**Edelweiss Applied Science and Technology**
*ISSN: 2576-8484*
*Vol. 9, No. 5, 2549-2564*
*2025*
*Publisher: Learning Gate*
*DOI: 10.55214/25768484.v9i5.7517*


# Gender-diverse boards, liquidity, and financial distress: Pathways to fraud deterrence in auditor judgments

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**Abstract:** This study aims to examine the effect of board gender diversity and liquidity on going concern audit opinions, with financial distress serving as a mediating variable. Using Partial Least Squares Structural Equation Modeling (PLS-SEM), the study analyzes panel data from 84 observations of non-financial Indonesian SOEs between 2020 and 2023. The findings reveal that both board gender diversity and liquidity significantly influence going concern audit opinions, with financial distress mediating the effect of liquidity but not gender diversity. Liquidity also significantly impacts financial distress. These results underscore the importance of governance and financial indicators in shaping audit judgments. The study contributes to fraud deterrence literature by linking strong liquidity and diverse boards to reduced audit risk. Practical implications include encouraging regulators to mandate board diversity in SOEs and promoting liquidity management as a fraud prevention mechanism. Auditors are advised to integrate governance indicators when assessing business continuity risk.

***Keywords:*** *Board gender diversity, Emerging markets, Financial distress, Going-concern audit opinion, Liquidity, PLS-SEM.*

## 1. Introduction

The going concern audit opinion functions as a critical early-warning signal for potential corporate failure, particularly in the face of economic uncertainty [1, 2]. In Indonesia, multiple non-financial state-owned enterprises (SOEs) encountered recurring going-concern issues between 2020 and 2023, primarily driven by weak cash flow projections, governance lapses, and poor financial management practices [3]. These developments underscore the pivotal role of auditors in evaluating managerial assumptions and delivering reliable signals to investors and other stakeholders [4, 5].

Prior research has explored various predictors of going concern opinions, emphasizing audit characteristics, financial ratios, and corporate governance mechanisms [1, 6, 7]. More recently, scholars have turned their attention to board gender diversity as a potential governance enhancer, capable of improving risk oversight and reducing financial vulnerabilities [8, 9]. Despite growing global momentum for diversity, women's representation in boardrooms remains limited in emerging markets like Indonesia [10]. Empirical evidence on the effect of gender diversity on going concern opinions, however, remains inconclusive, while some studies suggest a negative relationship [8] Others report no significant association [11].

Liquidity is another key determinant of going concern assessments, representing a firm's short-term solvency. Several studies have found that low liquidity increases the likelihood of auditors issuing a going-concern opinion [1, 4]. Though other findings challenge this view [12]. These mixed outcomes suggest the need to consider intermediate factors that may better explain the pathways linking governance and financial indicators to audit outcomes.

Financial distress may mediate the relationship between board gender diversity, liquidity, and going concern audit opinions. While theoretically relevant, this mediating mechanism, particularly within Indonesian SOEs, lacks empirical examination. This study addresses this gap by proposing a model


**History:** Received: 20 March 2025; Revised: 28 April 2025; Accepted: 5 May 2025; Published: 24 May 2025
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where financial distress mediates the influence of governance and liquidity on going concern audit opinions.

Theoretically, this study contributes to the audit literature by integrating financial distress as a mediating construct that links internal governance features and financial conditions to auditor judgments. Practically, the findings provide useful insights for auditors, regulators, and corporate decision-makers in identifying early warning signals of continuity risk, especially within publicly owned enterprises.

## 2. Literature Review

### *2.1. Fraud Deterrence*

Fraud deterrence refers to a proactive approach aimed at preventing fraudulent activities before they occur by cultivating institutional environments that minimize opportunities and rationalizations for misconduct. Unlike fraud detection, which addresses fraud after its occurrence, deterrence strategies emphasize preventive measures such as robust internal control systems, ethical leadership, and governance structures that foster accountability [13]. These mechanisms operate by influencing the psychological calculus of potential fraud perpetrators, who assess the risks of detection and punishment relative to the expected benefits.

In the Indonesian context, empirical studies have highlighted that the effectiveness of fraud deterrence is significantly shaped by the extent to which internal actors, particularly management, internalize their roles in promoting integrity. This internalization stems not merely from compliance obligations but from a strategic commitment to organizational transparency and ethical behaviour [14]. Accordingly, corporate governance becomes a critical driver of deterrence effectiveness; enhanced board oversight, active audit committees, and strong ethical leadership amplify perceived enforcement, thereby reducing fraudulent intentions.

Further, deterrence is dynamic and evolves with the organization's ethical climate and credibility of sanction mechanisms, termed "deterrence propellers" by Koerniawan, et al. [15]. When these propellers are embedded into institutional governance frameworks, they bolster fraud resilience. This is particularly relevant for Indonesian State-Owned Enterprises (SOEs), where integrating fraud deterrence principles into liquidity management and audit oversight is not only regulatory but strategically imperative for sustaining institutional integrity.

### *2.2. Agency Theory*

Agency theory examines the relationship between principals (shareholders) and agents (managers), focusing on how managers make decisions on behalf of shareholders [16]. However, this relationship is often strained by conflicts of interest and information asymmetry, as managers may act in pursuit of personal interests at the expense of shareholders [17]. To mitigate such issues, auditors serve as independent monitors, tasked with assessing financial statements and providing assurance regarding the continuity of business operations [1]. The issuance of audit opinions, especially going concern opinions, thus functions as a critical accountability tool within the agency framework.

### *2.3. Signaling Theory*

Signaling theory addresses how companies reduce information asymmetry by sending credible signals to the market [18]. Within this framework, audit opinions serve as key indicators of firm health and performance. According to Ghozali [19] management employs such signals to communicate relevant financial conditions to investors and stakeholders. Agency theory studies the relationship between shareholders (principals) and managers (agents), analyzing managers' decision-making on behalf of shareholders [1]. Such signals are particularly salient in contexts marked by sustained losses or liquidity problems, which can undermine firm valuation and stakeholder trust.

*Edelweiss Applied Science and Technology*
*ISSN: 2576-8484*
*Vol. 9, No. 5: 2549-2564, 2025*
*DOI: 10.55214/25768484.v9i5.7517*

*2.4. Going-Concern Audit Opinion*

A going-concern audit opinion signals the auditor's substantial doubt about an entity's ability to continue operating in the foreseeable future [20]. Auditors must critically assess management's going concern assessment and obtain sufficient evidence regarding material uncertainties [21]. While financial statements assume ongoing viability, declining income, high liabilities, or consistent losses may necessitate a modified opinion [1, 4]. From an agency theory perspective, such opinions serve as an important mechanism for aligning management accountability with shareholder interests, especially when financial realities contradict optimistic managerial forecasts.

*2.5. Financial Distress*

Financial distress refers to a condition wherein a firm experiences significant financial instability, marked by difficulties in meeting debt obligations and a heightened risk of bankruptcy or liquidation [22]. It reflects deeper organizational problems, such as ineffective financial strategies, weak internal controls, or misaligned managerial decisions [23, 24]. Financial distress also signals heightened operational and credit risk, prompting auditors and investors to reassess the company's sustainability. As a precursor to audit modifications, particularly going concern opinions, financial distress serves as both a warning sign and a mediating variable that connects governance and financial health to audit outcomes.

*2.6. Board Gender Diversity and Going-Concern Audit Opinion*

Board gender diversity, or the inclusion of women on corporate boards, is increasingly recognized as crucial for effective governance [25]. According to signaling theory, gender-diverse boards convey a signal of robust governance, inclusivity, and enhanced ethical standards to external stakeholders [19]. From an agency theory perspective, such diversity strengthens oversight by introducing varied perspectives that challenge managerial decisions, thereby reducing agency costs [26-28].

Empirical studies have demonstrated that Gender-diverse boards enhance risk monitoring and strategic thinking, decreasing the probability of going-concern audit opinions [8, 29, 30]. Female directors tend to adopt more conservative approaches to financial management and disclosure, which contributes to the early detection of financial red flags and enhances auditors' confidence in the entity's viability.

*$H_1$: Board gender diversity affects going-concern audit opinions.*

*2.7. Liquidity and Going Concern Audit Opinion*

Liquidity reflects a company's capacity to fulfill its short-term obligations using its current assets, thus serving as a primary indicator of operational resilience. Firms with high liquidity typically maintain stakeholder trust and attract favorable audit evaluations [1]. Signaling theory suggests that low liquidity signals financial distress to auditors, increasing the likelihood of a modified going concern opinion [1].

This relationship has been empirically substantiated in various contexts, including studies by Bahtiar, et al. [4] and Himam and Masitoh [31] established a significant link between declining liquidity and going-concern audit opinions.

*$H_2$: Liquidity affects going concern audit opinions.*

*2.8. Financial Distress and Going Concern Audit Opinion*

Financial distress occurs when a firm experiences a significant decline in its ability to meet financial commitments, often serving as a precursor to insolvency or bankruptcy [22]. In the auditing context, the presence of financial distress constitutes a material uncertainty that directly informs the auditor's judgment regarding the entity's ability to continue as a going concern.

Prior studies have affirmed that financial distress significantly influences auditors' decision-making, with distressed firms facing a greater likelihood of receiving going-concern audit opinions [32, 33].

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These findings align with both agency and signaling theories: distress signals weak managerial performance and intensify concerns about governance failures.

*$H_5$: Financial distress affects going concern audit opinions.*

*2.9. Board Gender Diversity and Financial Distress*

Board gender diversity may also contribute to mitigating financial distress by enhancing the board's risk oversight function. From the agency theory standpoint, diverse boards can reduce information asymmetry and mitigate conflicts between managers and shareholders, thereby leading to better financial outcomes [10, 16]. Women on boards are often associated with greater prudence in financial decision-making and stronger monitoring roles, which can bolster financial resilience.

Empirical evidence supports the hypothesis that gender-diverse boards are inversely associated with financial distress. Studies show that such diversity promotes financial stability and reduces vulnerability to adverse economic conditions [34-38].

*$H_4$: Board gender diversity affects financial distress.*

*2.10. Liquidity and Financial Distress*

Liquidity plays a pivotal role in ensuring a firm's financial solvency and operational sustainability. Adequate liquidity not only allows a firm to cover its immediate liabilities but also provides a buffer against unforeseen shocks and financial downturns [1, 4, 39]. Insufficient liquidity, conversely, is a well-established predictor of financial distress, particularly in contexts characterized by economic volatility.

Research has shown that low liquidity levels are closely linked with heightened financial vulnerability [40, 41]. Hence, maintaining optimal liquidity is vital for preserving stakeholder trust and minimizing the likelihood of distress events.

*$H_5$: Liquidity affects financial distress.*

*2.11. Financial Distress as an Intervening Role*

Financial distress, a condition characterized by significant financial difficulties that impair a company's ability to meet short-term obligations, significantly influences audit assessments, especially regarding going concern opinions. Prior research identifies corporate governance and financial indicators as key determinants of financial distress. Studies suggest that board gender diversity can improve financial performance [25, 42, 43] reducing the risk of financial distress [37], and that stronger financial performance decreases auditor concerns [44]. Liquidity is also critical; low liquidity increases vulnerability to going-concern audit opinions [1]. A low Z-score combined with declining liquidity signals a higher risk of failure, increasing the likelihood of a going-concern opinion [33, 45].

Therefore, this study posits financial distress as a mediating variable between board gender diversity and going concern audit opinions, and between liquidity and going concern audit opinions. Hypotheses H6 and H7 examine these indirect effects, testing whether the influence of board gender diversity and liquidity on going concern audit opinions is mediated by financial distress.

Specifically, the hypotheses are:

*$H_6$: Board gender diversity affects going concern audit opinions through financial distress.*

*$H_7$: Liquidity affects going-concern audit opinions through financial distress.*

These hypotheses are visually represented in the conceptual research model (Figure 1), illustrating the relationships between the independent variables (board gender diversity and liquidity), the mediating variable (financial distress), and the dependent variable (going concern audit opinion).

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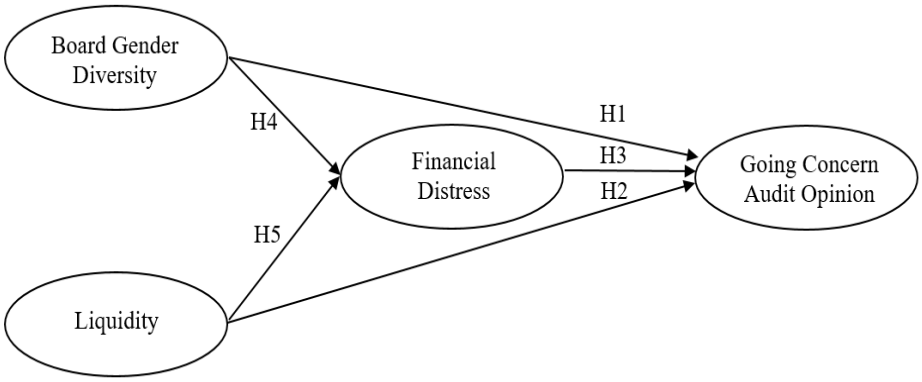


**Figure 1.**
Research Model.

## 3. Methodology

This study uses a descriptive quantitative approach to examine the influence of board gender diversity and liquidity on going concern audit opinions, mediated by financial distress. The analysis focuses on non-financial state-owned enterprises (SOEs) listed on the Indonesia Stock Exchange (IDX) from 2020 to 2023. Data, sourced from publicly available audited annual financial statements on the IDX, were analyzed for a final sample of 21 SOEs selected from an initial pool of 23 based on data completeness.

Data analysis involved descriptive statistics and Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4.0. Descriptive statistics summarized the distributional characteristics of construct indicators. PLS-SEM, suitable for exploratory research, investigated direct and indirect relationships among variables, specifically the mediating effect of financial distress.

Following Sarstedt, et al. [46] The PLS-SEM analysis comprised a measurement model (outer model) assessment to confirm construct reliability and validity, and a structural model (inner model) evaluation to assess hypothesized relationships, including mediated effects.

The endogenous latent variable, going concern audit opinion (Z), was measured as a binary variable (1 = going concern opinion; 0 = otherwise). Financial distress (Y), the mediating latent variable, was measured using a composite score derived from the Altman Z"-Score, Springate Model, and Grover Model.

Exogenous latent variables included:

- Board gender diversity (X1), measured by the proportion of female directors and a binary dummy variable (1 = at least one female director; 0 = none).
- Liquidity (X2), measured by the current ratio and quick ratio.

This framework facilitates a rigorous investigation of the relationships between governance, financial condition, and audit judgments, providing empirical evidence of financial distress's mediating role.

### *3.1. Sample and Data*

This study uses secondary data from annual reports of IDX-listed companies between 2020 and 2023. The final sample includes 21 firms after excluding those with incomplete data. Board diversity is measured using a composite index of gender diversity. Liquidity is measured using the current ratio and the quick ratio. Audit opinion is a dummy variable indicating whether the auditor issued a going-concern opinion. Financial distress is measured using the Altman Z"-Score model, Springate model, and Grover model.

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*3.2. Analytical Technique and Variable Measurement*

Partial Least Squares Structural Equation Modeling (PLS-SEM) is used due to its suitability for exploratory models with complex relationships [46]. Mediation is tested using bootstrapping procedures [47-50].

This study uses four constructs: an endogenous variable (going concern audit opinion), an intervening variable (financial distress), and two exogenous variables (board gender diversity and liquidity), as detailed in Table 1.

The endogenous variable, going concern audit opinion (GC), is a dummy variable (1 = going concern opinion received, 0 = otherwise) [4, 51].

Financial distress (FD), the intervening variable, is measured using three financial distress prediction models to ensure robust measurement: the Z-Score model [52-54], integrating financial ratios; the S-Score model [55, 56], incorporating profitability, leverage, liquidity, and operational efficiency ratios; and the G-Score model [57, 58] evaluating solvency and earnings performance. These indices provide a comprehensive assessment of financial vulnerability.

Board gender diversity (BGD), one exogenous variable, is measured by: (1) the proportion of female directors (female directors/total board members) [9, 59] and (2) a dummy variable (1 = at least one female director, 0 = otherwise) [30, 35].

The other exogenous variable, liquidity (LKD), is assessed using the current ratio (current assets/current liabilities) [60, 61] and the quick ratio (excluding inventory) [1, 62].

These indicators were selected for their theoretical relevance, empirical support in prior research, and compatibility with the SEM-PLS analytical framework, ensuring construct validity.

**Table 1.**
Variable's Measurement.

| Measurement Items | Indicator | References |
|---|---|---|
| **Going Concern Audit Opinion – Endogenous Latent Variable** | | |
| GC1 | If the company receives a going concern opinion in a year, the dummy variable is 1; otherwise, it is 0. | Bahtiar, et al. [4] and Fidiana, et al. [51] |
| **Financial Distress – Intervening Variable** | | |
| FD1 | *Z-Score* = 3,25 + 6.56X1 + 3.26X2 +6.72X3 + 1.05X4 | Altman [52] and Rahmat [53] |
| FD2 | *S-Score* = 1.03A + 3.07B + 0.66C + 0.4D | Saha [55] and Fauzi and Saluy [56] |
| FD3 | *G-Score* = 1,65WCTA + 3,404EBITTA – 0,016NITA + 0,057 | Ashraf, et al. [57] and Lutfiyyah and Bhilawa [58] |
| **Board Gender Diversity – Exogenous Latent Variable** | | |
| BGD1 | Female Proportion on Board = $\frac{\text{Total woman of director on board in a year}}{\textit{The whole number of director on a board in a year}}$ | Wijaya and Memarista [9] and Mvita and Du Toit [59] |
| BGD2 | If the board of directors contains at least one female member, the dummy variable is 1; otherwise, it is 0. | Tessema, et al. [30] and Abbas and Frihatni [35] |
| **Liquidity – Exogenous Latent Variable** | | |
| LKD1 | Current Ratio = $\frac{\text{Current assets}}{\textit{Current liabilities}}$ | Ariska, et al. [60] and Dirman [61] |
| LKD2 | Quick Ratio = $\frac{\textit{Current assets} - \textit{Inventories}}{\textit{Current laibilities}}$ | Averio [1] and Kustiana [62] |

## 4. Results

*4.1. Descriptive Statistics*

Table 2 presents the descriptive statistics of the latent variable indicators based on a sample of 84 observations. These statistics provide an overview of the distributional characteristics, central tendency, and dispersion of the data, which are essential for evaluating the appropriateness of subsequent structural model analysis.

Board Gender Diversity (X1) is measured using two indicators. The first, BGD1, represents the proportion of female members on the board of commissioners. It has a mean of 0.126 and a standard

*Edelweiss Applied Science and Technology*
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*Vol. 9, No. 5: 2549-2564, 2025*
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deviation of 0.128, with values ranging from 0.000 to 0.500. The positive skewness (0.681) and slightly negative kurtosis (-0.218) indicate that most firms have a low proportion of female commissioners, with a few outliers having relatively higher gender diversity. The second indicator, BGD2, is a binary variable indicating the presence or absence of at least one female commissioner. This indicator has a mean of 0.548 (suggesting that approximately 54.8% of the firms have at least one female board member), a standard deviation of 0.498, and a full range from 0 to 1. The distribution is negatively skewed (-0.915) and leptokurtic (-2.010), reflecting a concentration of observations near the extremes.

Liquidity (X2) is assessed through two financial ratio indicators. LKD1, likely representing the current ratio or a similar liquidity metric, has a mean of 1.154 and a standard deviation of 0.537, with values ranging from 0.053 to 2.487. Its slight positive skewness (0.409) and near-normal kurtosis (0.027) suggest a moderately symmetrical distribution. LKD2, possibly reflecting the quick ratio or cash ratio, has a mean of 0.879 and a standard deviation of 0.472, with a range from 0.040 to 2.425. The positive skewness (0.989) and leptokurtic nature (kurtosis = 1.206) indicate a right-skewed distribution, with a concentration of firms clustered around lower liquidity levels, and a few firms showing significantly higher values.

Financial Distress (Y) is represented by three indicators. FD1, which may correspond to a Z-score or similar distress proxy, shows a wide dispersion (SD = 4.899) and a mean of 3.938, with extreme values ranging from -17.649 to 13.410. The distribution is negatively skewed (-1.577) and highly leptokurtic (kurtosis = 4.205), indicating a heavy tail on the left and the presence of substantial outliers among financially distressed firms. FD2 has a mean of 0.344 and a much smaller standard deviation (1.277), yet the range remains wide (-7.181 to 3.693), and the distribution exhibits extreme leptokurtosis (14.368) and left skewness (-2.450). This reflects a clustering of firms with low distress but a small subset experiencing severe financial strain. Similarly, FD3 displays a mean of 0.134 and a standard deviation of 0.981, with values ranging from -4.934 to 2.207. Its skewness of -2.349 and kurtosis of 9.331 further confirm a distribution heavily weighted toward less distressed firms, with few extreme negative cases.

Lastly, the Going Concern Audit Opinion (Z) is captured by a binary indicator GC1, which takes the value of 1 if the audit opinion contains a going concern modification and 0 otherwise. The mean value of 0.345 implies that 34.5% of firms in the sample received a going concern opinion, with a standard deviation of 0.475. The skewness (0.663) and negative kurtosis (-1.599) suggest a distribution leaning toward the non-issuance of going concern opinions, but with a notable proportion of firms still flagged for potential continuity issues.

In sum, the descriptive statistics indicate substantial variability across firms in terms of gender diversity, liquidity, financial health, and audit outcomes, highlighting the relevance of these variables in understanding fraud deterrence dynamics within Indonesian State-Owned Enterprises.

The measurement model demonstrates good reliability and validity. Board diversity has a significant positive effect on fraud deterrence ($\beta = 0.312$, $p < 0.01$). Financial distress negatively affects fraud deterrence ($\beta = -0.215$, $p < 0.05$). Audit opinion partially mediates the relationship between financial distress and fraud deterrence, with a significant indirect effect ($\beta = 0.087$, $p < 0.10$).

### *4.2. Measurement Model (Outer Model)*

The measurement model was evaluated using a reflective measurement model framework to ensure indicator validity and reliability. Following Sarstedt, et al. [46] indicator loadings, internal consistency reliability, convergent validity, and discriminant validity were assessed.

Table 3 shows that all indicator loadings exceeded the 0.708 threshold, demonstrating sufficient individual item reliability. Composite reliability (0.957-0.979) and Cronbach's alpha (0.911-0.969) surpassed the recommended 0.70 threshold [46] indicating strong internal consistency for all constructs. Convergent validity was established as AVE values exceeded 0.50, demonstrating that each latent construct explained more than 50% of the variance in its indicators [63].

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The single-indicator construct, Going Concern Audit Opinion (GC1), was excluded from the reflective measurement model analysis. Consistent with methodological best practices [46] Single-indicator constructs are assessed using standard reliability and validity criteria rather than confirmatory measurement modeling.

Discriminant validity was assessed using the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT). The Fornell-Larcker criterion was met, as the square root of the AVE for Board Gender Diversity (0.958) was greater than its correlations with Financial Distress (0.233), Liquidity (0.106), and Going Concern Audit Opinion (-0.340) [46]. Furthermore, HTMT values, which are more sensitive in detecting discriminant validity issues [63] were all below the 0.90 threshold, confirming that each construct is empirically distinct and indicators uniquely represent their respective latent variables.

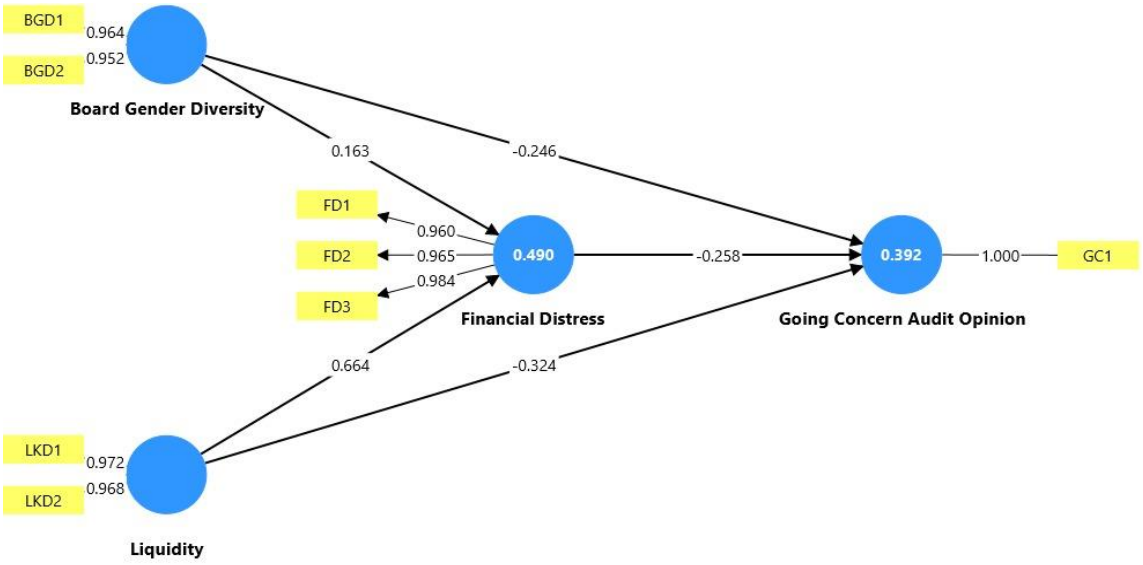


**Figure 2.**
Outer Model Output.

**Table 3.**
Reflective Measurement Model Result.

| Latent Variables | Measurement Items | Indicators | Indicator Loading | Internal Consistency Reliability | | Convergent Validity |
|---|---|---|---|---|---|---|
| | | | Outer Loading | Cronbach Alpha | Composite Reliability | AVE |
| | | | (≥ 0.708) | (> 0.70) | (> 0.70) | (≥ 0.50) |
| Board Gender Diversity | BGD1 | Female proportion on board | 0.964 | 0.911 | 0.957 | 0.918 |
| | BGD2 | Dummy variable | 0.952 | | | |
| Liquidity | LKD1 | Current ratio | 0.972 | 0.937 | 0.970 | 0.941 |
| | LKD2 | Quick ratio | 0.968 | | | |
| Financial Distress | FD1 | Altman Z"-Score Model | 0.960 | 0.969 | 0.979 | 0.941 |
| | FD2 | Springate Model | 0.965 | | | |
| | FD3 | Grover Model | 0.984 | | | |

### *4.3. Structural Model (Inner Model)*

The structural model was evaluated for collinearity, path coefficient significance, explanatory power, and predictive power. VIF values below 3 indicate no multicollinearity issues. Path analysis

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(Table 6) revealed significant negative effects of board gender diversity (-0.246), liquidity (-0.324), and financial distress (-0.258) on going concern audit opinion ($p < 0.05$), but with small effect sizes. Liquidity significantly impacted financial distress (0.664), while board gender diversity did not (0.163, $p = 0.099$). Board gender diversity and liquidity explained 47.8% of financial distress variance ($R^2 = 0.478$), while board gender diversity, liquidity, and financial distress explained 36.9% of going concern audit opinion variance ($R^2 = 0.369$). Financial distress significantly mediated the effect of liquidity on going concern audit opinion (-0.171, $p = 0.025$), but not board gender diversity (-0.042, $p = 0.286$). PLSpredict (Table 7) showed positive $Q^2$_predict values, supporting predictive validity. PLS-SEM outperformed the linear model in predicting five of eight indicators based on RMSE and MAE, indicating medium predictive power.

**Table 4.**
Discriminant Validity Result.

| Variables | Board Gender Diversity | Financial Distress | Liquidity | Going Concern Audit Opinion |
|---|---|---|---|---|
| **Fornell-Larcker Criterion** | | | | |
| Board Gender Diversity | 0.958 | | | |
| Financial Distress | 0.233 | 0.970 | | |
| Liquidity | 0.106 | 0.681 | 0.970 | |
| Going Concern Audit Opinion | -0.340 | -0.536 | -0.526 | 1.000 |
| **Heterotrait-Monotrait Ratio (HTMT)** | | | | |
| Board Gender Diversity | | | | |
| Financial Distress | 0.239 | | | |
| Liquidity | 0.112 | 0.702 | | |
| Going Concern Audit Opinion | 0.354 | 0.528 | 0.542 | |

**Table 5.**
Collinearity Result

| | ***Financial Distress*** | ***Going Concern Audit Opinion*** |
|---|---|---|
| *Board Gender Diversity* | 1.011 | 1.063 |
| Liquidity | 1.011 | 1.876 |
| *Financial Distress* | | 1.962 |

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**Table 6.**
Hypothesis and path coefficient significance testing result.

| Hypothesis | Path Coefficient | t statistic | p value | PCI | Sig | f² / Upsilon v | VIF | R-square | Q-square |
|---|---|---|---|---|---|---|---|---|---|
| **Direct Effects** | | | | | | | | | |
| H1. Board gender diversity → Going concern audit opinion | -0.246 | 2.677 | 0.007 | -0.413, -0.053 | Yes | 0.093 | 1.063 | 0.369 | 0,336 |
| H2. Liquidity → Going concern audit opinion | -0.324 | 2.939 | 0.003 | -0.501, -0.071 | Yes | 0.092 | 1.876 | | |
| H3. Financial Distress → Going concern audit opinion | -0,258 | 2.491 | 0.013 | -0.500, -0,082 | Yes | 0.056 | 1.962 | | |
| H4. Board gender diversity → Financial Distress | 0.163 | 1.652 | 0.099 | -0.005, 0,361 | No | 0.051 | 1.011 | 0.478 | 0.419 |
| H5. Liquidity → Financial Distress | 0.664 | 14.523 | 0.000 | 0.581, 0.759 | Yes | 0.855 | 1.011 | | |
| **Indirect Effects** | | | | | | | | | |
| H6. Board gender diversity → Financial Distress → Going concern audit opinion | -0.042 | 1.068 | 0.286 | -0.155, 0.002 | No | 0.002 | | | |
| H7. Liquidity → Financial Distress → Going Concern Audit Opinion | -0.171 | 2.244 | 0.025 | -0.358, -0.054 | Yes | 0.029 | | | |

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**Table 7.**
PLS predict result.

| Indicator | $Q^2$ *Predict* | PLS-SEM Model | | LM Model | |
|---|---|---|---|---|---|
| | | RMSE | MAE | RMSE | MAE |
| FD1 | 0.551 | 3.320 | 2.241 | 3.305 | 2.326 |
| FD2 | 0.275 | 1.101 | 0.617 | 1.108 | 0.597 |
| FD3 | 0.356 | 0.797 | 0.476 | 0.802 | 0.467 |
| GC1 | 0.333 | 0.394 | 0.347 | 0.400 | 0.350 |

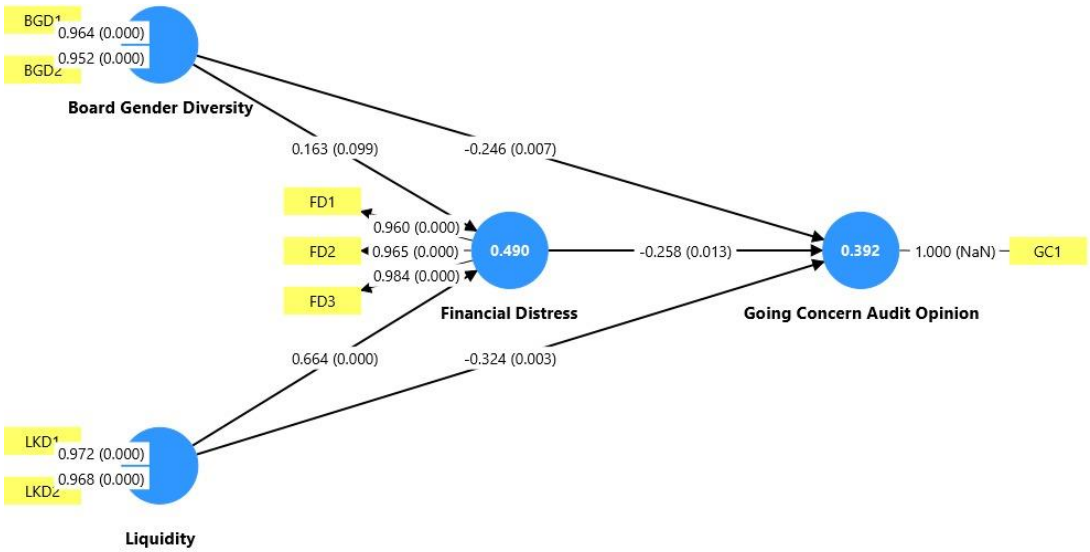


**Figure 3.**
Inner Model Output.

## 5. Discussion

These findings highlight the importance of governance structures in deterring fraud. Diverse boards provide broader perspectives and enhance monitoring capabilities [59]. Audit opinions, especially modified ones, serve as effective signals to stakeholders, contributing to preventive measures against fraud [2]. Financial distress, while a risk factor, can also lead to increased scrutiny and thus reinforce deterrence mechanisms.

This study examines how board gender diversity and liquidity affect financial distress and, in turn, influence going concern audit opinions, testing seven direct and indirect hypotheses. Results show that board gender diversity (X1) significantly reduces the likelihood of a going concern opinion (Z), suggesting that increased female board representation enhances accountability and mitigates audit-related risks [8, 29, 30].

Liquidity also negatively impacts going concern opinions, indicating that firms with weaker short-term financial health are more likely to receive such opinions, consistent with prior research [1, 4, 31]. Similarly, financial distress (Y) has a significant negative effect on going concern outcomes, as distressed firms exhibit characteristics, such as cash flow issues and weak governance, that raise auditor concerns [32, 33, 64].

However, board gender diversity does not significantly influence financial distress, possibly due to decision-making complexities within diverse boards [26] contrasting with studies highlighting its protective effect [35-38]. Liquidity (X2), by contrast, significantly increases financial distress, confirming that lower liquidity levels are reliable indicators of deteriorating financial health [45, 65].

*Edelweiss Applied Science and Technology*
*ISSN: 2576-8484*
*Vol. 9, No. 5: 2549-2564, 2025*
*DOI: 10.55214/25768484.v9i5.7517*

Regarding indirect effects, financial distress does not mediate the link between board gender diversity and going concern opinions, likely due to women's limited influence in board leadership and the presence of other audit considerations like firm size and profitability [1, 4, 66]. In contrast, financial distress mediates the effect of liquidity on going concern opinions, supporting both agency theory and signaling theory frameworks [16, 18, 33, 45].

From a fraud risk perspective, the findings suggest that financial distress and liquidity pressures—key elements of the fraud triangle—may heighten the risk of misconduct in poorly governed firms. Although not directly tested, board diversity could act as a deterrent, but its effectiveness depends on institutional support and accountability mechanisms [13]. Strong internal controls, monitoring, and ethical culture are essential in mitigating fraud, especially under financial strain [15] and governance indicators, including audit opinions, serve as important public signals of corporate integrity [14]. Ultimately, the study highlights the critical role of liquidity in audit outcomes and the contextual impact of gender-diverse governance in strengthening financial oversight and resilience.

## 6. Conclusion

This study examines how board gender diversity and liquidity affect financial distress and the issuance of going-concern audit opinions among non-financial state-owned enterprises listed on the Indonesia Stock Exchange (IDX) from 2020 to 2023. Results show that board gender diversity, liquidity, and financial distress each significantly reduce the likelihood of a going concern opinion. Liquidity increases financial distress, while board gender diversity does not. Financial distress mediates the effect of liquidity on audit opinions but not that of board gender diversity.

These findings highlight the combined impact of financial and governance factors on audit outcomes, emphasizing liquidity management and board composition as key elements in auditors' risk evaluations. Strong liquidity not only lowers distress but also deters audit risks and fraud, supporting fraud deterrence principles that stress proactive financial oversight.

From a fraud prevention lens, the results affirm the role of governance, especially board diversity, as an internal control that strengthens oversight and ethics. Although gender diversity did not significantly reduce financial distress, its negative effect on going concern opinions suggests its contribution to better risk oversight and transparency. These results support prior arguments that female board presence promotes ethical conduct, stronger monitoring, and reduced managerial opportunism, key to fraud prevention.

Policy implications include:

1. For regulators, mandating board diversity in SOEs could strengthen ethical oversight and indirectly reduce fraud and audit risks.
2. For auditors, the findings support a holistic going concern assessment incorporating financial and governance-based fraud indicators.
3. For management, maintaining liquidity should be a strategic priority to reduce audit scrutiny and signal operational stability.
4. For stakeholders, audit opinions reflect not only financial risks but also governance effectiveness in preventing misconduct.

While insightful, this study is limited to gender diversity, liquidity, and financial distress. Future research should include broader governance variables—such as audit committee strength, ownership structures, and internal controls—and investigate more direct fraud indicators. Including private and financial sector firms and extending the time horizon may reveal deeper insights into the interplay between fraud deterrence and audit outcomes across institutional settings.

## Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

*Edelweiss Applied Science and Technology*
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*DOI: 10.55214/25768484.v9i5.7517*

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*Edelweiss Applied Science and Technology*
*ISSN: 2576-8484*
*Vol. 9, No. 5: 2549-2564, 2025*
*DOI: 10.55214/25768484.v9i5.7517*