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Public Firm Size Moderating Factors on Audit Report Lag: Evidence from ASEAN

Tanggor Sihombing, Natasya Florencia.*

Accounting Study Program, Faculty of Economics and Business, Pelita Harapan University, Banten, Indonesia.

*Correspondence: tanggor.sihombing@uph.edu

ABSTRACT

This research aimed to examine the effect of audit tenure, financial distress, and solvency on audit report lag while considering the size of public firm size as a moderating factor. By employing purposive sampling method, samples of 135 companies from the real estate industry in the Big 5 ASEAN that are listed on SandP Capital IQ from the period 2020-2022 are gathered. This research employs a quantitative approach and data will be analyzed using STATA ver. 17. The research findings demonstrated that audit tenure has a negative effect on audit report lag, whereas financial distress and solvency have a positive impact. The public firm size does not significantly strengthen the negative effect of audit tenure and does not significantly weaken the positive effect of financial distress on audit report lag. However, the public firm size can strengthen the positive effect of solvency on audit report lag. This research aims to provide theoretical implications whereas audit tenure affects agency theory while financial distress and solvency affect compliance theory. While practical implications suggest that companies engage the same auditor, monitoring financial conditions and solvency levels to reduce audit report lags. The novelty of this research is by using real estate industry companies located in the Big 5 ASEAN countries (Indonesia, Thailand, Singapore, Malaysia, and Vietnam) as the population and thus enriching understanding within this specific context and extending the applicability of findings to this sector.

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1. INTRODUCTION

Financial report serves as a valuable tool for investors, stakeholders, and other users to assess a company's financial performance (Weygandt, et al., 2019). Public company's financial report are required to be audited by public accounting firms to ensure their compliance with applicable standards and regulations. Public demand for audited financial reports continues to rise due to the growth of publicly traded companies worldwide, especially in ASEAN regions (ASEAN Secretariat, 2023). Ensuring trust among stakeholders involves delivering audit reports promptly. However, real-world challenges often lead to delays in issuing these reports, a phenomenon termed as audit report lag (Vjetrov, et al., 2018). This delay signifies the time auditors require to process financial report audits (Hersan and Fettry, 2020). Audit report lag is defined as the interval between the date the audit report is issued and the end date of the company's financial reporting period (Setiyowati and Januarti, 2022). Different countries have their own regulations specifying deadlines for annual financial report submissions. For instance, in Indonesia, Otoritas Jasa Keuangan (OJK) mandates submission within 90 days or by the end of the third month after the end of the financial year (Otoritas Jasa Keuangan Republik Indonesia, 2016). While other countries such as Singapore, Malaysia, Thailand, and Vietnam have regulations ranging from 30 to 150 days after the end of the financial year ("Companies Act 1967 - Singapore Statutes Online," n.d.; Federation of Accounting Professions, 2018; National Assembly of Vietnam, 2017; The Commissioner of Law Revision, 2018). Not only that, this research serves as a crucial aspect in accounting as it delves into the factors affecting delays in audit report submissions alongside with public firm size as a moderating factors. The findings have practical significance for companies to mitigate risks related to audit report lags while also contributing theoretically to accounting literature, notably in risk management and oversight.

This research relies on agency theory and compliance theory to support the findings. Agency theory describes the relationship of the organization's owner (principal) and its representative (agent). This relationship often creates issues due to the conflicting goals between both parties, typically caused by the limited information and results in information asymmetry (Jensen and Meckling, 1976). Compliance theory refers to a theoretical framework that emphasizes the importance of adherence to regulations and audit standards. According to this theory, auditors are tasked with ensuring that the audited company, as the auditee, has complied with all applicable rules, standards, and regulations (Mufidah and Laily, 2019).

The novelty of this research is that it adds the moderating role of public firm size to the factors that could affect audit report lag. Previous research has predominantly concentrated on local companies in sectors like manufacturing, mining, and consumer goods (Fairuzzaman, et al., 2022; Saputri, et al., 2021; Sidauruk and Sagita, 2021; Tampubolon and Siagian, 2020). In contrast, this research will focus on real estate companies based in significant ASEAN countries, namely Indonesia, Singapore, Thailand, Malaysia, and Vietnam.

The primary goal of this research is to look into factors that could impact the delay in audit report issuance, such as audit tenure, financial distress, and solvency with public firm size as a moderating factor. The population is the real estate sector companies located in Big 5 ASEAN listed on SandP Capital IQ between 2020-2022. Real estate companies were selected as this sector was one of the sectors that were significantly affected by the COVID-19 pandemic. The research endeavors to enhance understanding and offer strategies for mitigating audit delay, thereby supporting more effective financial reporting and risk management practices within the real estate industry and beyond.

2. METHODS

The research conducted is a quantitative study done using secondary data, which refers to data that has been collected and processed by others for purposes beyond the scope of the current research (Sekaran and Bougie, 2019). Quantitative study is chosen as the research uses numerical data which later would be analyzed using statistical processes (Saskya and Sonny, 2019). In this case, the secondary data utilized are the audited financial report documents published on the company's website and SandP Capital IQ.

Samples were chosen deliberately based on specific criteria using the purposive sampling method, which included:

1. Companies located in the Big 5 ASEAN countries (Indonesia, Singapore, Thailand, Malaysia, Vietnam) within the real estate sector and listed on the SandP Capital IQ for the year 2020-2022.
2. Companies that have published financial reports for the year 2020-2022.
3. Companies that did not engage in listing or delisting activities during the year 2020-2022.
4. Companies with financial reporting periods ending on December 31 to avoid partial timing differences.
5. Companies that published financial reports in English translation.

In this research, a multiple linear regression model was used, comprising one dependent variable, three independent variables, one moderating variable, and four control variables. Data processing in this research was facilitated using the 17th Version of STATA Software.

Research model 1 will be used to explore the connection between audit tenure, financial distress, solvency, and audit report lag.

$$ARL_{i,t} = \alpha + \beta_1 AT_{i,t} + \beta_2 FD_{i,t} + \beta_3 SOLV_{i,t} + \beta_4 KAP_{i,t} + \beta_5 LIQ_{i,t} + \beta_6 PROFIT_{i,t} + \beta_7 LEV_{i,t} + \beta_8 FIRM_{i,t} + e_{i,t}$$

Research model 2 will be used to describe the moderating role of the public firm size in the relationship between audit tenure, financial distress, solvency, and audit report lag.

$$ARL_{i,t} = \alpha + \beta_1 AT_{i,t} + \beta_2 FD_{i,t} + \beta_3 SOLV_{i,t} + \beta_4 KAP_{i,t} + \beta_5 AT * KAP_{i,t} + \beta_6 FD * KAP_{i,t} + \beta_7 SOLV * KAP_{i,t} + \beta_8 LIQ_{i,t} + \beta_9 PROFIT_{i,t} + \beta_{10} LEV_{i,t} + \beta_{11} FIRM_{i,t} + e_{i,t}$$

Where,

ARL	: Audit Report Lag – Dependent Variable
AT	: Audit Tenure – Independent Variable
FD	: Financial Distress – Independent Variable
SOLV	: Solvency (debt-to-assets ratio) – Independent Variable
KAP	: Public Firm Size – Moderating Variable
AT*KAP	: Interaction Variable between Audit Tenure and The Public Firm Size
FD*KAP	: Interaction Variable between Financial Distress and The Public Firm Size
SOLV*KAP	: Interaction Variable between Solvency and The Public Firm Size
LIQ	: Liquidity (current ratio) – Control Variable
PROFIT	: Profitability (return on assets) – Control Variable
LEV	: Leverage (debt-to-equity ratio) – Control Variable
FIRM	: Firm Size – Control Variable

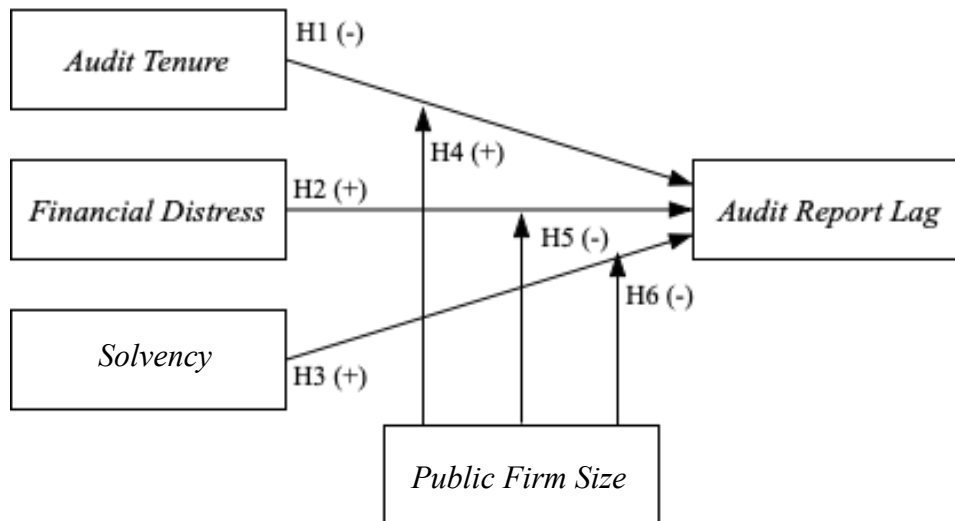


Figure 1. Conceptual Framework
Source: Processed by Author, 2023

Audit tenure can be defined as the number of years during which a public accounting firm is engaged with a client as its auditee (Rani and Triani, 2021). The more extended this engagement lasts, the better the auditor's comprehension of the client's industry and the pertinent audit standards becomes (Mufidah and Laily, 2019). Audit tenure is measured by calculating the initial engagement period as the number one (1) and continuously adding it if the engagement continues in subsequent periods.

Previous research conducted by Maulana (2018), Sidauruk and Sagita (2021), and Nurfauziah (2020) state that audit tenure has a negative impact on audit report lag. On the other hand, Abdillah, et al., (2022) state that audit tenure has a negative but not significant impact on audit report lag. Therefore, the hypothesis built is as follows:

H1: Audit tenure has a negative effect on audit report lag

The term financial distress can be defined as a condition where an entity's finances experience losses (deficit) over several periods, in which companies usually require a longer time to rectify the information obtained from the financial statements (Khamisah et al., 2021). The risk of financial distress can be caused by several things, including leverage (debt) and cash flow (Hanifah, 2023). Before commencing the audit procedure, an auditor is required to perform a risk assessment to evaluate the entity's financial condition. If the entity is facing financial difficulties, an auditor may require additional time which potentially leads to delays in the audit process (Loviera and Akhsani, 2023). Other than that, financial distress often leads auditors to be more skeptical of the information provided in a company's financial statements and therefore leads auditors to spend more time reviewing the content of the financial reports (Fitri, et al, 2021). Financial distress is evaluated through the Altman Z-Score method, devised by Edward I. Altman in 1968, employing the following formula:

$$Z = 1.2 X_1 + 1.4 X_2 + 3.3 X_3 + 0.6 X_4 + 0.99 X_5$$

Where:

Z = Standard Z-Score

X_1 = Working Capital to Total Assets (WCTA)

X_2 = Retained Earnings to Total Assets (RETA)

X_3 = Earnings Before Interest and Taxes to Total Assets (EBITA)

X_4 = Equity's Market Value to Total Liabilities (EMVTL)

X_5 = Total Sales to Total Assets (SETA)

The outcomes from the Altman Z-Score can be categorized into three groups. If the Z-Score is below 1.81, it signifies that the company is in an unstable financial state and potentially faces a risk of bankruptcy. Entities with Z-Scores falling between 1.81 and 2.99 fall into the grey area, denoting financial vulnerability. Conversely, if the Z-Score surpasses 2.99, it can be concluded that the entity is in a sound financial position (Altman, 2013).

Research conducted by Jehezekiel & Siagian (2022), Sabella, et al., (2021), Saputri, et al., (2021), and Saputri, et al., (2021) that financial distress leads to a prolonged audit report lag. Therefore, the hypothesis built is as follows:

H2: Financial distress has a positive effect on audit report lag

Solvency indicates an entity's capacity to settle its obligations using its owned assets (Sidauruk and Sagita, 2021). Entities with high solvency generally have diverse financial instruments and a more complex financial structure which makes the audit process more intricate and therefore increases the audit report lag value. Solvency is calculated using the debt-to-assets ratio, which compares the total debt to the total assets of the company (Ross, et al., 2023).

Previous research done by Khairunnisa and Praptiningsih (2022), and Fairuzzaman, et al. (2022) show that solvency results in a prolonged audit report lag. Therefore, the hypothesis built is as follows:

H3: Solvency has a positive effect on audit report lag

The public firm size is believed to have an influence on the completion time of the whole audit process. Accounting firms associated with the Big Four are reputed for completing audits more efficiently and quickly. This happens because *Big Four* accounting firms have more resources and experience (Widiastuti and Kartika, 2018). Additionally, *Big Four* accounting firms are believed to have better control systems, which ultimately affects the audit quality. Dummy variable is used to measure the size of public firm size, where it is assigned a value of 1 if the firm is associated with *Big Four* and a value of 0 if it is not associated with *Big Four*.

Research conducted by Boloni (2022) and Herlambang and Hastuti (2021) shows that the size of public accounting firms negatively impacts audit report lag. This statement indicates that the larger the size of the public accounting firm, the shorter the duration of audit, thus reducing the audit report lag. Therefore, the hypotheses built are as follows:

H4: The public firm size strengthens the negative effect of audit tenure on audit report lag

H5: The public firm size weakens the positive effect of financial distress on audit report lag.

H6: The public firm size weakens the positive effect of solvency (solvability) on audit report lag

3. RESULTS AND DISCUSSION

3.1. Descriptive Analysis

Based on the sample selection criteria, there are 135 companies from the Big 5 ASEAN countries that met the criteria. Since the research period is 3 years from 2020 to 2022, the total sample size comprises 405 data samples, which were subjected to descriptive statistical analysis, correlation tests, classical assumption tests, model specification tests, and hypothesis testing.

Table 1. Research data selection

No.	Description	Total
1	Companies within the real estate sector in the Big 5 ASEAN countries and listed on SandP Capital IQ for the period 2020-2022	386
2	Companies that listed after 2020 and delisted before 2022	(116)
3	Companies with incomplete financial report data during the period 2020-2022	(56)
4	Companies whose financial reporting period did not end on December 31	(51)
5	Companies whose financial reports were not published in English translation	(28)
	Number of Sample of Companies	135
	Number of years of observation	3
	Number of data samples	405

Source: Processed by the Author, 2023

3.2. Descriptive Statistical Analysis

Based on **Table 2**, the average value for audit report lag (ARL) is 107.1605. This indicates that the delay in reporting audit results tends to be good because the deadline for submitting audit reports in the Big 5 ASEAN countries ranges from 90 days (end of the 3rd month) to 180 days (end of the 6th month). Additionally, the minimum value is 34 and the maximum value is 199, with a standard deviation of 34.41788. A standard deviation significantly below the average value indicates a relatively uniform data dispersion.

Table 2. Descriptive statistical analysis

Variables	Obs.	Mean	Standard Deviation	Min.	Max.
ARL	405	107.1605	34.41788	34	199
AT	405	1.940741	0.8092561	1	3
FD	405	1.274519	1.604686	-9.89	9.74
SOLV	405	0.8076593	0.5045325	0.002	2.5
KAP	405	0.4197531	0.4941288	0	1
LIQ	405	3.985684	16.37225	0.07	308.79
PROFIT	405	0.0384242	0.750542	-0.7945	15.0096
LEV	405	0.7839309	3.242687	-51	10.67
FIRM	405	1203.624	3056.436	0.3064452	25926.42

Source: Processed by STATA ver. 17, 2023

Meanwhile, the average value for audit tenure (AT) is 1.940741, indicating that the average duration of engagement between sampled companies and auditors is below 2 years. Considering the 3-year research period, the minimum and maximum values are 1 and 3 respectively. The standard deviation for audit tenure is 0.8092561, and thus is less than the average value and therefore suggests a fairly even data dispersion.

For the financial distress (FD) variable, the average value is 1.274519 with a minimum value of -9.89 and a maximum value of 9.74. The average score indicates that the Big 5 ASEAN countries entities working in real estate industry are at risk of bankruptcy as the average Z- Score is below 1.81. The standard deviation is 1.604686 which is above the average value and thus indicating non-uniformity in the data.

The solvency (SOLV) variable has an average value of 0.8076593, indicating that companies are paying for their assets using at least 80% of debt, which is less favorable. The minimum value is 0.002 and the maximum value is 2.5. This results show how some companies are financing nearly all of their assets using equity, while others are using debt. The standard deviation is 0.5045325, which is below the average value and thus indicates relatively even data dispersion.

The public firm size (KAP) acting as a moderating factor has an average value of 0.4197531, indicating that only about 41% of sampled companies use auditors from Big Four. The public firm size variable is measured using dummy variable and thus has a minimum and maximum value of 0 and 1 respectively. The standard deviation is 0.4941288, slightly higher than the average, indicating some diversity in the data.

3.3. Correlation Test

The result of the Pairwise Correlation analysis indicates that the correlation coefficient between audit tenure (AT) and audit report lag (ARL) is -0.0732 with a significance level of 10% (0.10), which equals 0.05295 in a one-tailed test.

Table 3. Pairwise correlation analysis

Variables	ARL	AT	FD	SOLV	KAP
ARL	1.0000				
AT	-0.0732	1.0000			
	0.1417				
FD	-0.0241	0.1059**	1.0000		
	0.6280	0.0331			
SOLV	0.4769***	0.0021	-0.1811***	1.0000	
	0.0000	0.9665	0.0002		
KAP	-0.0789	0.0190	0.1431***	0.0745	1.0000
	0.1128	0.7026	0.0039	0.1342	
LIQ	-0.0670	0.0430	0.0910*	-0.1301***	-0.0836*
	0.1783	0.3884	0.0673	0.0087	0.0928
PROFIT	-0.0103	0.0765	0.3277***	-0.0608	-0.0220
	0.8368	0.1240	0.0000	0.2220	0.6590
LEV	0.0511	-0.0336	0.2364***	0.0594	0.1101**
	0.3051	0.4997	0.0000	0.2331	0.0268
FIRM	-0.0738	0.0365	0.0587	0.0481	0.2931***
	0.1381	0.4633	0.2386	0.3338	0.0000
Variables	LIQ	PROFIT	LEV	FIRM	
LIQ	1.0000				
PROFIT	0.0034	1.0000			
	0.9457				
LEV	-0.0255	-0.0027	1.0000		
	0.6087	0.9564			
FIRM	-0.0494	-0.0099	0.0794	1.0000	
	0.3210	0.8429	0.1106		

***, **, *, significance at the 1% (0.01) level, 5% (0.05) level, and 10% (0.10) level respectively.

Source: Processed by STATA ver. 17, 2023

Additionally, the correlation coefficient between financial distress (FD) and audit report lag (ARL) is -0.0241 but does not show significance at the 10% (0.10) level as the one-tailed test result is 0.314. Meanwhile, the correlation coefficient between solvency (SOLV) and audit report lag (ARL) is 0.4769 with a significance level of 1% (0.01) which equals to 0.0000.

Based on the correlation analysis using the pairwise correlation method, it can be concluded that there is no issue of multicollinearity in this research. This conclusion is drawn by observing that all the independent variables used in this research have correlation coefficient values below 0.8000.

3.4. Regression Model Selection

The testing for the regression model selection for both research model 1 and 2 was examined using three methods, namely the (1) Hausman Test, (2) the Chow Test, and (3) the Lagrange Multiplier Test.

Hausman Test is the first step to determine which method is more appropriate to execute data analysis, whether using the fixed effect model (FEM) or the random effect model (REM). The results for research model 1 show a Prob > chi2 value of 0.5026, while research model 2 shows a Prob > chi2 value of 0.7026 (shown in **Table 4**). As both the value exceeds the minimum threshold of 0.05 (5%), therefore both research models will be using the random effect model (REM).

Table 4. Hausman test

	Model 1	Model 2
chi2 (8)	7.32	7.92
Prob > chi2	0.5026	0.7206

Source: Processed by STATA ver. 17, 2023

Next is the Chow Test to compare between the pooled least squares (PLS) or common effect model (CEM) with the fixed effect model (FEM). The results for research model 1 show a Prob > F value of 0.1231 while research model 2 shows a Prob > F value of 0.1485 (shown in **Table 5**). This shows that both research models will be using the pooled least squares (PLS) or common effect model (CEM) as it exceeds the minimum amount of 0.05 (5%).

Table 5. Chow test

	Model 1	Model 2
F (134, 262)	1.19	1.17
Prob > F	0.1231	0.1485

Source: Processed by STATA ver. 17, 2023

Last is the Lagrange Multiplier Test which will compare between two model, namely the common effect (CEM) and random effect (REM). The results of research model 1 (see **Table 6**) show a Prob > chibar2 value of 0.1368 and research model 2 (see **Table 7**) shows a Prob > chibar2 value of 0.1511. This indicates that both research models will be using the common effect model (CEM) as the value exceeds the minimum threshold of 0.05 (5%).

Table 6. Lagrange multiplier test - Research model 1

	Var	SD = sqrt (Var)
ARL	1184.591	34.41788
e	842.5404	29.02655
u	55.03699	7.418692
		chibar2 (01) = 1.20
		Prob > chibar2 = 0.1368

Source: Processed by STATA ver. 17, 2023

Table 7. Lagrange multiplier test - Research model 2

	Var	SD = sqrt (Var)
ARL	1184.591	34.41788
e	850.7022	29.1668
u	55.67923	7.461852
		chibar2 (01) = 1.06
		Prob > chibar2 = 0.1511

Source: Processed by STATA ver. 17, 2023

3.5. Classical Assumption Test

3.5.1. Normality Test

The normality tests were conducted using three methods, namely (1) the Shapiro-Wilk test, (2) the Shapiro-Francia test, as well as (3) Skewness/Kurtosis test, where these tests are only mandatory for the dependent variable.

The significance values for the dependent variable which is audit report lag (ARL) were below the minimum threshold of 0.01, specifically Prob > Z = 0.00018 for the Shapiro-Wilk test (see **Table 8**), Prob > Z = 0.00086 for the Shapiro-Francia test (see **Table 9**), and Prob > chi2 = 0.0088 for the Skewness/Kurtosis test (see **Table 10**). Therefore, a Box-Cox treatment was performed to achieve a skewness level of 0. After the treatment, the data became normally distributed as the values were greater than 0.01 (1%), which is Prob > Z = 0.02533 for Shapiro-Wilk (see **Table 11**), Prob > Z = 0.07356 for Shapiro-Francia (see **Table 12**), and Prob > chi2 = 0.0423 for Skewness/Kurtosis test (see **Table 13**).

Table 8. Normality test (*Shapiro-Wilk*) - Before Box-Cox Treatment

Variables	Obs	W	V	Z	Prob > Z
ARL	405	0.98396	4.464	3.562	0.00018

Source: Processed by STATA ver. 17, 2023

Table 9. Normality test (*Shapiro-Francia*) - Before Box-Cox Treatment

Variables	Obs	W'	V'	Z'	Prob > Z
ARL	405	0.98581	4.255	3.134	0.00086

Source: Processed by STATA ver. 17, 2023

Table 10. Normality test (*Skewness/Kurtosis*) - Before Box-Cox Treatment

Variables	Obs	Skewness	Kurtosis	----- Joint Test -----	
				Adj chi2(2)	Prob > chi2
ARL	405	0.0083	0.0699	9.46	0.0088

Source: Processed by STATA ver. 17, 2023

Table 11. Normality test (*Shapiro-Wilk*) - After Box-Cox Treatment

Variables	Obs	W	V	Z	Prob > Z
ARL	405	0.99184	2.272	1.954	0.02533

Source: Processed by STATA ver. 17, 2023

Table 12. Normality test (*Shapiro-Francia*) - After Box-Cox Treatment

Variables	Obs	W'	V'	Z'	Prob > Z
ARL	405	0.99348	1.954	1.450	0.07356

Source: Processed by STATA ver. 17, 2023

Table 13. Normality test (*Skewness/Kurtosis*) - After Box-Cox Treatment

Variables	Obs	Skewness	Kurtosis	---- Joint Test ----	
				Adj chi2(2)	Prob > chi2
ARL	405	1.0000	0.0114	6.33	0.0423

Source: Processed by STATA ver. 17, 2023

3.5.2. Multicollinearity Test

The multicollinearity test was conducted by examining the Variance Inflation Factor (VIF) values, where the requirement is that the VIF values should be below 10, and the 1/VIF (tolerance) should approach 1. Based on the test results, research model 1 can be considered free from multicollinearity issues as the average VIF value is 1.09 and the 1/VIF values for each variable are below 1 (see **Table 14**). Similarly, research model 2 can also be considered free from multicollinearity issues as well because the average VIF value is 3.28, and the 1/VIF values for each variable are below 1 except for the size of public firm size as the moderating factor which has a VIF value of 11.45 (see **Table 15**).

Table 14. Multicollinearity test - Research model 1

Variables	VIF	1/VIF
FD	1.29	0.772367
PROFIT	1.14	0.878789
KAP	1.14	0.879486
FIRM	1.10	0.909525
LEV	1.09	0.916403
SOLV	1.07	0.935746
LIQ	1.03	0.966726
AT	1.02	0.980293
Mean VIF	1.11	

Source: Processed by STATA ver. 17, 2023

Table 15. Multicollinearity test - Research model 2

Variables	VIF	1/VIF
KAP	11.45	0.087313
AT*KAP	7.81	0.127980
SOLV*KAP	4.46	0.224255
FD*KAP	3.13	0.319007
AT	1.78	0.561704
SOLV	1.59	0.628216
FD	1.41	0.710068
PROFIT	1.15	0.871023
FIRM	1.10	0.907429
LEV	1.10	0.911055
LIQ	1.04	0.959121
Mean VIF	3.28	

Source: Processed by STATA ver. 17, 2023

3.5.3. Heteroscedasticity Test

The Heteroscedasticity test was conducted with the Breusch-Pagan method, where data is considered free from heteroscedasticity issues if the significance level (Prob > chi2) is above 0.10 (10%).

Based on the test results that shown in **Table 16**, research model 1 has a Prob > chi2 value of 0.3508 while research model 2 has a Prob > chi2 value of 0.2041. Therefore, it can be concluded that both research models do not experience heteroscedasticity issues.

Table 16. Heteroscedasticity test

	Model 1	Model 2
chi2 (1)	0.87	1.61
Prob > chi2	0.3508	0.2041

Source: Processed by STATA ver. 17, 2023

3.5.4. Autocorrelation Test

The autocorrelation test was conducted using the Durbin-Watson (DW) test, where research model 1 has a DW value of 2.349025 and research model 2 has a DW value of 2.356407 (shown in **Table 17**). The results of this test indicate that both research models have autocorrelation issues as they do not meet the criteria $dU < DW < 4-dU$. After the Cochrane-Orcutt Treatment, the DW value for research model 1 became 1.979591 while research model 2 became 1.985805. This indicates that both research models no longer have autocorrelation issues as they met the criteria $dU (1.872135) < DW (1.979591) < 4-dU (2.127865)$ for research model 1 and $dU (1.892865) < DW (1.979591) < 4-dU (2.107135)$ for research model 2.

Table 17. Autocorrelation test

	Model 1	Model 2
Original	1.887862	2.356407
Transformed		1.985805

Source: Processed by STATA ver. 17, 2023

3.5.5. Model Specification Test

According to the F-statistic test results, the probability value (Prob > F) obtained for both research models was 0.0000. This indicates that every independent variables included in the research models influence the dependent variable which is audit report lag (ARL) simultaneously. It is said so because the significance level is less than 0.10 ($F < 0.10$).

The coefficient determination test results are based on the values of R-squared and Adj. R-squared. Research model 1 has an R-squared value of 0.2432 and Adj. R-squared value of 0.2299 (shown in **Table 18**). This indicates that the independent variables used can explain 24.32% of the dependent variable which is audit report lag. Conversely, research model 2 has an R-squared value of 0.2594 and Adj. R-squared value of 0.2387 (shown in **Table 19**). These numbers show that the independent variables used can explain 25.94% of the dependent variable which is audit report lag. According to the rule of thumb parameter, the Adj. R-squared values for both research models fall into the strong / reasonably good category as the values are above 0.2.

Table 18. F Statistic test and determination coefficient test - Research model 1

Source	SS	df	MS	No. of obs =	405
Model	2110.62711	8	263.828389	F (7, 397) =	16.98
Residual	6153.88434	396	15.540112	Prob > F =	0.0000
Total	8264.51144	404	20.4567115	R-squared =	0.2554
				Adj R-squared =	0.2403
				Root MSE =	3.9421

Source: Processed by STATA ver. 17, 2023

Table 19. F Statistic test and determination coefficient test - Research model 2

Source	SS	df	MS	No. of obs =	405
Model	2114.20127	11	194.927388	F (7, 397) =	12.52
Residual	6120.31018	393	15.5733083	Prob > F =	0.0000
Total	8264.51144	404	20.4567115	R-squared =	0.2594
				Adj R-squared =	0.2387
				Root MSE =	3.9463

Source: Processed by STATA ver. 17, 2023

3.6. Hypothesis Test

Audit tenure (AT) produces a coefficient value of -0.3790492, indicating a negative impact on audit report lag (ARL) (see **Table 20**). The probability value ($P > |t|$) is 0.053 (0.106 / 2) in a one-tailed test, making audit tenure (AT) significant at the 10% (0.10) level. Therefore, it can be concluded that audit tenure negatively affects audit report lag and **H1 is accepted**.

Table 20. t-Statistic test - Research model 1

Dependent Variable: ARL						
Period: 2020 - 2022						
ARL	Coefficient	Robust Std. Error	t	P > t	[95% conf. interval]	
AT	-0.3790492	0.2342434	-1.62	0.106*	-0.8395654	0.081467
FD	0.2966051	0.1682334	1.76	0.079**	-0.0341372	0.6273474
SOLV	4.472717	0.399822	11.19	0.000***	3.686678	5.258757
KAP	-1.075629	0.4256586	-2.53	0.012	-1.912462	-0.2387957
LIQ	-0.0074139	0.0079393	-0.93	0.351	-0.0230223	0.0081946
PROFIT	-0.0550334	0.1040517	-0.53	0.597	-0.2595961	0.1495293
LEV	0.0172673	0.0455973	0.38	0.705	-0.0723758	0.1069104
FIRM	-0.0000982	0.000039	-2.52	0.012	-0.0001749	-0.0000215
_CONS	19.98972	0.7042398	28.38	0.000	18.60521	21.37424

Source: Processed by STATA ver. 17, 2023

Based on the hypothesis testing results, it was found that audit tenure, measured by the duration of engagement between the client and the auditor, negatively impacts audit report lag. In simpler terms, a longer audit tenure corresponds to a shorter audit reporting time. This occurs due to a high level of audit engagement, in which it shows that the auditor has a good

understanding of the client's company, which leads to a shorter period for completing the audit process.

Audit tenure plays a critical role in influencing both agency theory and compliance theory. From the agency theory's perspective, shorter duration of audit report can mitigate the risk of agency problems such as information asymmetry. This timely reporting aligns the interest of financial statement users such as investors and management, and therefore fostering greater trust and reducing the likelihood of arising conflicts from information imbalances. Conversely, the compliance theory suggests that a longer audit tenure can significantly impact the auditor's efficiency in ensuring adherence to regulatory requirements. This happens as deepened understanding of the entity allows more effective audits and thus contribute to reducing audit report lag.

This research outcome is consistent with previous studies conducted by Maulana (2018), Sidauruk and Sagita (2021), and Nurfauziah (2020), in which all indicated that audit tenure has a negative impact on audit report lag. However, it differs from the findings of Abdillah, et al., (2022) who stated that audit tenure affects audit report lag negatively, but not significantly.

Financial distress (FD) shows a coefficient value of 0.2966051, signifying a positive influence on audit report lag (ARL). The probability value ($P > |t|$) in a one-tailed test is 0.0395 ($0.079 / 2$), making financial distress (FD) significant at the 5% (0.05) level. Thus, it can be concluded that financial distress has a positive effect on audit report lag and **H2 is accepted**.

The results from the hypothesis testing reveal that financial distress exerts a positive impact on audit report lag. This signifies that a company's financial difficulties which were measured by the Altman Z-Score method will slow down the audit process. Based on the analysis, the average value of financial distress is 1.27. This indicates that on average, the sampled companies are in a financially vulnerable condition because their Z-Score is below 1.81.

According to the agency theory, when a company faces financial distress, it typically strives to enhance the financial statements' quality which at the end could affect the duration of the audit report completion. Not only that, distress situations also increases the risk of information asymmetry as it necessitates more rigorous audit procedures and thus extending the audit duration. From the compliance theory perspective, the financial distress situation will increase the complexity of ensuring compliance with all relevant regulations and standards. This detailed and cumbersome process further prolongs the audit process as auditors need to gather extensive evidence.

This research's findings are in line with prior research done by Jehezkiel & Siagian (2022), Sabella, et al., (2021) and Saputri, et al., (2021), and Saputri, et al., (2021), all of which found that financial distress has a positive impact on audit report lag. However, this research's results differ from those found by Fairuzzaman, et al. (2022) who stated that financial distress has a positive but insignificant effect on audit report lag.

Solvency (SOLV) exhibits a coefficient value of 4.472717, indicating a positive effect on audit report lag (ARL). The probability value ($P > |t|$) is 0.000, making solvency (SOLV) significant at 1% (0.01) level. Therefore, it can be said that solvency has a positive effect on audit report lag and **H3 is accepted**.

Based on the test results, solvency which was measured by comparing debt amount to assets amount shows a positive impact on audit report lag. This means that high solvency values generally prolong the duration of the audit process. These results can be explained by the fact that when the solvency ratio is high, a company has a wider variety of financial instruments, leading to a more complex financial structure. Consequently, auditors typically require more time

to complete the examination process and thus influence the compliance theory as companies possibly exceed the predefined deadlines of the audited financial statements submission.

From the agency theory perspective, the intricate nature of financial structures and potential for management complacency in solvent companies can indicate a more thorough audits, and thus extending the duration of audit as the complexity often demands auditor to delve deeper into entity's operation and transactions. Conversely, from the compliance theory perspective, the rigorous compliance regulatory requirements faced by solvent companies can complicate the audit process and thus prolong the audit duration. This happens as stringer compliance frameworks and regulatory impose additional demands on auditors.

These findings are in consistency with previous research conducted by Fairuzzaman et al., (2022) and Khairunnisa and Praptiningsih (2022), both stating that solvency depicts a positive impact on audit report lag. However, this research's results differ from those found by Shofiyah and Suryani (2020) who stated that solvency shows a positive but insignificant effect on audit report lag.

The relationship between audit tenure (AT) and the public firm size (KAP) as the moderating variable shows a correlation coefficient value of -0.2360216 with a probability value ($P > |t|$) of 0.312 in a one-tailed test (shown in **Table 21**). This indicates that the public firm size could potentially enhance the negative impact of audit tenure on audit report lag, but is not significant at the 10% level. Thus, **H4 is rejected**.

Table 21. t-Statistic test - Research model 2

Dependent Variable: ARL						
Period: 2020 - 2022						
ARL	Coefficient	Robust Std. Error	t	P > t	[95% conf. interval]	
AT	-0.2683338	0.3001047	-0.89	0.372	-0.8583453	0.3216776
FD	0.3026296	0.1876324	1.61	0.108	-0.0662592	0.6715184
SOLV	4.090251	0.4874428	8.39	0.000	3.131929	5.048572
KAP	-1.317461	1.487281	-0.89	0.376	-4.241484	1.606562
AT*KAP	-0.2360216	0.4816093	-0.49	0.624	-1.182874	0.7108311
FD*KAP	-0.1026463	0.4332687	-0.24	0.813	-0.9544607	0.7491681
SOLV*KAP	1.056402	0.8015264	1.32	0.188	-0.5194134	2.632218
LIQ	-0.0089799	0.0079715	-1.13	0.261	-0.024652	0.0066922
PROFIT	-0.0799775	0.1178637	-0.68	0.498	-0.3116997	0.1517448
LEV	0.0180425	0.047274	0.38	0.703	-0.0748991	0.1109841
FIRM	-0.0001015	0.0000377	-2.69	0.007	-0.0001756	-0.0000274
_CONS	20.07692	0.8544385	23.50	0.000	18.39708	21.75676

Source: Processed by STATA ver. 17, 2023

The relationship between financial distress (FD) and the public firm size (KAP) as the moderating variable shows a correlation coefficient of -0.1026463 with a probability value ($P > |t|$) of 0.4065 in a one-tailed test. This indicates that the public firm size can weaken the positive effect of financial distress on audit report lag, but is not significant at the 10% level. Thus, **H5 is rejected**.

The relationship between solvency (SOLV) and the public firm size (KAP) as the moderating variable has a correlation coefficient of 1.056402 with a probability value ($P > |t|$) of 0.094 in a one-tailed test. Although solvency shows significance at the 10% level, however the direction of

the correlation coefficient is not as expected. This indicates that the public firm size cannot weaken the positive effect of solvency on audit report lag. Thus, **H6 is rejected**.

These findings do not align with previous studies by Bagaskara, et al., (2023) and Boloni (2022) which state that the size of a public firm size has a negative impact on audit report lag, meaning that the duration of audit process becomes shorter as the size of public accounting firm increases.

4. CONCLUSION

The objective of this research is to explore the connection between several variables, namely the audit tenure, financial distress, and solvency on audit report lag using the public firm size as the moderating factor. Audit report lag serves as a crucial element for companies as it can be used to assess whether a company complies with the regulations, particularly regarding the submission deadline. Despite previous studies on this topic, discrepancies still exist thus prompting the author to re-evaluate using different variables, broader country scope, and including a moderating factor. The research findings reveal that audit tenure reduces audit report lag. On the other hand, financial distress and solvency increase audit report lag. However, it was not established that the public firm size moderates the effects of audit tenure, financial distress, and solvency on audit report lag.

There are several limitations in this research, including the exclusion of numerous real estate sector companies that did not meet the criteria, a restricted research period and industry focus. Consequently, the sample size may not be large enough, therefore potentially impacting the accuracy of the results and creating sampling bias. Thus, it is recommended to broaden the criteria for the company selections to enhance accuracy and consider doing a cross-country comparative analysis for broader insights. Through this research, it is hoped to provide implications for companies, where the findings can offer additional insights into several factors that contribute to audit report lag. Moreover, the research aims to assist in managing risks related to audit report lag, which enables companies to promptly take action to mitigate these risks. Not only that, but the research findings are also expected to serve as a foundation and additional reference for future researchers conducting further studies on other factors influencing audit report lag.

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