



Audit Tenure, Audit Fee and Audit Quality: The Mediating Role of Firm Size

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ABSTRACT

Recurrent irregularities in auditing practices across the globe, Indonesia included, have intensified the call for rigorous scrutiny of the factors that shape audit quality and the integrity of financial reporting. Concurrently, the swift growth of the Islamic capital market has elevated the need for reliable and ethically grounded disclosure. Drawing on a sample of food and beverage manufacturers listed on the Indonesian Sharia Stock Index (ISSI) over the 2021–2024 window, this study examines whether audit tenure and audit fee predict audit quality, and whether firm size acts as an intermediary in those relationships. The novelty of this study lies in its exclusive focus on ISSI-listed food and beverage firms a context that has been systematically underexplored in prior audit quality research and its simultaneous treatment of firm size as a mediating variable rather than as a control or moderating variable, offering a distinct analytical contribution to the audit quality literature in the Islamic capital market setting. A positivist, quantitative design was applied, employing multiple linear regression, binary logistic regression, and path analysis. Secondary data sourced from the annual financial statements of 24 companies generated 96 firm-year observations through purposive sampling. The Big Four/non-Big Four dichotomy was used as the audit quality proxy, following DeAngelo (1981) and Lumban Gaol and Sitohang (2020), with the acknowledgment that this proxy captures reputational rather than technical quality differences. Results reveal that: (1) audit tenure exerts no statistically significant influence on audit quality; (2) audit fee positively and significantly drives audit quality; (3) firm size has no significant bearing on audit quality; (4) audit tenure does not significantly determine firm size; (5) audit fee positively and significantly predicts firm size; (6) firm size fails to transmit the effect of audit tenure onto audit quality; and (7) firm size likewise fails to transmit the effect of audit fee onto audit quality. These findings establish audit fee as the dominant direct driver of audit quality in the ISSI food and beverage sector, operating independently of firm scale.

Keywords: Audit Tenure, Audit Fee, Firm Size, Audit Quality, Big Four Auditor, Islamic Capital Market, Indonesian Sharia Stock Index (ISSI)

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1. INTRODUCTION

Investor confidence and public reliance on the financial disclosures of exchange-listed entities, including those registered under the Indonesian Sharia Stock Index (ISSI), are fundamentally anchored in the calibre and professional rigour of the auditors who conduct the examination. ISSI-listed companies face a dual accountability: they must satisfy conventional financial reporting standards while simultaneously upholding sharia-compliance principles, making audit quality not merely a technical requirement but an ethical imperative. Serving as impartial third parties, auditors are entrusted with rendering credible opinions that empower investors and oversight bodies to arrive at well-informed economic judgments grounded in verifiable data. Against this backdrop, a discernible global deterioration in audit quality has emerged. The 2024 inspection report published by the Public Company Accounting Oversight Board (PCAOB), which covered audit engagements completed in 2021, disclosed that Ernst & Young (EY), Deloitte, and PricewaterhouseCoopers (PwC) three of the world's largest accounting networks, registered a combined average deficiency rate of 24%, representing roughly a 13 percentage-point rise from the prior cycle (Maurer, 2024).

Within the Indonesian context, the Centre for Financial Profession Development (PPPK) under the Ministry of Finance documented a range of disciplinary actions against public accountants during 2024, encompassing four service restrictions and one outright licence cancellation. Cumulatively between 2020 and 2024, five practitioners lost their professional licences following findings of serious non-compliance, notably inadequate audit evidence and departures from prescribed documentation standards (Intoniswan, 2025). Prominent corporate scandals, including fabricated investment schemes at PT Taspen and widespread governance failures at PT Asuransi

Adisarana Wanaartha (WAL) has further exposed deep-seated structural weaknesses in audit oversight (Aslendra, 2025; OJK, 2018).

Notwithstanding these systemic concerns, Indonesia's Islamic capital market has maintained a robust growth trajectory. The Indonesia Stock Exchange (IDX) set an ambitious target of 50,000 additional active sharia investors in 2026, buoyed by a base of 217,157 existing investors whose cumulative transactions surpassed Rp11.2 trillion in 2025 (Kumparan Bisnis, 2026). Entities registered under the ISSI are obligated to operate in conformity with sharia norms, which not only necessitate technically sound financial statements but also demand a standard of transparency and ethical responsibility that goes beyond ordinary compliance.

The academic literature on the nexus between audit tenure, audit fees, and audit quality has produced markedly divergent outcomes, giving rise to an empirical gap that motivates this study. Fajrina and Rohkayatim (2021) reported a negative tenure–quality association, whereas Kristianto and Pangaribuan (2022) together with Ananda and Faisal (2023) documented positive relationships. Evidence on audit fees is equally mixed: Wardani et al. (2022) and Zulfikar and Waharini (2019) found that fee levels improve quality, while Ananda and Faisal (2023) observed the contrary. Findings on firm size as a moderating or predictive force are similarly inconclusive (Harianja & Sudjiman, 2020; Fajrina & Rohkayatim, 2021). This inconsistency is empirical in nature it stems not from a lack of theoretical frameworks or methodological tools, but from conflicting results across different samples, industries, and time periods, suggesting that context-specific factors may play a significant role. Importantly, the bulk of extant research targets conventional BEI-listed firms, leaving ISSI-specific companies largely underexplored. This study, therefore, addresses the empirical gap by providing evidence from a distinct regulatory and ethical context, the Sharia-based capital market, which has received insufficient scholarly attention despite its growing economic significance.

Firm size is incorporated as a mediating variable based on a theoretically grounded causal logic: audit tenure and audit fee characteristics shape the complexity and resource demands of an engagement, which in turn influence the scale of a firm's operations and governance requirements captured by total assets and this scale then conditions the firm's selection of auditor quality tier. Specifically, firms that attract higher audit fees tend to be larger and more operationally complex, creating structural conditions that systematically favour engagement with Big Four firms. This causal sequence, where the independent variables influence firm size, and firm size in turn influences audit quality, is precisely what distinguishes a mediator from a control or moderating variable. A control variable accounts for noise without transmitting effects; a moderating variable alters the strength or direction of a relationship; a mediating variable, by contrast, serves as the mechanism through which an independent variable exerts its influence on a dependent variable (Baron & Kenny, 1986). Firm size fits the mediator role because it is plausibly caused by audit fee and tenure dynamics, and it plausibly causes variation in audit quality outcomes. This mediation pathway is further grounded in agency theory (Jensen & Meckling, 1976), which posits that larger firms face greater agency costs and therefore invest more heavily in credible monitoring mechanisms, including high-quality auditors. By focusing on ISSI-listed food and beverage firms across 2021–2024 a post-pandemic period characterised by heightened economic uncertainty, this study addresses an identifiable gap in the literature and offers fresh evidence on the dynamics of audit quality in the Islamic capital market setting.

2. LITERATURE REVIEW

2.1 Agency Theory and Signaling Theory

The agency framework advanced by Jensen and Meckling (1976) rests on the premise that the structural separation of corporate ownership from operational control generates information asymmetries between principals and agents. Because shareholders cannot exert continuous surveillance over managerial conduct, windows open for self-serving behaviour that may disadvantage the principal. External auditors function as an institutional corrective mechanism, independently verifying the truthfulness of financial statements and thereby narrowing the informational gap. Both audit tenure and audit fee carry significance within this framework: extended tenure can deepen the auditor's contextual understanding of the client, but simultaneously heightens the risk that familiarity will erode professional scepticism, compromising the auditor's objectivity. Conversely, more substantial fee arrangements may reflect a commitment to allocating adequate resources to the engagement, though reliance on a single major client for a disproportionate share of revenue may introduce pressures that undermine independence.

Signaling theory, as articulated by Spence (1973), offers a complementary lens: organisations communicate their dedication to accountability by selecting highly reputable auditors and committing to appropriate fee levels. Larger firms, in particular, tend to project positive signals to capital market participants through such choices, thereby reinforcing the theoretical connection among firm scale, audit quality indicators, and investor trust.

2.2 Audit Tenure

Audit tenure denotes the cumulative duration of the professional engagement between an auditor or an audit firm and a specific client. In Indonesia, POJK No. 9/2023 caps engagement periods at seven years for banks, publicly listed entities, and other public-interest organisations, after which a mandatory cooling off period must elapse before re-engagement is permitted. The relationship between audit tenure and audit quality is inherently dual-sided. On the positive side, prolonged tenure enables auditors to accumulate deep client-specific institutional knowledge encompassing an understanding of the client's business model, internal control systems, risk profile, and industry dynamics which can sharpen the auditor's ability to detect anomalies and conduct more targeted, efficient examinations (Al-Thuneibat et al., 2011). This accumulated knowledge reduces information asymmetry between the auditor and the client, potentially leading to higher audit effectiveness over time. On the negative side, however, an excessively long engagement relationship carries a well documented risk: the gradual erosion of auditor independence and professional scepticism. As familiarity deepens, auditors may unconsciously become more accommodating toward management's preferred accounting treatments, thereby compromising their objectivity and critical rigour (Effendi & Ulhaq, 2021). This dual nature of tenure simultaneously a knowledge asset and an independence risk makes its net effect on audit quality inherently uncertain and context dependent, which is precisely why regulatory bodies such as OJK have imposed mandatory rotation requirements. In the present study, audit tenure is operationalised as the aggregate number of consecutive years during which an auditor has maintained a continuous relationship with the client.

2.3 Audit Fee

Audit fee represents the compensation paid to auditors in exchange for professional assurance services. According to Mulyadi (2016), the principal determinants of fee levels include the inherent risk of the engagement, its operational complexity, the competence and standing of the audit team, and the structural cost base of the accounting firm. The relationship between audit fee and audit quality, however, operates in two competing directions that must both be acknowledged. On the one hand, a higher fee level signals that greater human and material resources are being deployed in the engagement more experienced personnel, more extensive testing procedures, and a longer audit horizon all of which are associated with a more exhaustive and rigorous audit process that is likely to yield superior quality outcomes (Wardani et al., 2022; Zulfikar & Waharini, 2019). From this perspective, adequate compensation is a necessary condition for auditors to perform their professional duties without cutting corners. On the other hand, when fee income from a single client constitutes a disproportionately large share of an auditor's total revenue, the resulting economic dependence creates a structural conflict of interest. Under these conditions, auditors may consciously or otherwise soften their professional judgments, avoid issuing qualified opinions, or acquiesce to management preferences in order to protect the client relationship and the associated income stream, thereby degrading the very quality they are engaged to assure (Agoes, 2012; Ramadhan & Laksito, 2018). The net effect of audit fee on audit quality is therefore theoretically ambiguous, contingent on whether the resource-enhancement effect or the economic-dependence effect dominates in a given context. Audit fee is quantified using the natural logarithm of the professional fees reported in companies' annual disclosures.

2.4 Firm Size

Firm size captures the magnitude of a company's operational footprint, conventionally measured via the natural logarithm of total assets. Organisations of greater scale contend with more intricate operational structures, higher levels of market visibility, and more demanding accountability frameworks all of which directly impinge on both the scope of the audit and the quality of its output (Riadi, 2020; Watts & Zimmerman, 1986). Larger firms, by virtue of their complexity, generate greater demand for thorough and credible audit examinations, which in turn creates structural pressure toward engaging higher-quality auditors. Within this study's analytical model, firm size occupies the role of a mediating variable, and the causal logic underpinning this positioning is as follows: audit fees and tenure characteristics influence the complexity profile and resource demands of a client firm, which shapes the scale of its organisational operations captured by total assets. This scale, in turn, conditions the firm's auditor selection behaviour larger, more complex firms operating under stronger public scrutiny and governance pressures tend to systematically select higher-quality, typically Big Four, auditors to credibly signal their accountability to investors and regulators. Firm size therefore functions as a transmission channel through which audit fee and tenure exert their indirect effects on audit quality, rather than merely as a background characteristic to be held constant.

This causal sequence independent variables influencing firm size, and firm size influencing audit quality is what distinguishes the mediator specification from a control or moderating variable treatment, and renders the mediation framework theoretically coherent and causally defensible.

2.5 Audit Quality

DeAngelo (1981) conceptualises audit quality as the joint probability that an auditor will both identify material misstatements (technical detection competence) and choose to report them (professional independence). For measurement purposes, this study employs a binary proxy grounded in audit firm affiliation: companies audited by Big Four affiliated firms specifically PwC, EY, Deloitte, and KPMG are coded 1, while those audited by non-Big Four practices receive a code of 0, in line with the approach adopted by Lumban Gaol and Sitohang (2020). The justification for this proxy rests on several grounds. First, Big Four firms operate under globally standardised quality control frameworks, invest substantially more in training, technology, and peer review mechanisms, and face significantly higher reputational and litigation risks that create strong incentives for rigorous audit execution (DeAngelo, 1981). Second, the Big Four/non Big Four dichotomy is widely adopted in the audit quality literature precisely because it provides an observable, consistent, and replicable measure across firms and time periods, making cross-study comparisons feasible. Third, in the Indonesian context, Big Four affiliated firms are generally associated with more stringent compliance with professional standards and greater resistance to client pressure, which aligns with the theoretical constructs of independence and competence central to audit quality. It must be acknowledged, however, that this proxy carries important limitations. Most critically, the Big Four classification captures reputational and structural differences between audit firms rather than the actual quality of execution within any specific engagement a Big Four audit is not inherently superior in every instance, nor does a non-Big Four audit necessarily fall short. Furthermore, this binary measure fails to capture the within-group heterogeneity that exists among Big Four firms themselves, as well as quality variations across different engagement teams, industries, and client sizes. These limitations should be borne in mind when interpreting the findings of this study.

2.6 Research Hypotheses

Drawing on the theoretical underpinnings and empirical antecedents reviewed above, the following hypotheses are formulated. The directional logic underlying each hypothesis is grounded in agency theory (Jensen & Meckling, 1976) and signaling theory (Spence, 1973), as elaborated below.

H1: Audit tenure exerts a significant influence on audit quality.

H2: Audit fee exerts a significant and positive influence on audit quality.

H3: Firm size exerts a significant influence on audit quality.

H4: Audit tenure exerts a significant influence on firm size. The rationale for this hypothesis rests on the observation that larger, more complex firms tend to maintain longer auditor-client relationships as a mechanism for preserving audit continuity and institutional knowledge. Extended tenure reflects the auditor's accumulated familiarity with the firm's operational complexity itself a function of firm scale creating a theoretically plausible directional path from tenure characteristics to firm size indicators.

H5: Audit fee exerts a significant and positive influence on firm size. Larger firms generate more complex transactions, broader risk exposures, and greater audit scope requirements, all of which drive higher fee allocations. Conversely, from a signaling theory perspective, firms that commit to higher audit fees signal their governance quality to the market, attracting investment and facilitating asset growth. The relationship between audit fee and firm size is therefore bidirectionally plausible, though in this model audit fee is positioned as an antecedent that reflects and reinforces organisational scale.

H6: Firm size mediates the relationship between audit tenure and audit quality. Building on H4, the mediation logic is as follows: audit tenure influences the depth of auditor-client engagement, which is partly a function of firm complexity and scale; this scale, in turn, shapes the demand for and selection of higher-quality auditors. Firm size thus serves as the transmission mechanism through which tenure characteristics reach audit quality outcomes.

H7: Firm size mediates the relationship between audit fee and audit quality. Building on H5, higher audit fees reflect greater organisational complexity captured by firm size and this complexity creates structural demand for

Big Four-quality auditors. Firm size therefore functions as the channel through which audit fee exerts its indirect influence on audit quality, beyond any direct fee-quality relationship.

3. RESEARCH METHODOLOGY

This investigation adopts a quantitative descriptive design grounded in a positivist epistemology (Sugiyono, 2019). The target population encompasses 42 food and beverage manufacturing companies listed on the ISSI. Applying three purposive sampling criteria (1) continuous ISSI listing throughout the 2021–2024 period, (2) disclosure of professional audit fees in annual reports, and (3) publication of complete annual financial statements the usable sample was narrowed to 24 companies, producing 96 firm year observations (24 firms × 4 years). Secondary data were sourced from annual financial statements made publicly available through the IDX portal and individual company websites.

Four constructs were operationalised as presented in Table 1 below.

Table 1. Operational Definition of Variables

| No | Variable | Definition | Indicator | Scale |
|----|-------------------|---|--|---------|
| 1. | Audit Tenure (X1) | The cumulative duration of continuous professional engagement between an auditor or audit firm and a specific client. Effendi & Ulhaq (2021) | Audit Tenure = Number of consecutive engagement years; resets to 1 upon auditor change | Ratio |
| 2. | Audit Fee (X2) | The total financial compensation received by the auditor from the client as remuneration for professional audit services rendered. Agoes (2012) | Audit Fee = Ln (Professional Fees disclosed in the annual report) | Ratio |
| 3. | Firm Size (Z) | A parameter representing the scale of a company's operational existence, serving as the mediating variable in this study's analytical model. Riadi (2020) | Firm Size = Ln(Total Assets at the end of the fiscal year) | Ratio |
| 4. | Audit Quality (Y) | The probability that an auditor both detects and discloses violations or material misstatements found in the client's accounting system. DeAngelo (1981) | Dummy variable: coded 1 if audited by a Big Four firm (PwC, EY, Deloitte, KPMG); coded 0 if audited by a non-Big Four firm | Nominal |

The analytical sequence comprised: (i) descriptive statistics; (ii) classical assumption diagnostics normality, multicollinearity, heteroscedasticity, and autocorrelation applicable to Model I only, as binary logistic regression does not require these assumptions; (iii) Pearson bivariate correlations; (iv) path analysis implemented through multiple linear regression (Model I: $Z = f(X1, X2)$) and binary logistic regression (Model II: $Y = f(X1, X2, Z)$); (v) logistic model-fit assessments using the $-2LL$ statistic, Hosmer-Lemeshow test, and Nagelkerke R^2 ; (vi) significance testing through the t-test and Wald test with Exp(B) odds ratios; and (vii) Sobel test for mediation. All computations were performed using IBM SPSS Statistics.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Analysis of the 96 firm-year observations drawn from 24 ISSI-listed food and beverage companies over 2021–2024 yields the following descriptive profile.

Table 2. Descriptive Statistics

| Variable | N | Min | Max | Mean | Std. Dev. |
|-------------------|----|--------|--------|--------|-----------|
| Audit Tenure (X1) | 96 | 1 | 4 | 2.36 | 1.116 |
| Audit Fee (X2) | 96 | 18.092 | 24.064 | 20.837 | 1.544 |
| Firm Size (Z) | 96 | 25.557 | 32.938 | 29.171 | 2.013 |
| Audit Quality (Y) | 96 | 0 | 1 | 0.615 | 0.489 |

Audit tenure ranges between 1 and 4 years (mean = 2.36; SD = 1.116). This relatively short average tenure is consistent with Indonesia's mandatory auditor rotation framework under POJK No. 9/2023, which caps engagement periods and compels periodic auditor changes. The standard deviation of 1.116 indicates moderate variation across firms, suggesting that while some companies retain the same auditor throughout the observation period, others undergo rotation a pattern that provides sufficient variability for meaningful statistical testing of the tenure-quality relationship.

Audit fee, expressed in natural logarithm form, spans from 18.092 to 24.064 (mean = 20.84; SD = 1.54). This relatively wide range equivalent to substantial differences in absolute fee values when reverse transformed reflects considerable heterogeneity in audit resource allocation across sample firms. Companies at the upper end of the fee distribution, such as large conglomerates like CPIN and INDF, commit significantly greater financial resources to their audit engagements, which may correspond to higher audit complexity and more rigorous examination procedures. Conversely, smaller entities such as BOBA and OILS operate with minimal fee allocations, potentially constraining the depth of audit procedures that can be performed.

Firm size, also in logarithmic form, varies from 25.557 to 32.938 (mean = 29.17; SD = 2.01). This range captures a substantial spread in organisational scale within the ISSI food and beverage sector from relatively small operators to large integrated agribusiness conglomerates. The mean value of 29.17 corresponds to total assets in the hundreds of billions of rupiah range, suggesting that the sample is populated predominantly by mid-to-large scale enterprises whose audit complexity and governance demands are non-trivial.

Regarding audit quality, 61.5 percent of observations (59 cases) correspond to engagements by Big Four-affiliated firms, while the remaining 38.5 percent (37 cases) involve non-Big Four practices. This distribution reveals a pronounced affinity for internationally accredited auditors among ISSI registered entities, which is theoretically consistent with the signaling motive: companies operating under sharia-compliance obligations face dual accountability pressures that incentivise the selection of high-reputation auditors to credibly communicate their governance quality to investors. The dominance of Big Four engagements also implies that larger, better-resourced firms in the sample disproportionately select Big Four auditors, providing preliminary descriptive support for the hypothesised audit fee, firm size, audit quality pathway.

4.2 Classical Assumption Diagnostics (Model I Only)

The classical assumption diagnostics reported in this section apply exclusively to Model I the multiple linear regression model in which firm size (Z) serves as the dependent variable and audit tenure (X1) and audit fee (X2) serve as predictors. These diagnostics are not applicable to Model II, which employs binary logistic regression; logistic regression does not assume normally distributed residuals, homoscedasticity, or absence of autocorrelation, and therefore does not require these tests. Within Model I, all four classical assumptions were satisfied. Normality of residuals was confirmed by the Kolmogorov-Smirnov test (Asymp. Sig. = 0.200, exceeding the 0.05 threshold), a result corroborated by the alignment of data points along the diagonal in the Normal P-P Plot. Multicollinearity was absent for both regressors: audit tenure (VIF = 1.021; Tolerance = 0.980) and audit fee

(VIF = 1.021; Tolerance = 0.980), both well within the acceptable thresholds of $VIF < 10$ and $Tolerance > 0.10$. The Glejser test established homoscedasticity for audit tenure (sig. = 0.345) and audit fee (sig. = 0.151), both above the 0.05 threshold, confirming that residual variance is constant across observations. Autocorrelation, initially detected in the raw data (DW = 0.610), was remedied through Cochrane-Orcutt transformation, which yielded an adjusted DW of 1.728 comfortably positioned within the acceptable interval ($du < DW < 4-du$: $1.70 < 1.728 < 2.30$). With all four assumptions satisfied, Model I proceeds to coefficient estimation without violation of the ordinary least squares requirements.

4.3 Pearson Correlation Analysis

Pearson correlation matrices provide preliminary descriptive evidence of the bivariate associations among the study's constructs; it is important to note at the outset that correlation coefficients indicate the strength and direction of linear relationships only, and do not establish causality or directionality between variables causal inferences are reserved exclusively for the regression and path analyses reported in subsequent sections. With that caveat in mind, the following associative patterns are observed. Audit fee maintains a moderate, statistically significant positive association with audit quality ($r = 0.592$; $p < 0.001$), suggesting that firms allocating higher audit fees tend to engage Big Four auditors, though the direction of this relationship cannot be determined from correlation alone. Audit fee also exhibits a strong, significant positive association with firm size ($r = 0.753$; $p < 0.001$), indicating that larger firms and higher fee levels co-occur frequently in this sample again, without implying which variable drives the other. Firm size, in turn, shows a moderate, significant positive association with audit quality ($r = 0.423$; $p < 0.001$), consistent with the notion that larger firms tend to select higher-quality auditors, though this remains a descriptive observation at this stage. By contrast, audit tenure shows no meaningful association with audit quality ($r = 0.009$; $p = 0.927$), firm size ($r = 0.072$; $p = 0.484$), or audit fee ($r = 0.144$; $p = 0.160$), suggesting that tenure length does not co-vary systematically with the other constructs in this sample. Collectively, these associative patterns particularly the significant co-variation among audit fee, firm size, and audit quality provide descriptive justification for the subsequent application of logistic regression and path-analytic methods to examine the hypothesised causal structure.

4.4 Path Analysis Results

Model I Determinants of Firm Size (Multiple Linear Regression):

The estimated structural equation is: $Z = 0.404 - 0.001X_1 + 0.676X_2 + \varepsilon_1$. Audit tenure ($t = -1.301$; $p = 0.196$) does not significantly predict firm size, leading to the rejection of H4. This finding suggests that the length of the auditor client relationship does not systematically co-vary with organisational scale in this sample, which is theoretically plausible given that auditor rotation is largely driven by regulatory mandate rather than firm size considerations under POJK No. 9/2023.

Audit fee exerts a strong, statistically significant positive association with firm size ($t = 16.912$; $p < 0.001$; $\beta = 0.676$), supporting H5. This result warrants careful interpretation, however. Conceptually, the more conventional expectation in the audit literature is that firm size drives audit fee larger firms generate greater complexity and audit scope, which in turn commands higher fees (Mulyadi, 2016). In positioning audit fee as a predictor of firm size within this mediation model, this study adopts an alternative theoretical perspective grounded in signaling theory (Spence, 1973) firms that commit to higher audit fees signal their governance quality and financial credibility to the market, which may attract greater investment and facilitate asset growth over time, thereby contributing to larger firm size. It should be acknowledged, however, that the strong empirical association between audit fee and firm size ($r = 0.753$) is consistent with both directional interpretations, and the possibility of reverse causality wherein firm size determines audit fee rather than the reverse cannot be ruled out in a cross-sectional panel design such as this. This endogeneity concern represents a limitation of the current model, and future research employing instrumental variable approaches or dynamic panel methods would be better positioned to establish the precise causal direction. The disturbance term computes as $\varepsilon_1 = \sqrt{(1 - 0.685)} = 0.561$.

Model II Determinants of Audit Quality (Binary Logistic Regression):

Wald statistics indicate that audit tenure does not significantly affect audit quality (Wald = 0.818; $p = 0.366$), requiring rejection of H1. Audit fee is a significant, positive predictor of audit quality (Wald = 10.426; $p = 0.001$; $\beta = 26.010$), confirming H2. Firm size does not significantly predict audit quality (Wald = 0.427; $p =$

0.513), resulting in rejection of H3. Overall model fit improved markedly: $-2LL$ contracted from 127.998 to 89.951 ($\Delta = 38.047$), and the Nagelkerke R^2 of 0.444 indicates that approximately 44.4 percent of the variance in audit quality is accounted for by the model.

Table 3. Summary of Hypothesis Testing Outcomes

| Hypothesis | Variable Path | Statistical Test | Outcome | Decision |
|------------|---------------------------------|------------------------|-----------------|----------|
| H1 | Audit Tenure → Audit Quality | Wald ($p = 0.366$) | Not Significant | Rejected |
| H2 | Audit Fee → Audit Quality | Wald ($p = 0.001$) | Significant (+) | Accepted |
| H3 | Firm Size → Audit Quality | Wald ($p = 0.513$) | Not Significant | Rejected |
| H4 | Audit Tenure → Firm Size | t-test ($p = 0.196$) | Not Significant | Rejected |
| H5 | Audit Fee → Firm Size | t-test ($p < 0.001$) | Significant (+) | Accepted |
| H6 | Audit Tenure → (Firm Size) → AQ | Sobel ($t = 0.475$) | Not Significant | Rejected |
| H7 | Audit Fee → (Firm Size) → AQ | Sobel ($t = 0.652$) | Not Significant | Rejected |

4.5 Mediation Test (Sobel)

The Sobel procedure was applied to assess whether firm size transmits the effects of the independent variables on audit quality. Along the path Audit Tenure → Firm Size → Audit Quality, the computed t-statistic of 0.475 falls well below the critical threshold of 1.96, confirming that firm size does not mediate this relationship (H6 rejected). Similarly, for the path Audit Fee → Firm Size → Audit Quality, the absolute t-value of 0.652 is also below 1.96, indicating that firm size does not serve as a conduit through which audit fee influences audit quality (H7 rejected). Audit fee is therefore shown to act on audit quality through a direct mechanism that does not require asset scale as an intermediary. It is important to acknowledge, however, that the Sobel test carries well-documented limitations when applied to samples of moderate size. The Sobel procedure assumes that the sampling distribution of the indirect effect (ab) is approximately normal an assumption that is frequently violated, particularly in samples below 200 observations such as the present study's 96 firm-year observations (Ghozali, 2018). Under these conditions, the Sobel test may be insufficiently powered to detect genuine indirect effects, potentially producing conservative conclusions. A bootstrap based mediation test such as that implemented via the Hayes PROCESS macro would provide a more robust assessment by generating empirical confidence intervals for the indirect effect through repeated resampling of the observed data, without relying on normality assumptions. Future research replicating this study's model is therefore encouraged to employ bootstrap mediation procedures to verify whether the non-significant mediation findings reported here hold under a more statistically robust testing framework.

4.6 Discussion

Audit Tenure and Audit Quality (H1)

The absence of a statistically significant relationship between audit tenure and audit quality ($p = 0.366$) implies that the length of the auditor-client engagement is not a meaningful quality differentiator among ISSI-listed food and beverage companies. Although prevailing theory suggests that sustained engagements build client-specific knowledge that may sharpen detection capabilities, the empirical data indicate that auditors uphold consistent professional standards regardless of how long the relationship has been maintained.

A plausible institutional explanation lies in Indonesia's mandatory rotation framework under POJK No. 9/2023: by capping engagement durations and prescribing cooling-off intervals, this regulation preserves auditor independence at a structural level, attenuating any observable tenure effect on output quality. Beyond the regulatory explanation, however, the characteristics of ISSI-listed food and beverage firms themselves may contribute independently to this null finding. First, companies listed under the ISSI are subject to periodic sharia-screening by the OJK, which imposes a standardised layer of governance and disclosure requirements that applies uniformly across firms regardless of their auditor tenure. This baseline compliance obligation reduces the governance variation that tenure-based knowledge accumulation would otherwise need to address, effectively

compressing the range within which tenure differences can meaningfully influence audit outcomes. Second, the food and beverage sub-sector operates within a relatively homogeneous regulatory and operational environment firms in this sector share broadly similar transaction structures, inventory-intensive balance sheets, and revenue recognition patterns which means that an auditor new to a particular client can draw on substantial transferable industry knowledge from prior engagements, diminishing the incremental informational advantage conferred by longer tenure with any single client. Third, the combination of sharia-compliance requirements and public listing obligations creates a dual accountability structure that compels all firms in the sample regardless of their auditor tenure to maintain a minimum standard of financial transparency, further narrowing the space within which tenure length can exert a differential quality effect.

These results resonate with Hidayat and Jatningsih (2017), Wardani et al. (2022), and Yasmin (2023), although they diverge from the positive associations reported by Kristianto and Pangaribuan (2022) and Ananda and Faisal (2023), underscoring the persistent heterogeneity in this strand of the literature.

Audit Fee and Audit Quality (H2)

Audit fee emerges as a positive and significant predictor of audit quality ($p = 0.001$; $\beta = 26.010$; $\text{Exp}(B) = 5.43 \times 10^{11}$), indicating that higher audit fee allocations are associated with a substantially greater probability of engaging a Big Four-affiliated auditor. From an agency theory perspective, this finding is consistent with the notion that adequate compensation enables auditors to mobilise sufficient personnel, time, and expertise, culminating in a more rigorous examination of financial statements. Viewed through the signalling lens, a commitment to higher fee levels publicly communicates a company's orientation toward credible governance, which may in turn enhance market confidence among investors in the Islamic capital market.

The result aligns with Wardani et al. (2022) and Zulfikar and Waharini (2019) but contrasts with Ananda and Faisal (2023), whose negative finding was attributed to the possibility of economic dependency distorting auditor behaviour. Within the ISSI environment where adherence to Islamic ethical norms is a non-negotiable condition fee adequacy appears to be an important direct lever through which audit quality is achieved. It is important, however, to qualify this conclusion in light of the measurement approach employed. The audit quality proxy used in this study the Big Four/non-Big Four binary classification — captures differences in audit firm reputation, resources, and structural quality systems rather than the actual execution quality of any specific engagement. Consequently, the finding that audit fee significantly predicts audit quality should be interpreted as: higher fee-paying firms are significantly more likely to engage Big Four-affiliated auditors, not that the intrinsic technical quality of the audit performed is necessarily superior in every instance. The very large $\text{Exp}(B)$ value further reflects the scale of the log-transformed fee variable relative to the binary outcome rather than a substantive effect of extraordinary magnitude. These measurement constraints caution against overly deterministic conclusions regarding audit fee as the singular principal driver of audit quality, and underscore the need for future research to employ more direct measures of audit quality such as audit report timeliness, restatement rates, or accrual-based quality metrics to corroborate and extend the present findings.

Firm Size and Audit Quality (H3)

Firm size does not significantly influence audit quality ($p = 0.513$). While this null result may appear surprising given that larger organisations typically face more intricate operational structures, more intensive public scrutiny, and stronger stakeholder pressure to secure high calibre assurance services, it becomes theoretically coherent when the specific characteristics of the ISSI context are taken into account.

Several features of the ISSI regulatory environment offer a plausible explanation for why firm size fails to differentiate audit quality in this sample. First, all ISSI listed companies regardless of their scale are subject to the same periodic sharia screening process conducted by the OJK, which imposes a uniform baseline of governance, transparency, and disclosure requirements across the entire constituent universe. This standardised compliance floor compresses the governance variation that would ordinarily make larger firms more demanding audit clients relative to smaller ones, effectively equalising the audit quality pressure across firms of different sizes. Second, within the food and beverage sub-sector specifically, operational structures while varying in scale tend to follow broadly similar business models centred on manufacturing, distribution, and inventory management. This sectoral homogeneity means that the incremental audit complexity associated with larger firm size is less pronounced than it would be in more structurally diverse industries, reducing the extent to which size differences

translate into meaningfully different audit quality demands. Third, the dual accountability framework imposed on ISSI-listed firms combining conventional financial reporting obligations with sharia-compliance requirements creates a minimum standard of audit rigour that auditors are expected to maintain universally, irrespective of client size. Under this framework, auditors appear to deploy a consistent standard of professional practice across engagements of different scales, and organisational complexity alone does not translate into measurable differences in audit output quality as proxied by Big Four affiliation.

This conclusion is consistent with Fajrina and Rohkayatim (2021) and Zulfikar and Waharini (2019) but conflicts with Harianja and Sudjiman (2020) and Kristianto and Pangaribuan (2022), who identified significant size effects in conventional BEI-listed settings a divergence that further underscores the importance of context specific factors, particularly the sharia compliance overlay, in shaping the firm size-audit quality relationship.

Firm Size as Mediator (H6, H7)

The mediation hypotheses both fail to receive empirical support. Firm size does not intermediate the effect of audit tenure on audit quality ($t = 0.475$) nor does it convey the impact of audit fee to audit quality ($t = 0.652$). These findings confirm that audit quality is shaped directly by fee considerations, without needing to operate through the amplification of firm scale. The robustness of the direct audit fee quality pathway and its independence from asset magnitude is corroborated by Yusuf et al. (2022) and Yusuf and Suherman (2021), who similarly found that structural firm characteristics do not function as effective conduits between audit process variables and the quality of audit outputs.

These results invite a critical reflection on whether firm size was appropriately positioned as a mediating variable in this model, or whether an alternative specification as a control variable or a moderating variable would have been more theoretically and empirically defensible. As a mediating variable, firm size was expected to absorb the effects of audit tenure and audit fee, transmitting them to audit quality through a causal chain. The empirical evidence, however, does not support this transmission mechanism: firm size neither significantly predicts audit quality (H3 rejected, $p = 0.513$) nor fully absorbs the effect of audit fee, which continues to exert a direct and significant influence on audit quality independent of firm scale. This pattern is more consistent with firm size functioning as a control variable a background characteristic that should be held constant to isolate the effects of the primary predictors rather than as an active transmission channel. Alternatively, firm size may be more appropriately conceptualised as a moderating variable, one that conditions the strength or direction of the audit fee–quality relationship rather than mediating it. For instance, it is plausible that fee adequacy is more consequential for audit quality among smaller ISSI firms where resource constraints are more binding than among larger firms that already possess robust governance infrastructure. Future research is therefore encouraged to test firm size as a moderator in the audit fee–quality relationship, which would provide a more nuanced understanding of how organisational scale interacts with audit process variables to shape quality outcomes in the Islamic capital market context.

5. CONCLUSION

This study investigated how audit tenure, audit fee, and firm size (as mediator) shape audit quality in ISSI-registered food and beverage manufacturers over the 2021–2024 period. Seven key conclusions emerge: (1) audit tenure exercises no significant influence on audit quality; (2) audit fee is a positive and significant predictor of audit quality; (3) firm size does not significantly affect audit quality; (4) audit tenure does not significantly determine firm size; (5) audit fee positively and significantly predicts firm size; (6) firm size does not mediate the audit tenure quality link; and (7) firm size does not mediate the audit fee quality link.

Scientific Contribution

The principal scientific contribution of this study is twofold. First, it provides the first systematic empirical evidence on audit quality determinants specifically within the ISSI-listed food and beverage sector a context that has been largely overlooked in prior audit quality research, which has predominantly focused on conventional BEI-listed firms. Second, by positioning firm size as a mediating variable and finding that it fails to transmit the effects of audit tenure and audit fee onto audit quality, this study contributes to the ongoing methodological debate about the appropriate role of firm size in audit quality models suggesting that future

researchers should consider whether firm size is better specified as a control or moderating variable rather than a mediator in this context.

Practical Implications

The findings carry distinct practical implications for different stakeholder groups. For auditors and audit firms, the results suggest that fee structures should genuinely reflect the resources committed to the engagement rather than serving as client retention instruments. Fee adequacy is not merely a commercial consideration but a quality assurance mechanism. For ISSI-listed companies, the evidence implies that investing in fee-adequate audit engagements constitutes a credible governance signal to investors, particularly in the Islamic capital market where dual accountability financial and ethical is non-negotiable. For regulators, particularly the OJK, the findings provide empirical support for the effectiveness of the mandatory rotation framework under POJK No. 9/2023 in neutralising tenure-driven quality variation, suggesting that the current regulatory architecture is functioning as intended. For investors in the Islamic capital market, audit fee disclosures in annual reports serve as a meaningful signal of audit rigour. Firms committing to higher fee allocations are significantly more likely to engage Big Four-affiliated auditors, which may inform investment and risk assessment decisions.

Limitations

This study is subject to several limitations that should be acknowledged. First, the Big Four/non-Big Four proxy for audit quality captures reputational rather than technical quality differences, and conclusions about actual audit execution quality should be drawn with caution. Second, the sample is confined to 24 food and beverage firms over four years, which limits the generalisability of the findings to other industries and time periods. Third, the Sobel mediation test, while standard, may be underpowered for a sample of 96 observations. Bootstrap based mediation procedures would provide more robust estimates of indirect effects. Fourth, the cross-sectional panel design does not fully resolve the potential endogeneity between audit fee and firm size, and the causal direction of this relationship warrants further investigation.

Recommendations for Future Research

Future research would benefit from: (1) incorporating additional variables such as auditor industry specialisation, audit committee effectiveness, and broader corporate governance mechanisms; (2) extending coverage beyond the food and beverage sector to other ISSI-listed industries to enhance generalisability; (3) employing bootstrap mediation procedures such as the Hayes PROCESS macro to provide more robust tests of indirect effects; (4) utilising more direct measures of audit quality such as restatement rates, audit report timeliness, or accrual-based quality metrics to move beyond the Big Four proxy; and (5) testing firm size as a moderating variable in the audit fee–quality relationship to examine whether fee adequacy operates differently across firms of varying scales within the ISSI universe.

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