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The Effects of Financial Distress, Operational Complexity, and Audit Quality on Audit Report Lag in Property and Real Estate Companies Listed on the Indonesia Stock Exchange

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Abstract

The timeliness of financial report submissions determines information of stakeholders, but delays still occur among issuers on Indonesia Stock Exchange including property and real estate sub-sector, which ranks second with a delay rate of 14.6%. These delays are concerning audit report lag duration from fiscal year-end until auditor's report is issued because audit duration could be longer, the greater the likelihood that a company will exceed 90-day filing maximum set by OJK Law. Therefore, aim of researcher's study is examining influence of financial distress, operational complexity, and audit quality on audit report lag. This quantitative applied secondary type of data from financial statements also annual reports related to property & real estate companies registed on IDX during 2021-2025 period. Researcher filtered samples by purposive sampling, to reach 73 companies and 365 observations. Grover score analyzed financial distress, subsidiaries' number to measure operational complexity, and audit firm size to measure audit quality (Big Four and non-Big Four). To analyze study data, researcher applied panel data regression with REM via EViews 13. This study findings show positive influence from financial distress on ARL significantly, whereas both operational complexity and audit quality show insignicant influence. Thus, financial condition of a company is the only factor proven to influence auditing duration.

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INTRODUCTION

Timeliness is an element which establishes relevance of information about financial aspect, as information must be available before users make decisions in order to influence those decisions. Financial reports that are submitted late lose their usefulness, widen information asymmetry in the market, and encourage stakeholders to make investment decisions without adequate verification (Ebaid, 2022; Hendi & Sitorus, 2023). In context related to this country, Indonesia, Otoritas Jasa Keuangan or OJK Law Number 14 / POJK.04 / 2022 defines requirement for issuers to transmitting their annual financial report, maximum 90 days subsequent to fiscal year-end.

However, an initial review of Indonesia Stock Exchange data is indicating a compliance with these deadlines has not been consistent. The percentage of issuers which listed late to reporting their financial statements stood at 20.40% in 2021, fell to 13.71% in 2022, rose again to 18.20% in 2023, peaked at 28.76% in 2024, and remained at 19.10% in 2025. By sector, the highest proportion of late submissions was in Consumer Cyclicals (21.1%), followed by property & real estate (14.6%), energy (12.8%), and basic materials (12.4%). This study selected property with real estate fields attributable to distinctive elements, namely holding fixed assets and high-value investment properties, complex fair value assessments, and a strong dependence on macroeconomic conditions such as interest rates and property

tax policies, resulting in relatively high audit risk. The OJK also recognizes the unique nature of this sector through OJK Law Number 28 / POJK.04 / 2021 about "Valuation & Presentation of Property Valuation Reports in the Capital Market".

One of the most important components of the financial statement reporting timeframe named ARL or "Audit Report Lag", represents number of days started by fiscal year-end date until the date stated on independent auditor's report (Li *et al*., 2025). ARL merely measures audit duration in a neutral manner, whereas delays indicate compliance status with deadlines. Nevertheless, if ARL extends, likelihood will become better (a company will exceed the 90-day limit set by the OJK). Therefore, factors that prolong audit duration need to be identified, particularly in public companies in sectors with high audit risk. Researcher's study is mainly focused on 3 factors: financial distress, operational complexity, also audit quality (Adam *et al*., 2022; Nurquran & Ardianto, 2023).

First factor, financial distress is defined as a situation of company comes up against its problems financially, as evidenced by a weakened capability to get obligations in both long and short terms (Purwanti et al., 2024). This condition caused higher audit risk through misstatements potential in financial statements and uncertain business continuity, thereby requiring auditors to perform more detailed additional procedures (Khamisah et al., 2023; Tampubolon, 2025). Financially distressed companies also tend to have longer ARLs (Ebaid, 2022; Park & Choi, 2023) and management may delay disclosing negative information to avoid a negative market reaction (Prastiwi & Farida, 2024). Empirical findings supporting this direction have been reported by (Napisah & Soeparyono, 2024; Tantianty & Uzliawati, 2023). Conversely, according to (Adam et al., 2022; Arianti, 2022; Putri & Silaen, 2022; Riyadi & Ullaya, 2026) found no effect of financial distress on ARL. This discrepancy in results indicates that the alternative hypothesis namely, that financial distress does not affect audit duration still has empirical support.

Operational complexity reflects the intricacy of business activities, as evidenced by the number of subsidiaries. Companies with high complexity typically have more transactions, larger assets, and accounting estimates that require professional judgment (Balqis & Erinos, 2023; Sihombing & Nofryanti, 2025). Auditors must test these estimates and review the consolidated financial statements of both the parent and subsidiary companies, thereby broadening the scope of the audit. Several studies have found that operational complexity extends the ARL (Adam et al., 2022; Endri et al., 2024; Khamisah et al., 2023). However (Napisah & Soeparyono, 2024; Nurjanah *et al.*, 2022; Riyadi & Ullaya, 2026) report that operational complexity does not affect the ARL, so the evidence regarding this variable remains inconsistent.

Audit quality reflects a capability from auditor to analyze also submit material misstatements through adequate audit procedures, supported by independence and objectivity (Gazali & Amanah, 2022). By framework of agency theory, independent audits served to be a part of monitor which mitigates asymmetry of information among principals with agents. Researcher applied public accounting firms (PAFs) size to be proxy in audit quality, since the Big Four PAFs generally excel in competence, experience, resources, and audit methodology, enabling them to operate more efficiently without compromising audit quality (Li *et al*., 2025). As indicated by (Gazali & Amanah, 2022; Li *et al*., 2025) higher audit quality shortens the ARL. In contrast, (Resti & Indra, 2024) found that its influence directly insignificant, while (Royani, 2026) reported that the size or quality of the PA firms actually lengthens the ARL. These conflicting results prove audit quality's position in ARL is still recognized as debate's subject/topic.

From above discussion, researcher needs to addressing this study gap. Findings regarding influence from these factors for ARL are inconsistent; previous studies have generally examined only one or two variables amongst various samples also periods, studies which examine all 3 simultaneously among property & real estate corporates of 2021-2025 remain scarce. Aims of researcher's study is testing also obtaining factual evidences related to influence from financial distress, operational complexity, also audit quality for ARL in property & real estate companies registed on IDX in period of 2021-2025. Its proposed hypotheses are financial distress with operational complexity shows actual influence in

positive term, while audit quality shows actual influence in negative term for ARL. All findings from researcher's study hopefully are predicted to generate more comprehensive empirical evidence for auditors, management, regulators, and investors regarding the determinants of audit duration.

LITERATURE REVIEW

Agency Theory

This element in (Jensen & Meckling, 1976) is characterized as correlation of principals (owner of company) with agents (management team) in the context of corporate governance. Principal grants agent about its authority to organize operational in company on their behalf (Purba, 2023). Consequently, the principal has a fundamental need to obtain transparent information regarding the company's condition and activities, particularly those related to the use of invested funds. This need is met through accountability reports prepared by management, which subsequently serve as principal's assessment basis of performance from agent over a specific period.

Correlation of both parties often gives rise to unavoidable interest issues. The principal generally expects improved well-being through optimal company performance, whereas the agent has personal interests that do not always align with those objectives. This issue is further complicated through asymmetry in materials/information, given that management has its authority to far more comprehensive information, comparing to company's owners. Such conditions create opportunities for management to act opportunistically, including reporting company's financial statements which is not fully proving factual condition and by delaying the disclosure of information that could potentially harm the principal. An effective oversight mechanism is needed to ensure management provides various information that considered accountable, also this mechanism is realized through audits conducted by independent auditors. Auditors are tasked with examining and addressing their ideas on financial statements' fairness so that the information presented by management has a higher level of reliability. Independent auditors' existence are required to reduce information asymmetry while minimizing interest risk of principal with agents.

Within that oversight framework, audit quality plays a crucial role. Auditors that hold great audit quality are presumed to have capability of detect or uncover material misstatements, present audit process consistently as per professional criterias, and produce reliable audit reports, so that independent auditor's report can be issued on time. Conversely, low quality of auditing may potentially prolong audit activities as result of requirement of auditors about extend duration to obtain sufficient audit evidence. A company's financial condition also influences the audit process. Companies experiencing financial distress pose higher audit risks, ordering auditors to execute examination activities to obtain reasonable assurance regarding the going concern and financial statements'fairness; agency theory explains that increased corporate risk necessitates that principals intensify their oversight of management's actions Similarly, companies with many subsidiaries, business units, or diverse operational activities require a broader scope of examination, and the agency theory perspective suggests that the higher the operational complexity, the greater the potential for information asymmetry and agency costs, thus necessitating a more comprehensive audit process. Thus, agency theory provides a solid conceptual foundation for explaining correlation of these factors.

Audit Report Lag

Definition of ARL is time span ordered to finish all audit duties, calculated in days by end of fiscal year until the date stated on report of independent auditor (Li *et a*l., 2025). ARL reflects duration until financial statements are set to be published, and this duration is largely determined by how quickly the auditor completes the audit (Balqis & Erinos, 2023). For publicly listed companies in Indonesia, the deadline is 90 days subsequent to end of fiscal year, as stipulated by OJK. Thus, companies with a longer ARL are not necessarily late, and a delay only occurs if that deadline is exceeded.

ARL is often used to be basis in assessing financial reporting's timeliness through financial statements which has been audited to be applied for primary information materials to share with investors. The longer the ARL, the greater the uncertainty that may arise in decision-making, which could potentially influence stakeholders' assessments and responses to the information presented (Li et

al., 2025). Delaying transmit financial statements may reduce usefulness or relation of information to economic decision making (Endri et al., 2024). ARL has affected by endogenous elements include financial situation, operational complexity, also size as well as external elements related to auditors conducting the audit.

From an internal perspective, a company's financial condition encompasses aspects of profitability, solvency, and liquidity. Companies with weak financial performance or those experiencing financial distress typically face a higher risk of misstatement, so auditors are ordered to conduct a better thorough and detailed examination. A study about property & real estate corporates in 2021 - 2023 demonstrated that financial condition has a significant impact on ARL (Wahyuningsih & Melania, 2024). Operational complexity reflects the level of intricacy in a company's activities, which can be identified by the subsidiaries' amounts, projects managed's amounts, and breadth from its operational territory; empirical findings show that companies with high complexity have more audit run duration considering their needs to gather another data and perform more detailed procedures (Adam et al., 2022). Company size, typically measured by total assets, sales revenue, or controlled resources, also plays a role because larger entities are generally supported by stronger internal control systems, a more capable workforce, and more organized accounting records, enabling auditors to gather evidence also finsih audit with shorter duration (Fairuzzaman et al., 2022).

From external perspective, auditor quality and reputation encompass professional competence, experience, independence, also PAF's image. Talented auditors such as those from Big4 firms mostly have capability to efficiently finish audits, even for complex or high-risk companies, and such auditors can significantly reduce ARL (Kusumawardhany, 2025). Audit tenure that is, duration of collaboration PAF with their clients allow auditors to gain deeper understanding of client's criterias, financial condition, and operations (Nurjanah et al., 2022). Audit opinion is correlated with audit's final results. Auditors with industry specialization tend to make decisions regarding the audit opinion more quickly, whereas the need for additional procedures before the opinion is determined can prolong audit's completion (Sastrawan et al., 2022).

Financial Distress

Financial distress is defined as a situation of company comes up against its issues financially, characterized by a decline in performance and an inability to meet short-term obligations (Andriani et al., 2022). This condition increases audit risk because the likelihood of misstatements in financial statements becomes higher. Companies experiencing financial distress require greater attention during the audit process, and auditors must produce detailed-examination process through ensuring financial statements' fairness. This process results in a longer audit duration and leads to an increase in ARL (Prastiwi & Farida, 2024).

Operational Complexity

Operational complexity explained intricacy category of operational correlated with breadth of its business operations and is reflected in the number of subsidiaries it owns (Napisah & Soeparyono, 2024; Nurianti et al., 2024). These conditions require auditors to understand more information and perform more detailed audit procedures. If this element categorized in higher level, effort required in the audit process can be better, as auditors need to examine the company's various transactions and operational processes in greater depth, thereby extending the time required. Operational complexity thus has a positive relationship with ARL, where increased complexity is accompanied by an increase in audit time (Rachman et al., 2024).

Audit Quality

Audit quality reflects a capability from auditor in their duties including identify or report issues in financial statements, indicating the auditor's effectiveness in detecting or uncovering material misstatements, thereby enhancing financial statements' reliability (Hivianto & Kurniawati, 2025).

This element extends beyond the accuracy of findings; it also influences the entire audit process from start to finish. High-quality auditors assess risks more carefully, gather evidence more systematically, and complete all stages of the examination more efficiently without compromising professional standards. These conditions facilitate the earlier release of report from independent auditor,

thereby shortening ARL. Conversely, when audit quality is low or auditors face competency limitations, the audit process tends to drag on and ultimately prolongs the ARL (Li et al., 2025).

Hypothesis Development

Influence from Financial Distress for Audit Report Lag

Financial distress described as situation of company experiences a decline through its financial performance, characterized by weakened capability to get obligations in both long and short terms (Sumarni, 2022). This condition caused higher audit risk through misstatements potential in financial statements and uncertain business status. In this situation, auditors share responses by exercising greater caution, including through additional testing, expanded audit procedures, and evaluation of the assumptions used by management. This process takes longer than for companies with stable financial conditions, thereby contributing to an increase in ARL.

Several empirical researches proved financial distress affects ARL. Explained by (Napisah & Soeparyono, 2024) financial distress showed influence for ARL positively, with corporates come up againts financial issues tending to face long duration of audit processes. Similar findings were reported by (Tantianty & Uzliawati, 2023) which states that financial distress can lead to negative market perceptions if it becomes known to shareholders. This situation prompts companies to manage the disclosure of information particularly adverse information more cautiously, thereby lengthening the audit process. It is indicating if financial distress' level gets higher, ARL may takes longer duration.

H1: Financial distress Influences ARL positively.

Influence from Operational Complexity for Audit Report Lag

Operational complexity reflects intricacy's level in operational activities, as evidenced by the number of subsidiaries and the scope of its operations (Napisah & Soeparyono, 2024; Nurianti et al., 2024). Companies with high operational complexity generally have broader organizational structures, requiring auditors to conduct more thorough examinations of various business units. Increasing complexity also heightens the need of auditors to figure out its systems, operational processes, and inherent risks, thereby prolonging the audit process.

Previous research indicates that operational complexity influences audit run-time (ARL). According to (Khamisah et al., 2023) Correlation of corporate complexity with ARL categorized positive, whereby increased complexity such as the number of subsidiaries results in the auditor requiring more time to finish audit. It is coherent to agency theory, if operational scale is bigger, required disclosures become more complex, thereby increasing agency costs. Thus, operational complexity is one of the factors influencing audit's duration.

H2: Operational complexity Influences ARL positively.

Influence from Audit Quality for Audit Report Lag

The Effect of Audit Quality on Audit Report Lag

As explained in agency theory, correlation of principals with agents shows potential to give rise to interest issues through asymmetry in materials or information. Management side, as the agent, possesses detail information of situation in company comparing to principal; therefore, principal employs oversight mechanisms through audits conducted by independent auditors. Auditors with high audit quality are expected to verify financial statements' fariness so information's reliability is maintained.

Audit quality is closely related to auditors' capability to analyze and inform data misstatements also present whole audit activities through professional criterias, supported by experience, adequate understanding, and structured work procedures. Competent, independent, and experienced auditors tend to be able to plan audits in a more structured manner, identify risks more accurately, and obtain sufficient audit evidence more efficiently. These capabilities allow audits to be completed more quickly without compromising the quality of the examination, thereby minimizing ARL. High-quality auditors also serve as effective monitor in decreasing issues about interest among principals with agents, as well as promoting a more efficient and measurable audit process.

Some of previous researches proved audit quality with ARL. A review (Li et al., 2025) found that audit quality was shown to accelerate audit completion in progress, while significantly decreasing ARL. A study (Gazali & Amanah, 2022) showed influence from audit quality for ARL negatively, indicating

that if audit quality gets higher and thus auditors' quality will be greater to faster financial statements can be finalized. By theoretical foundation also empirical support in this study, audit quality is predicted to influence audit completion'duration.

H3: Audit quality Influences ARL negatively.

METHOD

Researcher applied quantitative type utilizing secondary data by all property & real estate companies registed in IDX. The methodological description is presented sequentially, starting from the research approach, data form or data sources, determination of its population & sample, measurement of variables, also analysis techniques to verify hypotheses.

Research Approach

Researcher mainly selected quantitative for influence of financial distress, operational complexity, and audit quality on ARL. Quantitative methods are including a philosophy of positivism also applied to identify exact population and its sample, whereas collecting data by instruments. Study data obtained are then analyzed using statistical techniques to test pre-determined hypotheses (Sugiyono, 2023).

Data Types & Resources

Secondary data applied in this study, while data gained by third parties who have made it available. The data consists of annual financial statements also annual reports from companies of property & real estate registed in IDX during 2021-2025 published on official site (www.idx.co.id). All information collected includes financial statements dates, independent auditor's reports date, subsidiaries' amounts, financial data necessary to assess the companies' financial condition, and information regarding KAP to audited companies.

Population & Sample

Study population include individuals or units possessing specific characteristics according to criteria established by the researcher, and its size can be precisely determined (Alamsyah et al., 2022) For researcher's study, this comprises whole companies registed on IDX, totaling 93 companies.

Researcher determined samples by *non probability sampling* that does not give every member of its population are equally selected through purposive method. This method selects study sample with predetermined criteria or considerations (Alamsyah et al., 2022) Criteria of sample that required in this study is listed below.

1. Company runs property & real estate, also registed on IDX during 2021-2025.
2. Company runs property & real estate that has completed annual financial statements available consecutively for 2021-2025.

Table 1. Sampling

Notes	Total
Property & real estate company registed on IDX during 2021–2025	93
Property & real estate company that does not have complete annual financial statements for 2021–2025	(20)
Total of Company samples	73
Total of Company samples × years of observation (5 years)	365

Source: Indonesia Stock Exchange, processed data (2026)

Based on these criteria, 73 companies filled study requirements. By a five-year observation, the data points calculated in study reached 365.

Operational Definitions and Variable Measurement

In researcher's study, dependent factor (Y), namely audit report lag, and 3 independent factors: financial distress (X1), operational complexity (X2), also audit quality (X3).

Audit Report Lag (Y)

Audit report lag is audit process's duration, calculated in days, from company's fiscal year-end date until date stated on report from independent auditor (Li et al., 2025). To measure this element, researcher calculated day amounts between financial statement date which generally ends on December 31 with date stated on report from independent auditor (Endri et al., 2024; Prastiwi & Farida, 2024). If value increases, it proves longer duration of audit but does not in itself indicate a delay.

ARL = Audit Report Date - Financial Statement Date

Financial Distress (X1)

Financial distress is a condition in which a company comes up against financial difficulties characterized by a decline in its capability to get obligations in both short and long term (Andriani et al., 2022; Purwanti et al., 2024). To measure this element, researcher used Grover (2001), namely, a model developed through the redesign and evaluation of the Altman Z-Score model (Abadi & Misidawati, 2023). This model was selected because, according to (Rokhmah & Suhadi, 2025) it has a fairly high level of accuracy in classifying financial condition of companies in Indonesia, and according to (Utami & Mahastanti, 2022) and (Dozen & Tannia, 2026) it shows biggest accuracy in analyzing financial distress of companies compared to other predictive models. The Grover (2001) model formula explained below.

$$G = 1{,}650X_1 + 3{,}404X_2 - 0{,}016ROA + 0{,}057$$

Explanation:

X1 = Working Capital / Total Assets
X2 = Earnings Before Interest and Taxes / Total Assets
ROA = Net Income / Total Assets

Interpretation of results: a company is labeled as healthy (not experiencing financial distress) when $G \geq 0.01$, is experiencing financial distress when $G \leq -0.02$, and is in the gray area when $-0.02 < G < 0.01$, meaning it cannot be classified into either of the other two categories.

Operational Complexity (X2)

Operational complexity reflects intricacy's level in company's operational activities, which may arise from a large number of business segments and an extensive organizational structure, such as the presence of subsidiaries. To measure this element, researcher used subsidiaries amounts owned by company during a specific period (Nurianti et al., 2024). This indicator is based on the assumption if subsidiaries increases, the consolidation of its financial statements and internal controls will be more complex; thus, if subsidiaries' number becomes greater, complexity of company's operations will be higher.

Operational Complexity = Number of Subsidiaries

Audit Quality (X3)

Audit quality explained capability of auditor to in their duties including identify or report issues in financial statements, followed by valid audit procedures. This variable is measured using the accounting firm (KAP) classification, which distinguishes between firms categorized Big 4 or Non groups (Li et al., 2025). This proxy is based on the assumption that Big Four firms possess better resources, experience, and quality control systems, and thus tend to produce higher audit quality. The measurement uses a dummy variable, which takes one point in position a company gets audited by one of Big 4 firm and zero point if gets audited by one of Non Big 4 firm.

Data Analysis

Researcher was analyzing data by panel regression technique, cross sectional is combined with time

series data also assistance by Eviews 13 software. This study is entirely quantitative and therefore does not employ qualitative analysis. Prior to analysis, the data were examined to address outliers using the winsorizing method. This method replaces observations outside a certain percentile boundary with the value at that percentile boundary, thereby maintaining the same number of observations (Zubedi et al., 2022). In this study, score that does not exceed 5% gets replaced by 5% when score above 95% gets replaced by 95% (Suwardi & Saragih, 2023). This procedure does not automatically guarantee that the model is free from statistical issues, this will decrease extreme observations' influence on estimation results.

Descriptive Statistical Tests

This method applied for explaining study data objectively, without gaining aim of describing general conclusions or making generalizations (Sugiyono, 2023). Its analysis includes min. score, max. score, mean, standard deviation, also skewness score of all study variables namely, financial distress, operational complexity, audit quality, and ARL to establish characteristics and distribution of the data prior to further testing.

Panel Data Regression Model

There are 3 basis regression models include 1) CEM or Common Effect; 2) FEM or Fixed Effect; and 3) REM or Random Effect Model (Ratnasari et al., 2023). Most relevant model is verified by 3 tests with criteria of reaching its sig. score (0,05). First, Chow method focused in comparing CEM with FEM to identify significant differences in characteristics between individuals, using FEM estimates; p score below standard 0,05 shows FEM is more applicable, then p score above 0,05 shows CEM is more applicable. Second, Hausman method focused in comparing FEM with REM to identify correlation of influence from independent factors individually, using REM estimates; p score below standard 0,05 proves FEM is more applicable, then p score above 0,05 proves REM is more applicable. Third, LM or Lagrange Multiplier method focused in comparing CEM with REM to prove REM is more applicable without individual influences, using CEM estimates; p score below standard 0,05 proves REM is more applicable, then p score above 0,05 shows CEM is more applicable.

Panel Data Regression

This regression methos applied to explain correlation followed by influence of several independent factors on one dependent factor by combining time series with cross sectional dimensions (Ratnasari et al., 2023). This method is appropriate because the research data covers several companies observed over multiple periods, resulting in more accurate and comprehensive estimates. The formula is written below.

$$ARL_{it} = \alpha + \beta_1 FD_{it} + \beta_2 KO_{it} + \beta_3 KA_{it} + \varepsilon_{it}$$

Notes:

ARL = Audit Report Lag
FD = Financial Distress
KO = Operational Complexity
KA = Audit Quality

Hypothesis Testing

This test applied to explain formulated hypothesis is categorized rejected or accepted based on its data. Simultaneous test checks if all independent factors simultaneously affect dependent factor while also indicating regression model's validity; sig. score below 0,05 proves model is valid. Partial test checks partial influence from independent factors individually for dependent factor; sig. score below 0,05 proves hypothesis is accepted and variable considered significant. R^2 or coefficient of determination identify ability of independent factors in explaining dependent factor, score range between 0 - 1, if score reaches close to 1 proves effective model explanatory.

RESULTS AND DISCUSSION

Overview of Study Subject

Subject consists of issuers in sub-sector of property and real estate on IDX during 2021 to 2025, whose business activities involve the development, ownership, and management of properties such as residential areas, apartments, office buildings, shopping centers, and industrial estates. This subsector was selected because, based on IDX data, it ranked second in the proportion of late financial report submissions, at 14.6%. By 93 companies from study population, 73 are fulfilled sample requirements (Table 1), resulting in 365 firm-year observations. Data that reported on annual financial statements and annual reports downloaded from IDX and issuers' official sites.

Descriptive Statistics

An initial examination of the skewness values indicated that the audit report lag (ARL) and operational complexity (KO) had extremely high values; therefore, these two variables were handled using winsorization of 5% with 95% percentiles without decreasing observations' number. Results are explained below.

Table 2. Descriptive Statistics (N = 365)

Variable	Minimum	Maximum	Mean	Median	Std. Deviation	*Skewness*	Kurtosis
ARL (before)	41	388	92,45479	87	32,00672	4,344147	30,38221
ARL (after)	59	124,5	88,62740	87	15,62198	0,447823	3,375123
FD	−2,889600	2,436300	0,472435	0,476100	0,624677	−1,351114	9,657449
KO (before)	0	239	18,92055	6	38,94765	3,775443	17,42319
KO (after)	0	93,75	14,92466	6	22,32779	2,481945	8,819262
KA	0	1	0,104110	0	0,305822	2,592580	7,721471

Source: output of Eviews 13, processed data (2026).

Notes: ARL = audit report lag; FD = financial distress (Grover score); KO = operational complexity; KA = audit quality.

The average ARL before winsorizing was 92.45 days with max. score is 388 days, skewness score is 4,344147, and kurtosis score is 30.38221, indicating a right-skewed distribution with heavy tails. After winsorizing, the average ARL decreased to 88,63 days, standard deviation decreased from 32,01 to 15,62, skewness became 0,447823, and kurtosis became 3,375123, making the ARL distribution closer to symmetrical. For the KO variable, the median number of subsidiaries is 6 with mean score 14,92 after winsorizing, indicating that most companies have only a few subsidiaries, while a small fraction have a very large number of entities. The skewness and kurtosis of KO decreased but remained above the practical guidelines (skewness > 2 or kurtosis > 7) (Kline, 2023), Thus, the handling of outliers has not fully eliminated the skewness of the distribution.

The financial distress with mean score 0,472435, which is above 0,01 threshold in the Grover model; thus, on average, the sample is classified as healthy. However, min. score is -2,889600 falls below -0,02 threshold, and standard deviation is 0,624677 proves there are still observations experiencing financial distress. The audit quality with mean score, 0,104110, meaning that only about 10.41% of the observations have audited by Big 4 firms also about 89.59% have audited by another firms (Non).

Panel Data Regression Model Results

Results of all tests are explained in Table 3 with sig. standard 0,05. Both Chow and LM test yielded p-score 0,0000, proves FEM is more applicable than CEM also REM is more applicable than CEM. While Hausman test yielded p-score 0,4888 above its sig. standard 0,05, proves REM is more applicable than FEM. Therefore, the estimation was performed using REM.

Table 3. Panel Data Regression Results

Test	Statistics	Prob. Score	Selected Model
Chow	3.390823	0.0000	FEM
Hausman	2.425965	0.4888	REM
LM *Breusch–Pagan*	73.04371	0.0000	REM

Source: output of Eviews 13, processed data (2026)

Regression Estimation Results and Hypothesis Testing

The REM estimation results applying GLS method or namely Generalized Leas Squares yielded following equation, with ARL and KO using winsorized data (ARL_W5 and KO_W5).

$$ARL_W5 = 91.963647 – 4.370478FD – 0.093855KO_W5 + 1.241661KA$$

The constant of 91.963647 represents the predicted ARL value when all independent variables are zero. A negative FD coefficient proves increased unit in Grover score which signifies increasingly sound financial health shortens the ARL by 4.370478 days. KO coefficient score -0.093855 shows very small change per additional subsidiary, and KA coefficient score 1.241661 means Big 4 accounting firms' clients are predicted to undergo audits that are 1.241661 days longer than Non Big 4 accounting firms' clients. Both F and T results is presented in Table below.

Table 4. Partial (T) Results

Variable	Coefficient	*t-Statistic*	*t-Table*	Prob.	Decision
Financial distress	-4.370478	-2.677202	1.966521	0.0078	H1 accepted
Operational Complexity (KO_W5)	-0.093855	-1.640665	1.966521	0.1017	H2 rejected
Audit Quality	1.241661	0.308837	1.966521	0.7576	H3 rejected

Source: output of Eviews 13, processed data (2026)

Table 5. F & R^2 Results

Measure	Value
f-statistic	3.575994
f-table	3.020661
Probability (*f* -statistic)	0.014187
R^2	0.028860
Adj. R^2	0.020789

Source: output of Eviews 13, processed data (2026)

From table, F score (3.575994) above its F table (3.020661) with sig. score 0.014187 < 0.05; thus, these 3 independent factors affects ARL in simultaneous term, and model is deemed valid. In T test, only financial distress has t-statistic score (2.677202) above its T table (1.966521) with sig. score 0.0078, while operational complexity (p-score 0.1017) and audit quality (p-score 0.7576) are not significant. An Adj. R^2 score of 0.020789 proves 3 independent factors capable in explaining 2.08% ARL variation, and other 97.92% is explained by external variables that not including in this study, such as profitability, firm size, auditor tenure, or audit opinion category.

Discussion

Influence of Financial Distress on Audit Report Lag

There is influence of financial distress on ARL significantly, thus supporting the first hypothesis. Since a lower Grover score proves worse financial situation, companies which are increasingly approaching financial distress tend to undergo longer duration of audits. This finding can be interpreted by agency theory (Jensen & Meckling, 1976). Company management possesses more complete information than shareholders, and independent audits serve as a control mechanism for the reliability of financial statements. Companies experiencing financial distress face higher risks of misstatement and uncertainty regarding business continuity; consequently, auditors expand their procedures and gather more evidence. Management of distressed companies also tends to be cautious in disclosing negative information, which can prolong the completion of financial statements.

The sample's average Grover score (0.472435) is above the healthy threshold of 0.01, but differences in scores across companies remain correlated with audit duration. This indicates that auditors consider clients' financial conditions when determining the scope of audit procedures not only when companies are already in distress. These results are consistent with those of (Tantianty & Uzliawati, 2023), and (Napisah & Soeparyono, 2024) which found that better financial strain in company, duration of auditing process can be longer. Conversely, these results differ from those of (Arianti, 2022), (Putri & Silaen, 2022), (Khamisah et al., 2023), and (Riyadi & Ullaya, 2026), which found no association between financial distress and audit duration. These gaps could be correlated to sector's variation, observation period, also measures used to assess financial distress. This study applies the Grover model to this study sector which model from (Utami & Mahastanti, 2022) and (Dozen & Tannia, 2026) is best suited to read financial distress in that sector, thereby reporting high level of accurate reflection of financial condition of a company.

Influence of Operational Complexity on Audit Report Lag

There is insignificantly influence of Operational complexity on ARL (p-score 0.1017), and the negative coefficient runs counter to the direction of the second hypothesis; therefore, the second hypothesis is rejected. The coefficient value is very small and not statistically significant; thus, it is not appropriate to interpret that a larger number of subsidiaries accelerates the audit. According to agency theory, a broader corporate structure has the potential to increase information asymmetry and agency costs and requires auditors to examine more entities and consolidated financial statements; however, the data in this study are not yet strong enough to support this reasoning.

Several data characteristics are thought to be related to these results. The median number of subsidiaries is only 6, while the mean is 14.92 after winsorizing; thus, the variation in complexity is concentrated in a small subset of observations, and its effect is more difficult to detect statistically. Furthermore, the number of subsidiaries represents only one aspect of business complexity and does not reflect transaction complexity, differences in business activity characteristics, or the quality of accounting information systems; companies with integrated recording systems can complete the collection of audit evidence without taking significantly longer, even if they have many subsidiaries. These findings align with (Nurjanah et al., 2022), (Napisah & Soeparyono, 2024), also (Riyadi & Ullaya, 2026) who found no association between operational complexity and audit duration, but differ from (Adam et al., 2022) also (Khamisah et al., 2023) who found that increasingly complex operations prolong the audit. These differences may be due to firm characteristics, the observation period, and the method used to measure operational complexity. These findings do not rule out the possibility of such a relationship but indicate that it was not statistically significant in the sample and period studied.

Influence of Audit Quality on Audit Report Lag

As proxied by PAF's size, there is insignificantly influence of audit quality on ARL (probability 0.7576). The positive coefficient (1.241661) which indicating clients of Big 4 PAF undergo audits that last slightly longer; however, this difference is insignificant and runs counter to the direction of the third hypothesis, so the third hypothesis is rejected. Agency theory views independent audits to be monitor for decreasing asymmetry in information, then Big 4 firms are expected to complete audits more efficiently due to their superior resources, professional staff, methodologies, and quality control systems

(Li et al., 2025). However, this advantage was not reflected in a significant difference in ARL in this sample.

There are several factors that are believed to be related to these results. First, only about 10.41% of the observations have audited by Big 4 PAF and about 89.59% by Non Big 4 PAF; thus, the imbalance in the number of observations made it difficult to detect differences in ARL between the groups. Second, the average ARL after winsorization of 88.62740 days, with a median of 87 days, is already close to 90-day deadline which explained in OJK Law Number 14/POJK.04/2022; since this limit applies to all issuers, clients of both Big 4 and Non tend to complete audits within a similar timeframe. Third, audit duration may be more heavily affected by other elements such as corporate size, auditor's engagement period, or the type of audit opinion; furthermore, grouping audit firms into two categories does not account for audit quality dimensions such as individual auditor competence, independence, and the effectiveness of procedure implementation.

These results align with those of (Resti & Indra, 2024) on transportation & logistics issuers registed on IDX during 2018 to 2022, which found relations with Big 4 PAF had insignificantly influence on audit duration (probability 0.667) and also yielded a positive coefficient. According to them, audits whether conducted by high-quality or less reputable accounting firms follow the same standard procedures; thus, audit duration is more determined by the company's operational conditions and systems. Furthermore, the majority of their sample was not audited by a Big 4 firm, equivalent to this study sample. The similarity of findings across two distinct sectors reinforces the indication of accounting firm size has not yet become a strong differentiator for audit duration among listed companies in capital market. Conversely, these findings contradict those of (Gazali & Amanah, 2022; Li et al., 2025) which suggest that high audit quality shortens audit time, and differ from (Royani, 2026) which reports that audit quality actually prolongs the audit, as well as (Nurjanah et al., 2022) which found that the firm's reputation influences audit duration. These differing results may be driven by industry, sample characteristics, the observation period, and the proportion of Big Four clients; however, this explanation cannot be confirmed without further testing.

CONCLUSION

This study examines the effects of financial distress, operational complexity, and audit quality on audit report lag in 73 companies in the property and real estate subsector registed on IDX during 2021 to 2025, with 365 observations analyzed by applying panel data regression with REM. Simultaneous test indicate all 3 variables collectively show significantly influence on audit report lag (f-statistic probability 0.014187). However, adj. R^2 score only reached 2.08%, proves explanatory of model to describe audit duration's variation is very weak, and most of its variation is described by external elements of model.

From these independent variables, only financial distress shows significantly influence in individual term. The Grover score coefficient of -4.370478 with a probability of 0.0078 indicates that if Grover score gets lower signifies worsening financial condition and audit completion time can be longer. Thus, H1 is accepted. All results suggest that auditors treat a client's financial condition as a source of audit risk, leading them to expand their examination procedures and gather additional evidence before issuing a report. This finding aligns with the agency theory framework used in this study, namely that financial distress exacerbates information asymmetry, thereby necessitating more thorough and time-consuming oversight by auditors.

In contrast, operational complexity checked with subsidiaries' number does not show influence on audit report lag significantly (probability 0.1017); thus, H2 is rejected. Audit quality, proxied by the size of Big 4 and Non accounting firms, also had no significant effect (probability 0.7576), and the coefficient was positive contrary to the initial assumption thereby leading to rejecting H3. These two results are interrelated because they both indicate that structural characteristics whether the number of entities in a business group or the firm's affiliation are not sufficient to distinguish audit duration in this sample. Two conditions in the research data are suspected to play a role. First, approximately 89.59% of companies were audited by Non Big 4 firms, so the differences among groups of accounting firms are very small. Second, the average ARL for sample 88.6 days is close to the 90-day deadline for submitting reports, so all companies tend to complete their audits within a similar timeframe regardless

of complexity or the accounting firm used. In this sample, audit duration is determined more by financial stage of company than by subsidiaries number or firm size.

These findings have implications for several parties. For company management, maintaining financial health and preparing documentation and supporting evidence from the outset are crucial steps to prevent the audit process from dragging on, particularly for companies with low financial scores. For auditors, clients with weak financial conditions require the allocation of more audit time and resources to ensure the audit is completed on schedule. For investors and capital market authorities, a long audit report lag at real estate companies can be interpreted as an additional signal of financial strain of company, and the fact that the average audit report lag is approaching the 90-day threshold indicates that the window for submitting financial statements is narrowing. This condition highlights the importance of continued attention from OJK and the Indonesia Stock Exchange to ensure that issuers maintain timely financial reporting practices. Therefore, monitoring compliance with financial reporting deadlines remains important, particularly for property and real estate companies whose average audit report lag is already close to the regulatory limit. For accounting and auditing education, these findings can serve as an empirical example that audit risks stemming from a client's financial condition show direct affect on audit duration.

This study has limitations that should be noted. The model includes only three independent variables, resulting in low explanatory power; the scope of the study is limited to the property and real estate subsector for the 2021-2025 period; and financial distress is measured using only one model the Grover model. Future research could include variables such as company size, profitability, auditor tenure, and type of audit opinion; expand the scope to other sectors over a longer period; and compare several prediction models of financial distress such as, Springate, Altman Z-Score or Zmijewski to test consistency of these findings.

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