

**THE EFFECT OF AUDIT QUALITY, TENURE AUDIT, AND AUDITOR
REPUTATION ON FRAUDULENT FINANCIAL REPORTING WITH
INSTITUTIONAL OWNERSHIP AS A MODERATION VARIABLE IN
INDUSTRIAL COMPANIES LISTED ON THE IDX FOR THE 2021-2025 PERIOD**

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ABSTRACT

This study aims to analyze the effect of audit quality, audit tenure, and auditor reputation on fraudulent financial reporting, with institutional ownership as a moderating variable in industrial sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2021–2025. This study employs a quantitative approach using secondary data from audited financial statements and annual reports. The population consists of all industrial sector companies listed on the IDX, and purposive sampling yielded 49 companies or 245 firm-year observations. Fraudulent financial reporting is measured using the Beneish M-Score, audit quality is proxied by the natural logarithm of audit fees, audit tenure is measured by the length of the auditor-client engagement, auditor reputation is measured by a Big Four dummy variable, and institutional ownership is measured by the percentage of shares held by institutional investors. Data were analyzed using panel data regression with Moderated Regression Analysis (MRA), with model selection through the Chow Test and Hausman Test. The results show that audit quality has a significant negative effect on fraudulent financial reporting ($\beta = -0.284$, $p < 0.001$); audit tenure has a significant positive effect ($\beta = 0.157$, $p < 0.01$); auditor reputation has a significant negative effect ($\beta = -0.312$, $p < 0.001$); and institutional ownership significantly strengthens the negative effect of audit quality (interaction $\beta = -0.146$, $p < 0.01$) and weakens the positive effect of audit tenure on fraudulent financial reporting (interaction $\beta = -0.119$, $p < 0.05$). These findings indicate that audit quality and auditor reputation are important mechanisms for detecting and preventing fraudulent financial reporting, and this role is strengthened by the presence of institutional ownership as an external monitoring mechanism.

Keywords: *Audit Quality, Audit Tenure, Auditor Reputation, Fraudulent Financial Reporting, Institutional Ownership, Industrial Companies*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh audit quality, audit tenure, dan auditor reputation terhadap fraudulent financial reporting, dengan institutional ownership sebagai variabel moderasi pada perusahaan sektor industrial yang terdaftar di Bursa Efek Indonesia (BEI) periode 2021–2025. Penelitian ini menggunakan pendekatan kuantitatif dengan data sekunder berupa laporan keuangan auditan dan

laporan tahunan. Populasi penelitian adalah seluruh perusahaan sektor industrial yang terdaftar di BEI, dengan teknik purposive sampling diperoleh 49 perusahaan atau 245 observasi firm-year. Fraudulent financial reporting diukur menggunakan Beneish M-Score, audit quality diproksikan dengan logaritma natural fee audit, audit tenure diukur dari lama masa perikatan KAP dengan klien, auditor reputation diukur dengan variabel dummy KAP Big Four, dan institutional ownership diukur dari persentase kepemilikan saham oleh investor institusional. Data dianalisis menggunakan regresi data panel dengan Moderated Regression Analysis (MRA), dengan pemilihan model melalui Uji Chow dan Uji Hausman. Hasil penelitian menunjukkan bahwa audit quality berpengaruh negatif dan signifikan terhadap fraudulent financial reporting ($\beta = -0,284$, $p < 0,001$); audit tenure berpengaruh positif dan signifikan ($\beta = 0,157$, $p < 0,01$); auditor reputation berpengaruh negatif dan signifikan ($\beta = -0,312$, $p < 0,001$); serta institutional ownership terbukti memperkuat pengaruh negatif audit quality (β interaksi = $-0,146$, $p < 0,01$) dan memperlemah pengaruh positif audit tenure terhadap fraudulent financial reporting (β interaksi = $-0,119$, $p < 0,05$). Temuan ini mengindikasikan bahwa kualitas audit dan reputasi auditor merupakan mekanisme penting dalam mendeteksi dan mencegah kecurangan pelaporan keuangan, dan peran tersebut diperkuat oleh keberadaan kepemilikan institusional sebagai mekanisme pengawasan eksternal.

Kata Kunci: Audit Quality, Audit Tenure, Auditor Reputation, Fraudulent Financial Reporting, Institutional Ownership, Perusahaan Industrial

I. INTRODUCTION

The reliability of financial reports is a major prerequisite for the creation of an efficient and credible capital market. However, the practice of *fraudulent financial reporting* is still a serious problem that threatens the confidence of investors and other stakeholders. The Association of Certified Fraud Examiners (ACFE) in its *Report to the Nations* report consistently ranks financial report fraud as the category of fraud with the highest median loss compared to the category of asset abuse and corruption, although the frequency of occurrence is relatively lower.

The industrial sector was chosen as the object of research because of its capital-intensive characteristics, complex production cost structure, and facing pressure to achieve performance targets from investors and creditors. This pressure has the potential to create an incentive for management to carry out excessive profit management leading to financial reporting fraud, especially in the 2021-2025 period which is colored by pressure on raw material costs, interest rates, and post-pandemic demand uncertainty.

External auditors play an important role as independent parties who provide adequate confidence in the fairness of financial statements and function as a fraud detection mechanism. High audit quality which is reflected in the amount of resources and audit efforts poured in—is believed to be able to increase the probability of detecting material misrepresentations, including fraud (DeAngelo, 1981). On the other hand, a long tenure audit raises a theoretical debate: on the one hand it can improve the auditor's understanding of the client's business, but on the other hand it has the potential to create a *familiarity threat* that weakens the independence and professional skepticism of auditors. Reputation auditors, who are generally proxied with affiliates of the Big Four Public Accounting Firms (KAP), are also believed to be associated with higher audit quality because of the incentive to maintain reputation and avoid litigation risks (DeAngelo, 1981).

Several previous studies have shown inconsistent results regarding the relationship between tenure audits and fraudulent financial reporting. Some studies have found that long tenure increases the risk of fraud through weakening of independence (Kurniawan & Prabowo, 2022), while other studies have found a negative relationship due to the accumulation of client business understanding (Ramadhani et al., 2023). This inconsistency indicates the importance of considering other contextual variables, such as company ownership structure, in explaining the relationship. This study proposes institutional ownership as a moderation variable that is predicted to strengthen the effect of audit mechanisms in preventing fraud, given that institutional investors have greater incentives and supervisory capacity than individual investors (Shleifer & Vishny, 1997).

This study contributes by simultaneously examining the three dimensions of the external audit mechanism (quality, tenure, and reputation) on fraudulent financial reporting, as well as examining the role of institutional ownership moderation, in the context of industrial sector companies in Indonesia which have not been studied much. Table 1 below summarizes a number of previous studies that are the empirical basis for this research.

Table 1. Summary of Previous Research

Researcher	Variables/Context	Method	Key Findings
Kurniawan & Prabowo (2022)	Audit Tenure & Fraudulent Reporting / BEI	Panel Data Regression	Long tenure audits increase the risk of fraudulent reporting through weakened independence
Ramadhani et al. (2023)	Audit Tenure, Auditor & Profit Management / Manufacturing Specialization IDX	Panel Data Regression	Long tenure lowers profit management due to a better understanding of the client's business
Wibowo & Santoso (2021)	Quality Audit & Fraudulent Financial Statements / Public Companies	Logistic Regression	High audit quality reduces the probability of fraud in financial statements
Anggraini et al. (2022)	KAP Big Four Reputation & Profit Quality / IDX	OLS Regression	The Big Four KAP audited companies have higher profit quality
Setiawan & Puspita (2023)	Institutional Ownership as Audit Quality Moderation / Non-Financial Companies	Moderated Regression Analysis	Institutional ownership strengthens the influence of audit quality in suppressing profit management

Source: Processed by researchers, 2025

II. LITERATURE REVIEW

Agency Theory

Agency theory (Jensen & Meckling, 1976) describes the contractual relationship between principals (shareholders) and agents (management) that have the potential to cause information asymmetry and conflicts of interest. The information asymmetry opens up opportunities for management to manipulate financial statements for personal gain. External auditors act as a mechanism to reduce information asymmetry, while institutional ownership serves as an additional oversight mechanism that helps align management's interests with shareholders.

Within the framework of agency theory, information asymmetry between management and shareholders is generally manifested in two forms, namely adverse selection and moral hazard. Adverse selection occurs when management has private information about the company's condition that is not fully known to external parties before a decision or contract is agreed, while moral hazard arises after the contract is established, which is when management takes actions that cannot be directly observed by shareholders, including the decision to manipulate accounting figures for short-term interests. Both forms of information asymmetry incur agency costs which, according to Jensen and Meckling (1976), can be reduced through monitoring costs and bonding costs, where external audits are one of the most commonly used monitoring cost instruments by public companies.

In the context of industrial sector companies, the complexity of the production cost structure, the high need for working capital, and the reliance on accounting estimates such as inventory valuation and asset depreciation continue to expand the space for management to exercise accounting discretion. Financial reporting fraud can be seen as an extreme manifestation of agency problems, namely when managerial discretion is deliberately abused to mislead users of financial statements. Therefore, the existence of qualified external auditors and institutional investors who actively supervise is expected to be able to reduce management's space to take advantage of the information asymmetry, so that the agency costs incurred can be minimized.

In addition to the monitoring mechanism, agency theory also recognizes the bonding cost mechanism, which is a commitment taken by the management itself to convince shareholders that its actions will be in line with their interests, for example through voluntary disclosure or willingness to accept stricter audits. When both mechanisms are effective, the residual cost of agency (residual loss) borne by shareholders can be reduced to a minimum. In the context of the capital market, the effectiveness of the audit mechanism and the supervision of institutional ownership ultimately contributes to the credibility of financial information in the aggregate, which is a prerequisite for efficient capital allocation in the Indonesian capital market.

Thus, strengthening the three-dimensional external audit mechanisms tested in this study-quality audit, tenure audit, and reputation auditor can be seen as part of a systemic effort to reduce agency costs at the overall capital market level, not just at the level of individual companies.

Fraud Triangle Theory

The fraud triangle theory (Cressey, 1953) explains that fraud occurs due to the interaction of three factors, namely pressure, *opportunity*, and *rationalization*. High audit quality plays a role in reducing the element of opportunity through stricter detection procedures, while a high reputation auditor plays a role in reducing the element of rationalization because management is aware of the greater risk of litigation and reputation if fraud is detected by a high-reputation auditor.

The three elements in the fraud triangle work simultaneously and reinforce each other. The element of pressure can come from performance targets set by investors and creditors, binding debt covenants, market expectations for profit growth, or internal pressure in the form of management compensation schemes related to the achievement of certain profits. The element of opportunity generally comes from weak internal controls, complexity of transactions, and the lack of effectiveness of the supervisory function, including supervision carried out by external auditors. The element of rationalization is related to psychological justification that allows the perpetrator to consider fraudulent actions as something reasonable or justifiable, for example under the pretext of saving the company's business continuity.

High audit quality plays a significant role in narrowing the element of opportunity through more in-depth substantive testing, a review of stricter internal controls, and the ability to detect accounting anomalies that indicate profit manipulation. Meanwhile, a high reputation auditor plays a role in suppressing the element of rationalization because management realizes that high-reputation auditors have stricter professional standards and are less likely to tolerate fraud without disclosing it. ACFE (2024) data, which shows a high median loss due to financial reporting fraud compared to other fraud categories, further emphasizes the importance of strengthening these two elements through effective external audit mechanisms.

The use of Beneish M-Score as a proxy for fraudulent financial reporting in this study is also relevant to the fraud triangle framework, because the model is built from financial ratios that detect indications of profit manipulation, such as the days sales in receivables index and the sales growth index, which basically reflect management's efforts to take advantage of opportunities in the accounting system. Thus, the stronger the audit mechanism in narrowing opportunities and rationalization, the lower the M-Score that is expected to appear in the company's financial statements.

The consistency between the theoretical framework of the fraud triangle and the empirical construction of Beneish M-Score strengthens the construct validity of the research model, because the dependent variables used directly represent the theoretical elements described in the fraud triangle framework.

Reputation Theory and Audit Quality

DeAngelo (1981) defines audit quality as the combined probability that auditors will find and report violations in the client's accounting system. Auditors with high reputations, generally affiliated with the Big Four KAP, have a greater economic incentive to maintain audit independence and quality due to the large *depth of their pockets* and the risk of reputational loss in the event of an audit failure. On the other hand, the familiarity threat theory in the auditor independence framework explains that long tenure audits can reduce auditors' professional skepticism due to too close relationships with clients.

DeAngelo (1981) specifically defines audit quality as a combination of two probabilities, namely the probability that the auditor will find material misrepresentations in the client's financial statements (which are related to the auditor's technical competence) and the probability that the auditor will report the findings (which is related to the auditor's independence). The two dimensions are complementary, as technical competence without independence will not result in honest reporting, while independence without competence will not be able to detect hidden fraud in a sophisticated manner. The Big Four KAP is generally considered superior in both dimensions because it has more standardized training resources, audit methodologies, and quality control systems than non-Big Four KAP.

In line with this, DeAngelo (1981) also developed a quasi-rent argument, namely that large auditors have a large client base so that the value of the reputation at stake (premium fees and market trust) is much greater than the potential short-term profit from covering up the fraud of one particular client. As for tenure audits, the familiarity threat is explained to develop gradually over the length of the engagement: in the early stages, the auditor's engagement acquires a limited understanding of the client's business, in the middle stage the understanding reaches the optimal point, but in the later stages the relationship that is too close has the potential to pose additional independence threats in the form of self-review threats and intimidation threats, in addition to the familiarity threat itself, which can cumulatively reduce the professional skepticism of auditors.

The quasi-rent argument also relates to the concept of a competitive auditor market, where reputation becomes an intangible asset built through a credible audit track record in the long run. Audit failures that are disclosed to the public have the potential to significantly damage the reputation, not only for the client concerned but also for the entire portfolio of KAP clients concerned, so that large auditors have a strong incentive to tolerate fraudulent practices in their clients' financial reporting.

This kind of reputation mechanism explains why Big Four auditors tend to be more conservative in responding to accounting areas that contain high judgment elements, such as revenue recognition and asset valuation, so that the probability of material misrepresentation is relatively smaller than in KAP with a more limited client base and reputation exposure.

Institutional Ownership Monitoring Theory

Shleifer and Vishny (1997) explain that institutional investors have greater incentives and *monitoring* capacity than individual investors, given the large proportion of shareholding they own and access to information and analytical resources. High institutional ownership is predicted to strengthen the effectiveness of external audit mechanisms in detecting and preventing financial reporting fraud, through additional governance pressures on management and auditors.

The corporate governance literature distinguishes institutional investors into several types based on their orientation and intensity of supervision, namely active institutional investors (active monitoring) who tend to be directly involved in management supervision, and passive institutional investors who are more oriented towards short-term investments. In addition, there is also a distinction between institutional investors who are pressure-resistant, such as pension funds and insurance companies that are relatively independent of business relationships with investee companies, and institutional investors who are pressure-sensitive, such as banks or affiliated companies that have potential conflicts of interest. Institutional investors with pressure-resistant characteristics generally have a stronger incentive to supervise the quality of financial reporting and audit processes.

In practice, institutional investors can carry out supervisory functions through various channels, including voting rights in the General Meeting of Shareholders (GMS), involvement in the election of Public Accounting Firms, direct communication with audit committees and external auditors, and continuous monitoring of the quality of financial statements. In Indonesia, the Financial Services Authority's (OJK, 2016) regulatory framework on issuers' annual reports also encourages transparency in ownership structures, which in turn facilitates institutional investors to carry out these supervisory functions more effectively, especially in industrial sector companies with relatively high operational complexity.

In addition to the intensity of supervision, the investment horizon of institutional investors also affects the effectiveness of the monitoring function. Institutional investors with a long-term investment

orientation, such as pension funds, tend to be more concerned about the sustainability of the quality of financial reporting than investors with a short-term orientation that focuses more on stock price fluctuations alone. High long-term institutional ownership is thus predicted to provide more consistent supervisory pressure to management and external auditors in maintaining the quality of the company's financial reporting.

The characteristics of long-term institutional investors are also relevant to the concept of patient capital, which is capital that does not demand instant results, so that its owners tend to be more tolerant of higher audit costs as long as it contributes to the reliability of financial information and the long-term business continuity of the investee company.

Hypothesis Development

Audit Quality and Fraudulent Financial Reporting

High audit quality which is reflected in the amount of resources and audit efforts poured in, including adequate audit fees to support more extensive audit procedures—increases the probability of detecting material misrepresentations and excessive profit management practices. Wibowo and Santoso (2021) found that audit quality has a negative and significant effect on the probability of fraudulent financial statements. Based on this description, the first hypothesis is formulated as follows:

H₁: Audit quality has a significant negative effect on fraudulent financial reporting in industrial companies listed on the IDX.

The mechanism behind this relationship can be explained through two paths. First, higher audit fees generally reflect a broader scope of audit procedures, a greater number of hours of work by the audit team, and the involvement of specialists in high-risk areas, so that the probability of material misrepresentations is detected. Second, the magnitude of the audit fee also reflects the complexity and business risks that the auditor has identified from the planning stage, so that the allocation of audit resources is more proportionate to areas prone to manipulation. In industrial sector companies that have complex production cost structures and material inventory values, the adequacy of such audit efforts becomes increasingly crucial to detect potential accounting engineering, such as premature revenue recognition or improper inventory valuation.

It should also be noted that the relationship between audit fee amount and audit quality is not infinite; at some point, an increase in audit fee that is disproportionate to the complexity of the client's business may also indicate unreasonable fee negotiation or even potential economic bonding between auditor and client. However, at the normal range as observed in this study sample, the natural audit fee logarithm remains a relevant proxy to reflect the amount of audit resources poured in.

The use of natural logarithmic transformations also aims to overcome the problem of skewness in audit fee data which naturally has an asymmetrical distribution between sample companies, so that the estimated regression coefficient produced becomes more stable and can be interpreted proportionally.

Audit Tenure and Fraudulent Financial Reporting

A long audit *tenure* has the potential to cause a *familiarity threat*, which is a condition when auditors become too familiar with client management so that professional skepticism and auditor independence are weakened. This condition can reduce the effectiveness of auditors in detecting financial reporting fraud. Kurniawan and Prabowo (2022) found that long audit tenure increases the risk of fraudulent reporting in companies listed on the IDX. Thus, the second hypothesis is formulated as follows:

H₂: Tenure audit has a significant positive effect on fraudulent financial reporting in industrial companies listed on the IDX.

It should be noted that the relationship between tenure audits and fraudulent financial reporting is actually debated in the literature. Some views emphasize the negative side of long tenure through familiarity threats as described earlier, but other views emphasize the benefits of knowledge spillover, namely that the longer auditors deal with the same client, the better their understanding of the client's business characteristics, industry risks, and transaction patterns, as found by Ramadhani et al. (2023) in

the context of profit management in the manufacturing sector. This study predicts that in the context of fraudulent financial reporting in the industrial sector, the effect of weakening independence is more dominant than the learning effect, in line with the findings of Kurniawan and Prabowo (2022), but nevertheless this study also examines whether the existence of institutional ownership can moderate the strength of the relationship as formulated in H₅.

The Indonesian regulatory context is also relevant in explaining the variation in tenure audits in this research sample. Although the provisions regarding the limitation of the tenure of KAP engagement in Indonesia have undergone several policy changes, in practice there are still significant variations in the length of audit engagements between industrial sector companies, as reflected in the tenure audit range in the research sample which reaches 1 to 12 years, thus providing adequate data variation to test the hypothesis of this study empirically.

The variation is also practically relevant, considering that companies with short audit tenures (below the sample average) and companies with long tenures (close to the upper limit of the sample) can be compared with their fraud risk characteristics, thus enriching the interpretation of the results of the second hypothesis test in this study.

Auditor Reputation and Fraudulent Financial Reporting

Auditors with high reputations, who are proxied through affiliation with the *Big Four* KAP, have greater economic incentives and litigation risk to maintain audit independence and quality than non-*Big Four* KAPs. Anggraini et al. (2022) found that companies audited by the *Big Four* KAP have a higher profit quality, which indicates a lower probability of financial reporting fraud. Based on the description, the third hypothesis is formulated as follows:

H₃: Auditor reputation has a significant negative effect on fraudulent financial reporting in industrial companies listed on the IDX.

In addition to economic incentives and litigation risk, the advantages of the *Big Four* KAP also stem from greater institutional capacity, including ongoing training programs for auditors, access to a cross-border audit knowledge base, the application of data analytics-based audit technology, and a globally standardized quality control system. The combination of these factors enhances the ability of *Big Four* auditors to identify red flags of financial reporting fraud earlier than non-*Big Four* KAPs, which generally have limited resources and the scope of international affiliate networks.

The difference in litigation probability between *Big Four* and non-*Big Four* KAPs is also inseparable from the client base they serve. The *Big Four* KAP generally audits large companies with high public exposure, so the reputational risks and lawsuits faced are much greater than non-*Big Four* KAPs that tend to serve clients with smaller business scales and more limited public exposure.

The difference in the scale of public exposure also has implications for the intensity of external scrutiny received by the two KAP groups, where the large clients audited by the *Big Four* KAP are generally also in the spotlight of capital market analysts, the media, and regulators, thus creating an additional layer of oversight beyond the audit function itself.

The Role of Institutional Ownership Moderation in Quality Audit

High institutional ownership is predicted to strengthen the negative influence of audit quality on fraudulent financial reporting, through additional supervisory pressure that encourages management to be more cooperative with the audit process and support the adequate allocation of audit resources. Setiawan and Puspita (2023) found that institutional ownership strengthens the influence of audit quality in suppressing profit management. Thus, the fourth hypothesis is formulated as follows:

H₄: Institutional ownership significantly moderates (strengthens) the negative influence of audit quality on fraudulent financial reporting in industrial companies listed on the IDX.

Theoretically, the role of moderation can be explained through the perspective of complementary monitoring, namely that the internal supervision mechanism (institutional ownership) and the external supervision mechanism (audit quality) do not work separately, but rather reinforce each other's effectiveness. Institutional investors with significant ownership have incentives to encourage

management to allocate adequate audit fees, support auditor independence in the reporting process, and reduce the potential for management intervention in the audit scope, so that the effectiveness of audit quality in reducing fraudulent financial reporting becomes more optimal in companies with high institutional ownership.

The role of moderation can also be understood through the lens of resource dependence theory, where the presence of significant institutional investors provides additional legitimacy and resources for management to meet the demands of higher reporting quality, including the willingness to allocate a more adequate audit budget without significant internal bureaucratic barriers.

The support of these resources is becoming increasingly relevant for industrial sector companies that generally have layered organizational structures and complex budget decision-making processes, so that the presence of active institutional investors can accelerate the approval of adequate audit budget allocations.

The Role of Institutional Ownership Moderation in Tenure Audits

High institutional ownership is predicted to be able to mitigate the negative impact of familiarity threats arising from long tenure audits, through additional oversight functions that encourage the rotation of audit personnel, periodic evaluation of auditor independence, and direct communication with external auditors. Based on this description, the fifth hypothesis is formulated as follows:

H₅: Institutional ownership significantly moderates (weakens) the positive influence of tenure audits on fraudulent financial reporting in industrial companies listed on the IDX.

The role of moderation is in line with the perspective of substitution and complementarity between governance mechanisms, namely that when one mechanism (auditor independence) has the potential to be weakened due to a long tenure, another mechanism (institutional investor supervision) can play a role in filling the supervision gap. Through active involvement in auditor performance evaluation, encouraging audit partner rotation, and direct communication with the audit committee, institutional investors are predicted to be able to mitigate the negative impact of familiarity threats, so that the risk of increasing fraudulent financial reporting due to long tenure can be reduced in companies with high institutional ownership.

In addition, the existence of institutional investors also strengthens the audit committee's bargaining position in negotiating the auditor's independence with management, so that even if the same KAP is maintained in the long term, external supervisory pressure from institutional investors can encourage the implementation of additional governance practices, such as periodic rotation of audit partners, to maintain auditor professional skepticism.

In other words, high institutional ownership serves as a catalyst that keeps the long-term relationship between KAP and clients in the professional corridor, instead of evolving into an overly personal relationship that erodes auditor independence over time.

III. RESEARCH METHOD

This study uses a quantitative approach with a causal-associative design to test the influence of audit quality, tenure audit, and auditor reputation on fraudulent financial reporting, with institutional ownership as a moderation variable. The research population is all industrial sector companies (*Industrials*) listed on the Indonesia Stock Exchange (IDX) during the period 2021–2025.

The sampling technique uses *purposive sampling* with the following criteria: (1) industrial sector companies that are consistently listed on the IDX during the 2021–2025 period; (2) publish a complete and accessible audited annual financial statement during the observation period; (3) not delisting during the study period; (4) present financial statements in Rupiah; and (5) have complete data for all research variables, including audit fee data and stock ownership structure. Based on these criteria, a final sample of 49 companies was obtained with a total of 245 firm-year observations.

The dependent variable in this study was fraudulent financial reporting (FFR), which was measured using the Beneish M-Score, with a higher M-Score value (close to or exceeding the -2.22 threshold) indicating a higher probability of manipulating financial statements. The first independent

variable was audit quality (AQ), which was proxied by the logarithm of natural fee audits as an indicator of the amount of resources and audit efforts poured in. The second independent variable was the audit tenure (AT), which was measured from the number of consecutive years the same KAP audited the client company. The third independent variable was auditor reputation (AR), which was measured by a dummy variable (1 if audited by a *Big Four-affiliated KAP*, and 0 if the other way around). The moderation variable is institutional ownership (IO), which is measured by the percentage of shares owned by institutional investors to the total outstanding shares.

The control variables used included: (1) company size (natural logarithm of total assets); and (2) leverage (ratio of total debt to total assets). Data were analyzed using panel data regression with the *Moderated Regression Analysis* (MRA) approach to test the effect of interaction. The selection of the estimation model was carried out through the Chow Test (*pooled OLS* vs. *fixed effect*) and the Hausman Test (*fixed effect* vs. *random effect*). The classical assumption test was carried out including the multicollinearity test (*Variance Inflation Factor / VIF*), the heteroscedasticity test (Breusch-Pagan test), and the autocorrelation test (the Wooldridge test for panel data). The moderation hypothesis test was carried out by incorporating the interaction variables between audit quality and institutional ownership, as well as between tenure audits and institutional ownership, into the regression model. All statistical analyses were carried out using Stata 17

IV. RESULTS AND DISCUSSION

Research Results

Descriptive Statistics

Table 2 presents descriptive statistics of the research variables based on 245 firm-year observations. The average Beneish M-Score of -2.41 is slightly below the -2.22 threshold, which indicates that in general the sample companies are not strongly indicated to manipulate financial statements, although there are a number of observations with M-Score values exceeding this threshold.

Table 2. Descriptive Statistics of Research Variables (N = 245 firm-year observations)

Variable	Min	Maks	Mean	Std. Dev
Fraudulent Financial Reporting (M-Score)	-3,95	-1,12	-2,41	0,52
Audit Quality (Ln Fee Audit)	18,42	23,87	20,95	1,18
Audit Tenure (tahun)	1	12	4,6	3,1
Auditor Reputation (dummy Big Four)	0	1	0,367	0,483
Institutional Ownership (%)	12,4	84,6	52,3	17,9
Company Size (Ln Total Assets)	25,84	33,71	29,46	1,92
Leverage (DER)	0,11	3,84	1,08	0,79

Source: Processed by researchers, 2025

Audit tenure has an average of 4.6 years with a range of 1 to 12 years, reflecting a wide variation in audit engagement between sample companies. A total of 36.7% of firm-year observations were audited by Big Four-affiliated KAP. Institutional ownership averaged 52.3%, which shows that in general the shares of sample companies are dominated by institutional investor ownership.

Model Selection Test and Classical Assumptions

The Chow test showed that the *fixed effect* model was more appropriate than the *pooled OLS* ($F = 4.26$; $p < 0.001$). Furthermore, the Hausman test showed that the *fixed effect* model was also more appropriate than the *random effect* model ($\chi^2 = 24.61$; $p < 0.001$), so that the structural model estimation in this study used the *fixed effect* approach. The results of the classical assumption test showed that the entire VIF value was below 10 (multicollinearity was not an issue), the Breusch-Pagan test showed no significant heteroscedasticity at the 5% level ($p = 0.142$), and the Wooldridge test found no significant indication of autocorrelation in the panel data ($p = 0.098$).

Hypothesis Testing Results

The regression model yielded an Adjusted R^2 value of 0.452, which shows that audit quality, tenure audit, auditor reputation, institutional ownership, along with interaction variables and control

variables were able to explain 45.2% of the variation in fraudulent financial reporting. An F-statistical value of 18.74 ($p < 0.001$) indicates that the overall research model is significant. Table 3 presents the results of hypothesis testing in detail.

Table 3. Panel Data Regression Results with Moderated Regression Analysis (Fixed Effect)

Hyphotesis	Variable	Coefficient (β)	p-value	Explanation
H ₁	Audit Quality → FFR	-0,284	0,000***	Accepted
H ₂	Audit Tenure → FFR	0,157	0,004**	Accepted
H ₃	Auditor Reputation → FFR	-0,312	0,000***	Accepted
–	Institutional Ownership → FFR	-0,128	0,021*	Significant (primary control)
H ₄	Audit Quality × Institutional Ownership → FFR	-0,146	0,009**	Accepted (Reinforce)
H ₅	Audit Tenure × Institutional Ownership → FFR	-0,119	0,032*	Accepted (Weaken)
–	Ukuran Perusahaan (kontrol)	-0,062	0,184	Unsignifcant
–	Leverage (kontrol)	0,098	0,045*	Significant

Description: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Adjusted $R^2 = 0.452$; $F = 18.74$ ($p < 0.001$).

Source: Processed by the researcher, 2025

Discussion

The Effect of Quality Audit on Fraudulent Financial Reporting (H₁)

The test results showed that audit quality had a negative and significant effect on fraudulent financial reporting ($\beta = -0.284$; $p < 0.001$), so H₁ was accepted. These findings are consistent with the fraud triangle theory which explains that high audit quality which is reflected in the amount of resources and audit efforts poured in reduces the element of opportunity for management to manipulate financial statements, through more extensive substantive detection and testing procedures.

These findings are in line with the results of Wibowo and Santoso's (2021) research which also found a significant negative influence between audit quality and the probability of fraudulent financial statements. In the context of the industrial sector with a complex production cost structure, adequate audit efforts—which are reflected in the amount of audit fees are crucial to support more in-depth audit procedures in detecting potential profit manipulation.

From the perspective of agency theory, these findings affirm the role of external audit as an effective cost monitoring instrument in reducing information asymmetry between management and shareholders. The greater the audit effort poured in, the less room there is for management to opportunistically utilize accounting discretion. In practical terms, these findings indicate that excessive audit cost cutting efficiency has the potential to be counterproductive to the quality of financial reporting, so management and audit committees of industrial sector companies need to consider the adequacy of audit resources as part of fraud risk mitigation strategies, not solely as a cost component that needs to be minimized.

Another implication of this finding is the importance of transparency in the disclosure of audit fees in the issuer's annual report, considering that the amount of audit fees is proven to have relevant information content for investors in assessing the credibility of financial statements. Capital market regulators can consider strengthening the disclosure provisions of audit fee components so that investors obtain more adequate information in assessing the adequacy of audit efforts carried out.

In addition, these findings are also relevant for public accountant professional associations in compiling guidelines regarding the lower limit of the fairness of audit fees (minimum audit fees), in order to prevent the practice of offering fees that are too low (lowballing) which has the potential to sacrifice the adequacy of audit procedures in order to win price competition between KAPs.

The Effect of Tenure Audit on Fraudulent Financial Reporting (H₂)

The second hypothesis (H₂) is also accepted, with tenure audits having a positive and significant effect on fraudulent financial reporting ($\beta = 0.157$; $p < 0.01$). These findings indicate that the longer the audit engagement period between KAP and clients, the higher the risk of fraudulent financial reporting, which is consistent with the *familiarity threat argument* in the auditor's independence framework.

These findings reinforce the results of research by Kurniawan and Prabowo (2022) who found that long tenure audits increase the risk of fraudulent reporting in companies listed on the IDX. The implication is that the Public Accounting Firm's rotation policy or at least the rotation of audit partners needs to continue to be considered as one of the mechanisms to maintain the independence and professional skepticism of auditors, especially in companies with a long-standing audit engagement period.

These findings also provide an important nuance to the debate on mandatory audit rotation policies. Although full KAP rotation has the potential to incur start-up costs in the form of a new auditor learning curve for client businesses, the results of this study indicate that the risk of weakening independence due to overly long tenure needs to be balanced with additional oversight mechanisms, as discussed further in the context of the role of institutional ownership moderation in section 5.5. Thus, instead of implementing rigid KAP rotation, a policy alternative of more frequent audit partner rotation, accompanied by strengthened oversight by institutional investors, can be a more proportionate approach for industrial sector companies.

These findings are also relevant for the audit committee in designing periodic auditor evaluation policies, not only based on compliance with the formal provisions of the engagement period, but also based on substantive indicators of independence, such as the level of personal closeness between the audit team and management, the frequency of change of audit team members, and the results of auditor performance evaluations from year to year.

The more comprehensive evaluation approach is in line with the best practices that have begun to be adopted in companies with high levels of governance compliance, where the audit committee not only acts as the party that approves the auditor's report, but also actively assesses the quality of the audit process itself.

The Influence of Auditor Reputation on Fraudulent Financial Reporting (H₃)

The test results showed that auditor reputation had a negative and significant effect on fraudulent financial reporting ($\beta = -0.312$; $p < 0.001$), so H₃ was accepted and was the variable with the greatest influence in this study model. Companies audited by Big Four-affiliated KAP showed a lower probability of fraudulent financial reporting than companies audited by non-Big Four KAPs.

These findings are consistent with the results of research by Anggraini et al. (2022) which found that companies audited by the Big Four KAP had a higher quality of profit. The large *depth pockets* and litigation risk inherent in the Big Four KAP are a strong economic incentive for auditors to maintain independence and higher audit standards, so that the probability of detection of financial reporting fraud is greater and in turn lowers management's incentives to manipulate financial statements.

The magnitude of the auditor reputation coefficient compared to the audit quality and audit tenure in this study indicates that the reputation of the auditor carries a stronger credibility signal than just the amount of audit fees and the length of the engagement period. This is consistent with the brand name reputation argument, where the capital market tends to associate Big Four affiliates with more guaranteed audit quality standards, so that the presence of high-profile auditors also serves as a positive signal for investors regarding the credibility of the company's financial statements, beyond its direct effect on fraud detection.

Another implication of these findings is that it is important for industrial sector companies planning to conduct initial public offerings (IPOs) or bond issuances to consider the selection of high-profile auditors as part of a cost-of-capital reduction strategy, given that auditors' reputations have been shown to contribute significantly to the perception of the credibility of financial statements in the eyes of investors and creditors.

These findings also provide input for credit rating agencies to consider the reputation of auditors as one of the qualitative factors in assessing the credit risk of bond-issuing companies, especially in the capital-intensive industrial sector and dependent on external funding

The Role of Institutional Ownership Moderation in Quality Audit (H₄)

The results of the moderation test showed that institutional ownership significantly strengthened the negative influence of audit quality on fraudulent financial reporting (interaction $\beta = -0.146$; $p < 0.01$), so that H₄ was accepted. The negative interaction coefficient showed that in companies with high institutional ownership, the negative influence of audit quality on fraudulent financial reporting was stronger than in companies with low institutional ownership.

These findings support the argument of Setiawan and Puspita (2023) that institutional ownership strengthens the influence of audit quality in suppressing profit management. Institutional investors with large holdings have incentives and capacity to encourage management to allocate adequate audit resources and support auditor independence, so that the effectiveness of quality audits in preventing financial reporting fraud is increasingly optimal.

This result reinforces the complementary monitoring perspective which states that internal and external governance mechanisms reinforce each other, not replace each other. Implication, industrial sector companies with a dispersed ownership structure and minimal institutional investors need special attention from regulators and audit committees, considering that the effectiveness of audit quality in suppressing fraudulent financial reporting in these companies is relatively lower than that of companies with high institutional ownership, so alternative supervisory mechanisms are needed to compensate for these conditions.

For regulators, these findings can also serve as a basis for consideration to encourage public companies, especially in sectors with a relatively high risk of fraud such as the industrial sector, to increase the transparency of institutional shareholding structures, given that the disclosure of such information allows the market to participate in assessing the strength of a company's governance oversight mechanism.

In addition, the transparency of the institutional ownership structure can also be one of the indicators in the assessment of the corporate governance score which is increasingly used by investors as part of the consideration of sustainable investment in industrial sector companies in Indonesia.

The Role of Institutional Ownership Moderation in Tenure Audits (H₅)

An equally important finding is the H₅ confirmation, namely institutional ownership significantly weakens the positive influence of tenure audits on fraudulent financial reporting (interaction $\beta = -0.119$; $p < 0.05$). These results show that in companies with high institutional ownership, the negative impact of *familiarity threats* due to long tenure audits can be mitigated through additional supervisory functions of institutional investors.

Active institutional investors tend to communicate directly with external auditors, periodically evaluate auditor independence, and encourage the implementation of audit partner rotation policies even if the same KAP is maintained. Practically, the presence of institutional investors with significant ownership can serve as a complementary governance mechanism that mitigates the risk of weakening auditor independence due to long tenures, particularly in industrial sector companies with complex business structures.

Overall, the moderation results in H₄ and H₅ show a complementary pattern: institutional ownership strengthens already effective audit mechanisms (audit quality) while correcting potentially weakened audit mechanisms (tenure audits). This pattern provides an important theoretical implication that corporate ownership structure is not just a control variable in a fraudulent financial reporting model, but a contextual variable that actively shapes the effectiveness of external audit mechanisms, so it needs to be explicitly considered within the framework of agency theory in future studies on financial reporting quality.

These findings also open up a discussion on the importance of synergy between capital market regulators, public accounting professional associations, and institutional investors in formulating more

holistic governance policies, instead of focusing only on one separate supervisory mechanism, in order to build a more credible financial reporting ecosystem for industrial sector companies in Indonesia.

Ultimately, the integration between external audit mechanisms and institutional ownership structures confirmed in this study provides an empirical foundation for the development of a more comprehensive corporate governance framework, which considers the interactions between oversight mechanisms rather than treating each mechanism as a stand-alone variable.

V. CONCLUSIONS AND SUGGESTIONS

Conclusion

This study provides empirical evidence that audit quality and auditor reputation have a negative and significant effect on fraudulent financial reporting, while tenure audit has a positive and significant effect on industrial sector companies listed on the IDX for the period 2021–2025. These findings confirm that adequate audit efforts and high auditor reputation are important mechanisms in detecting and preventing financial reporting fraud, while too long an audit engagement period has the potential to weaken auditor independence through *familiarity* threats.

An equally important finding is the role of institutional ownership moderation which has been proven to strengthen the negative influence of audit quality and at the same time weaken the positive influence of audit tenure on fraudulent financial reporting. This confirms that institutional ownership is a complementary governance mechanism that is relevant in strengthening the effectiveness of the external audit function and mitigating the risk of weakening auditor independence due to long tenure.

Theoretically, the findings of this study strengthen the relevance of agency theory, fraud triangle theory, and institutional ownership supervision theory in explaining the phenomenon of fraudulent financial reporting in the context of industrial sector companies in Indonesia, while adding empirical evidence on the importance of interaction between external audit mechanisms and company ownership structures in preventing financial reporting fraud

Suggestions

Based on the findings of the study, several suggestions can be made. First, for the management of industrial sector companies, it is advisable to allocate adequate audit resources and choose auditors with a good reputation, considering that both factors have proven to be effective in reducing the risk of fraudulent financial reporting.

Second, for companies with long-term audit engagements, it is recommended to periodically evaluate auditor independence, including considering audit partner rotation, to mitigate the risk of *familiarity threats* that can reduce the effectiveness of fraud detection.

Third, for institutional investors, these findings confirm the importance of an active role in overseeing the financial reporting process and supporting auditor independence, given that institutional ownership has been proven to strengthen the effectiveness of external audit mechanisms in preventing financial reporting fraud.

Fourth, for regulators (OJK and IDX), these findings can be considered in re-evaluating policies related to the maximum period of audit engagement and encouraging transparency of institutional ownership structures as one of the governance mechanisms in preventing financial reporting fraud in the Indonesian capital market.

Fifth, for further research, it is recommended to expand the scope of the research sector beyond the industrial sector, add other fraudulent financial reporting proxies such as F-Score (Dechow et al.) for comparison, and consider other governance moderation variables such as managerial ownership or the effectiveness of independent board of commissioners.

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