a mean value of 23.87, ranging from 18.99 to 27.36. These findings indicate variations in audit timeliness, audit fees, governance structures, organizational maturity, and firm size among Singaporean commercial banks during the 2021–2025 period.

## Model Selection Result

### 1. Chow Test

The Chow test results for Indonesian and Singapore commercial banks during 2021–2025 show a probability value of  $0.0000 < 0.05$ . Therefore, the Fixed Effect Model (FEM)

is preferred over the Common Effect Model (CEM). Consequently, a Hausman test was conducted to determine the most appropriate model between the Fixed Effect Model (FEM) and the Random Effect Model (REM).

**Table 5. Chow Test Results for Indonesian and Singapore Commercial Banks**

Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

| Effects Test             | Statistic  | d.f.    | Prob.  |
|--------------------------|------------|---------|--------|
| Cross-section F          | 18.202978  | (14,56) | 0.0000 |
| Cross-section Chi-square | 128.544904 | 14      | 0.0000 |

Cross-section fixed effects test equation:

Dependent Variable: Y

Method: Panel Least Squares

Date: 06/11/26 Time: 02:24

Sample: 2021 2025

Periods included: 5

Cross-sections included: 15

Total panel (balanced) observations: 75

| Variable              | Coefficient | Std. Error         | t-Statistic | Prob.     |
|-----------------------|-------------|--------------------|-------------|-----------|
| C                     | 101.5614    | 8.332882           | 12.18803    | 0.0000    |
| X1                    | 0.677605    | 0.936763           | 0.723347    | 0.4719    |
| X2                    | -2.264431   | 0.804271           | -2.815507   | 0.0063    |
| X3                    | 0.041865    | 0.036069           | 1.160671    | 0.2497    |
| Z                     | -2.163699   | 0.637030           | -3.396542   | 0.0011    |
| Root MSE              | 10.51400    | R-squared          |             | 0.473137  |
| Mean dependent var    | 41.74667    | Adjusted R-squared |             | 0.443030  |
| S.D. dependent var    | 14.58256    | S.E. of regression |             | 10.88303  |
| Akaike info criterion | 7.676626    | Sum squared resid  |             | 8290.819  |
| Schwarz criterion     | 7.831126    | Log likelihood     |             | -282.8735 |
| Hannan-Quinn criter.  | 7.738316    | F-statistic        |             | 15.71545  |
| Durbin-Watson stat    | 0.385000    | Prob(F-statistic)  |             | 0.000000  |

Source: Processed using EViews, 2026

## 2. Hausman Test

**Table 6. Hausman Test Results for Indonesian and Singapore Commercial Banks**

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

| Test Summary         | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob.  |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 11.781875         | 4            | 0.0190 |

Cross-section random effects test comparisons:

| Variable | Fixed     | Random    | Var(Diff.) | Prob.  |
|----------|-----------|-----------|------------|--------|
| X1       | 0.793279  | 0.969289  | 2.455823   | 0.9106 |
| X2       | -2.530542 | -2.893936 | 0.173587   | 0.3831 |
| X3       | 1.667659  | 0.086909  | 0.256132   | 0.0018 |
| Z        | -3.840570 | -2.222013 | 5.053356   | 0.4715 |

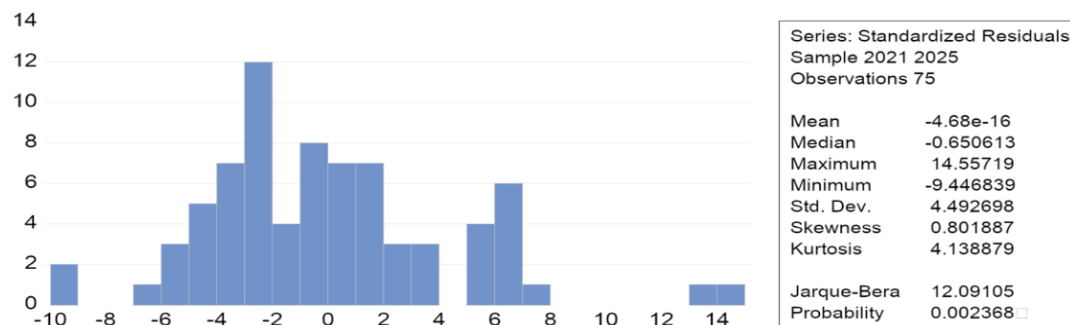
Source: Processed using EViews, 2026

The Hausman test results for Indonesian and Singapore commercial banks during 2021–2025 indicate a probability value of 0.0190, which is below the significance level of 0.05. Accordingly,  $H_0$  is rejected and  $H_1$  is accepted, indicating that the Fixed Effect Model (FEM) is the most appropriate model for this study. Since the Hausman test confirmed the superiority of FEM, the Lagrange Multiplier (LM) test was not required.



## Classical Assumption Tests Result

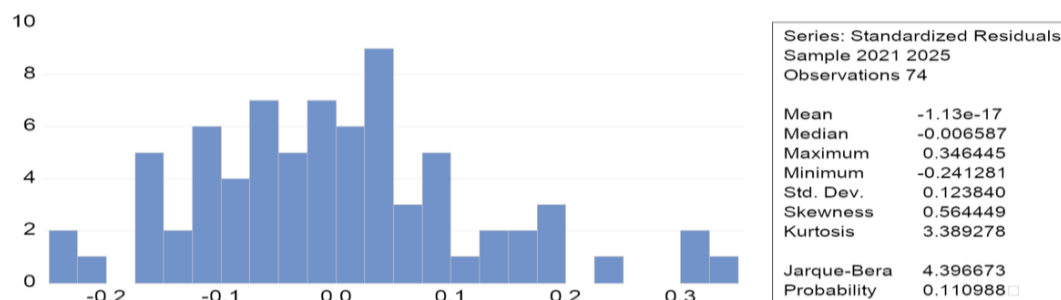
### 1. Normality Test



**Figure 1. Normality Test Results for Indonesian and Singapore Commercial Banks**

Source: Processed using EViews, 2026

The probability value for Indonesian and Singapore commercial banks during the 2021–2025 period is  $0.002368 < 0.05$ . Therefore, it can be concluded that the data are not normally distributed. To address this issue, a logarithmic transformation was applied. According to Ghazali (2018), non-normally distributed data can be transformed to satisfy the normality assumption. One commonly used transformation method is the logarithmic transformation (LN or Log10), resulting in the following outcome.



**Figure 2. Normality Test Results after Data Transformation**

Source: Processed by the researcher, 2026

Based on Figure 5.2, the probability value is  $0.110988 < 0.05$ . Therefore, it can be concluded that the data for Indonesian and Singapore commercial banks during the 2021–2025 period are normally distributed and suitable for further analysis.

### 2. Multicollinearity Test

**Table 7. Multicollinearity Test Results for Indonesian and Singapore Commercial Banks**

|        | LOG_Y     | LOG_X1    | LOG_X2    | LOG_X3    | LOG_Z     |
|--------|-----------|-----------|-----------|-----------|-----------|
| LOG_Y  | 1.000000  | -0.538937 | -0.241083 | -0.207935 | -0.599671 |
| LOG_X1 | -0.538937 | 1.000000  | 0.035119  | 0.076390  | 0.894822  |
| LOG_X2 | -0.241083 | 0.035119  | 1.000000  | 0.017471  | 0.087002  |
| LOG_X3 | -0.207935 | 0.076390  | 0.017471  | 1.000000  | 0.321922  |
| LOG_Z  | -0.599671 | 0.894822  | 0.087002  | 0.321922  | 1.000000  |

Source: Processed using EViews, 2026

Based on table result, none of the correlation coefficients exceed 0.90. Therefore, it can be concluded that the model used in this study does not suffer from multicollinearity problems.

### 3. Heteroscedasticity Test

**Table 8. Heteroscedasticity Test Results for Indonesian and Singapore Commercial Banks**

Dependent Variable: ABSRES

Method: Panel Least Squares

Date: 06/11/26 Time: 02:35

Sample: 2021 2025

Periods included: 5

Cross-sections included: 15

Total panel (unbalanced) observations: 74

| Variable                                     | Coefficient | Std. Error | t-Statistic        | Prob.    |
|----------------------------------------------|-------------|------------|--------------------|----------|
| C                                            | -3.662293   | 4.281489   | -0.855378          | 0.3961   |
| LOG_X1                                       | 0.646872    | 0.563976   | 1.146985           | 0.2564   |
| LOG_X2                                       | -0.063632   | 0.073374   | -0.867230          | 0.3896   |
| LOG_X3                                       | -0.079162   | 0.072076   | -1.098313          | 0.2769   |
| LOG_Z                                        | 0.641371    | 1.013185   | 0.633025           | 0.5293   |
| Effects Specification                        |             |            |                    |          |
| <b>Cross-section fixed (dummy variables)</b> |             |            |                    |          |
| Root MSE                                     | 0.063907    |            | R-squared          | 0.339611 |
| Mean dependent var                           | 0.094577    |            | Adjusted R-squared | 0.123483 |
| S.D. dependent var                           | 0.079177    |            | S.E. of regression | 0.074128 |
| Akaike info criterion                        | -2.149272   |            | Sum squared resid  | 0.302221 |
| Schwarz criterion                            | -1.557688   |            | Log likelihood     | 98.52308 |
| Hannan-Quinn criter.                         | -1.913282   |            | F-statistic        | 1.571345 |
| Durbin-Watson stat                           | 2.145288    |            | Prob(F-statistic)  | 0.101194 |

Source: Processed using EViews, 2026

Based on table result, variables have probability values greater than 0.05. Therefore, it can be concluded that the model used in this study is free from heteroscedasticity problems.

### Hypothesis Testing

#### 1. t-Test (Partial Test) Result

**Table 9. t-Test, F-Test and R<sup>2</sup> Test Results for Indonesian and Singapore Commercial Banks**

Dependent Variable: LOG\_Y

Method: Panel Least Squares

Date: 06/11/26 Time: 02:36

Sample: 2021 2025

Periods included: 5

Cross-sections included: 15

Total panel (unbalanced) observations: 74

| Variable                                     | Coefficient | Std. Error | t-Statistic        | Prob.    |
|----------------------------------------------|-------------|------------|--------------------|----------|
| C                                            | -2.157485   | 8.240522   | -0.261814          | 0.7944   |
| LOG_X1                                       | 1.553013    | 1.085477   | 1.430719           | 0.1582   |
| LOG_X2                                       | -0.298612   | 0.141222   | -2.114480          | 0.0390   |
| LOG_X3                                       | 0.053573    | 0.138724   | 0.386185           | 0.7008   |
| LOG_Z                                        | 0.406458    | 1.950063   | 0.208433           | 0.8357   |
| Effects Specification                        |             |            |                    |          |
| <b>Cross-section fixed (dummy variables)</b> |             |            |                    |          |
| Root MSE                                     | 0.123000    |            | R-squared          | 0.858366 |
| Mean dependent var                           | 3.685101    |            | Adjusted R-squared | 0.812013 |
| S.D. dependent var                           | 0.329061    |            | S.E. of regression | 0.142673 |
| Akaike info criterion                        | -0.839747   |            | Sum squared resid  | 1.119551 |
| Schwarz criterion                            | -0.248162   |            | Log likelihood     | 50.07062 |
| Hannan-Quinn criter.                         | -0.603756   |            | F-statistic        | 18.51805 |

|                    |          |                   |          |
|--------------------|----------|-------------------|----------|
| Durbin-Watson stat | 1.910106 | Prob(F-statistic) | 0.000000 |
|--------------------|----------|-------------------|----------|

Source: Processed using EViews, 2026

Based on the results presented above, the effects of each variable can be explained as follows: the calculated t-value is 1.430719, which is lower than the critical t-value of 1.99444, and the significance value is  $0.1582 > 0.05$ . Therefore, the hypothesis is rejected, indicating that audit fee (x1) has no significant effect on audit delay (y) among Indonesian and Singapore commercial banks during the 2021–2025 period. The calculated t-value is -2.114480, with a significance value of  $0.0390 < 0.05$ . Therefore, the hypothesis is accepted, indicating that audit committee (x2) has a significant effect on audit delay (y) among Indonesian and Singapore commercial banks during the 2021–2025 period at the 5% significance level. The calculated t-value is 0.386185, which is lower than the critical t-value of 1.99300, and the significance value is  $0.7008 > 0.05$ . Therefore, the hypothesis is rejected, indicating that firm age (x3) has no significant effect on audit delay (y) among Indonesian and Singapore commercial banks during the 2021–2025 period

## 2. F-Test (Simultaneous Test) Result

Based on Table 9, the Prob. (F-statistic) value is  $0.000000 < 0.05$ . This indicates that the independent variables, namely Audit Fee, Audit Committee, and Firm Age, simultaneously have a significant effect on Audit Delay among Indonesian and Singapore commercial banks during the 2021–2025 period.

## 3. Coefficient of Determination ( $R^2$ )

As shown in Table 9, the R-Square ( $R^2$ ) value is 0.812013, indicating that 81.2% of the variation in Audit Delay can be explained by the independent variables included in this study. The remaining 18.8% is explained by other variables not included in the research model.

## Moderating Effect Test

**Table 10. Moderating Test Results for Indonesian and Singapore Commercial Banks**

Dependent Variable: LOG\_Y

Method: Panel Least Squares

Date: 06/11/26 Time: 03:51

Sample: 2021 2025

Periods included: 5

Cross-sections included: 15

Total panel (unbalanced) observations: 74

| Variable                                     | Coefficient | Std. Error         | t-Statistic | Prob.  |
|----------------------------------------------|-------------|--------------------|-------------|--------|
| C                                            | 7.526378    | 14.45671           | 0.520615    | 0.6048 |
| LOG_X1                                       | -0.398411   | 2.691089           | -0.148048   | 0.8829 |
| LOG_X2                                       | -0.344332   | 0.436794           | -0.788318   | 0.4341 |
| LOG_X3                                       | -0.011924   | 0.129249           | -0.092254   | 0.9269 |
| LOG_Z                                        | -1.723941   | 2.886677           | -0.597206   | 0.5530 |
| X1Z                                          | 0.001771    | 0.004448           | 0.398172    | 0.6921 |
| X2Z                                          | 0.000575    | 0.002581           | 0.222893    | 0.8245 |
| X3Z                                          | 0.001352    | 0.000357           | 3.793228    | 0.0004 |
| Effects Specification                        |             |                    |             |        |
| <b>Cross-section fixed (dummy variables)</b> |             |                    |             |        |
| Root MSE                                     | 0.107751    | R-squared          | 0.891309    |        |
| Mean dependent var                           | 3.685101    | Adjusted R-squared | 0.847414    |        |
| S.D. dependent var                           | 0.329061    | S.E. of regression | 0.128539    |        |
| Akaike info criterion                        | -1.023402   | Sum squared resid  | 0.859153    |        |

|                      |           |                   |          |
|----------------------|-----------|-------------------|----------|
| Schwarz criterion    | -0.338409 | Log likelihood    | 59.86586 |
| Hannan-Quinn criter. | -0.750150 | F-statistic       | 20.30571 |
| Durbin-Watson stat   | 2.200930  | Prob(F-statistic) | 0.000000 |

Source: Processed using EViews, 2026

Based on the Moderated Regression Analysis (MRA) results, can be describe:

1. Firm Size (Z) does not moderate the relationship between Audit Fee (X1) and Audit Delay (Y). This is evidenced by a probability value of 0.6921, which is greater than 0.05.
2. Firm Size (Z) does not moderate the relationship between Audit Committee (X2) and Audit Delay (Y). This is indicated by a probability value of 0.8245, which exceeds 0.05.
3. Firm Size (Z) moderates the relationship between Firm Age (X3) and Audit Delay (Y). This is supported by a probability value of 0.0004, which is lower than 0.05, indicating a significant moderating effect.

## Discussion

### Effect of Audit Fees on Audit Delay in Indonesian and Singapore Commercial Banks

The results indicate that audit fees do not have a significant effect on audit delay in Indonesian and Singapore commercial banks. This finding may be explained by the highly regulated nature of the banking industry, if audit procedures must comply with strict regulatory and professional standards regardless of the audit fee paid. Consequently, the timeliness of audit completion is driven more by compliance requirements and regulatory oversight than by the amount of audit remuneration. In signaling theory, timely financial reporting serves as a positive signal to investors; audit fees are not directly observable signals of reporting timeliness. Instead, they primarily reflect audit complexity, scope, and professional agreements between auditors and clients. Therefore, higher audit fees do not necessarily lead to faster audit completion. This finding suggests that audit fees are not a determining factor influencing audit delay within the banking sector (Damayanti, 2022; Febriana et al., 2024; Zusraeni & Hermi, 2020).

### Effect of Audit Committee on Audit Delay in Indonesian and Singapore Commercial Banks

The findings reveal that the audit committee has a significant effect on audit delay in Indonesian and Singapore commercial banks. An effective audit committee enhances financial reporting quality, strengthens internal controls, and facilitates the timely provision of information required by external auditors, thereby improving audit efficiency and reducing reporting delays. In Indonesia, audit committees contribute to audit effectiveness through oversight of financial reporting and coordination with external auditors. Similarly, in Singapore, audit committees play a crucial role in ensuring reporting quality and internal control effectiveness, supported by advanced information systems, structured reporting procedures, and regulatory supervision by the Monetary Authority of Singapore. These conditions help accelerate the audit process and improve reporting timeliness. This finding is consistent with previous studies by Afenya et al. (2022) and Bhuiyan and D'Costa (2020), which conclude that stronger audit committee effectiveness is associated with shorter audit completion periods.

### Effect of Firm Age on Audit Delay in Indonesian and Singapore Commercial Banks

The results demonstrate that firm age does not significantly affect audit delay in Indonesian and Singapore commercial banks. According to signaling theory, companies seek to provide timely financial information as a positive signal to investors and stakeholders. However, firm age does not directly reflect a company's ability to deliver financial reports on time. Although older firms generally possess greater experience and organizational maturity,

these characteristics do not automatically translate into shorter audit completion periods. The findings suggest that firm age is not a sufficiently strong signal to influence audit delay in the banking industry. This result is consistent with the studies of Febriana et al. (2024), Rustanto et al. (2023), and Suminar et al. (2022), which also found no significant relationship between firm age and audit delay. The evidence indicates that, particularly in highly regulated industries such as banking, organizational age is not a primary determinant of audit timeliness.

### **Moderating Effect of Firm Size on the Relationship Between Audit Fee and Audit Delay in Indonesian and Singapore Commercial Banks**

The results indicate that firm size does not moderate the relationship between audit fee and audit delay in Indonesian and Singapore commercial banks. Regardless of whether banks are large or small, all banking institutions are required to submit financial reports in a timely manner to maintain transparency and preserve the confidence of investors, regulators, and the public. In the banking sector, audit fees primarily reflect the complexity of audit engagements and the scope of audit procedures rather than factors associated with reporting timeliness. Consequently, firm size is unable to strengthen or weaken the effect of audit fees on audit delay, as banking audits are conducted under strict regulatory requirements, standardized audit procedures, and predetermined reporting deadlines. Similarly, commercial banks in Singapore are required to maintain timely financial reporting to uphold their reputation and credibility in international financial markets. Supported by strong corporate governance practices, advanced financial technologies, and rigorous supervision from the Monetary Authority of Singapore, banks are subject to uniform reporting standards and audit deadlines. This finding is consistent with Maharsa et al. (2021), who reported that firm size was unable to moderate the relationship between several determinants and audit delay. Therefore, the size of a company does not necessarily influence the effectiveness of audit fees in accelerating audit completion.

### **Moderating Effect of Firm Size on the Relationship Between Audit Committee and Audit Delay in Indonesian and Singapore Commercial Banks**

The findings demonstrate that firm size does not moderate the relationship between the audit committee and audit delay in Indonesian and Singapore commercial banks. This suggests that the size of a company neither strengthens nor weakens the influence of the audit committee on the timeliness of audit completion. Commercial banks in Indonesia continue to prioritize timely financial reporting to maintain the confidence of investors, customers, and regulatory authorities, regardless of organizational size. Banks in Singapore strive to ensure timely reporting as a positive signal of transparency, accountability, and sound corporate governance to investors and regulators. These results support the findings of Ayuningrum (2025) and Wahyuni (2024), which concluded that firm size does not moderate the relationship between audit committee effectiveness and audit delay. Accordingly, the role of the audit committee in facilitating timely audits appears to operate consistently across banks of different sizes.

### **Moderating Effect of Firm Size on the Relationship Between Firm Age and Audit Delay in Indonesian and Singapore Commercial Banks**

The results reveal that firm size significantly moderates the relationship between firm age and audit delay in Indonesian and Singapore commercial banks. This finding suggests that the impact of organizational experience on audit timeliness becomes stronger as company size increases. Larger and more mature banks generally possess more developed administrative systems, well-established reporting procedures, and more experienced human resources, all of which contribute to a more efficient audit process. From the perspective of Signaling Theory, large and long-established firms have stronger incentives to disclose financial information promptly in order to convey positive signals to investors, creditors, regulators, and other

stakeholders. Because large firms attract greater public and market attention, they face stronger pressure to maintain their reputation and credibility through timely and reliable financial reporting. Consequently, firm size enhances the beneficial effect of firm age in reducing audit delay. This finding highlights that the combination of organizational experience and substantial operational capacity plays a crucial role in improving audit efficiency and reporting timeliness. The result is consistent with the study of Marcelino and Mulyani (2021), which found that firm size moderates the relationship between firm age and audit delay.

## CONCLUSION

Based on the results of data analysis conducted on Indonesian and Singaporean commercial banks during the 2021–2025 period, it can be concluded that audit fee and firm age do not have a significant effect on audit delay, indicating that the amount of audit fees paid and the length of a firm's operation are not the primary determinants of audit completion timeliness. In contrast, the audit committee has a significant effect on audit delay, suggesting that effective oversight and coordination between management and external auditors contribute to a more efficient audit process. Audit fee, audit committee, and firm age simultaneously have a significant effect on audit delay, demonstrating that audit timeliness is influenced by the combined effect of these factors. Moderation analysis reveals that firm size is unable to moderate the relationships between audit fee and audit delay as well as between audit committee and audit delay. Firm size successfully moderates the relationship between firm age and audit delay. Therefore, audit committee effectiveness and organizational capacity remain important factors in enhancing audit timeliness within the banking sector.

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