http://dx.doi.org/10.18623/rvd.v22.n4.3520

DETECTING FINANCIAL FRAUD IN INDONESIAN ISLAMIC BANKS

DETECÇÃO DE FRAUDE FINANCEIRA EM BANCOS ISLÂMICOS INDONÉSIOS

Article received on: 8/13/2025
Article accepted on: 10/13/2025

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The authors declare that there is no conflict of interest

Abstract
This study aims to analyze the influence of financial targets, financial stability, external pressure, ineffective monitoring, the nature of the industry, and auditor changes on financial statement fraud in Islamic banks in Indonesia over the period 2014–2023. Financial statement fraud is measured using the Modified Beneish M-Score. The sample was selected using purposive sampling. The research data consist of financial statements from nine Islamic Commercial Banks over ten years, resulting in a total of 90 observations. Logistic regression analysis was performed using EViews software. The results indicate that financial targets and ineffective monitoring have a positive and significant effect on financial statement fraud, while financial stability has a negative and significant effect. In contrast, external pressure, the nature of the industry, and auditor changes show no significant effect on financial statement fraud. These findings support the Fraud Triangle Theory, particularly highlighting pressure and opportunity as key drivers of fraud. The study underscores the importance of robust Sharia-compliant oversight systems and advocates for the adoption of the Beneish M-Score model as an early detection tool for financial statement fraud in Indonesia's Islamic banking sector.

Resumo
Este estudo tem como objetivo analisar a influência das metas financeiras, da estabilidade financeira, da pressão externa, da monitorização ineficaz, da natureza da indústria e das mudanças de auditor sobre a fraude nas demonstrações financeiras em bancos islâmicos da Indonésia no período de 2014 a 2023. A fraude nas demonstrações financeiras é medida utilizando o Modelo Beneish M Modificado. A amostra foi selecionada por meio de amostragem intencional (purposive sampling). Os dados da pesquisa consistem em demonstrações financeiras de nove bancos comerciais islâmicos ao longo de dez anos, resultando em um total de 90 observações. A análise de regressão logística foi realizada utilizando o software EViews. Os resultados indicam que as metas financeiras e a monitorização ineficaz têm um efeito positivo e significativo sobre a fraude nas demonstrações financeiras, enquanto a estabilidade financeira apresenta um efeito negativo e significativo. Em contraste, a pressão externa, a natureza da indústria e as mudanças de auditor não demonstram efeito significativo sobre a fraude nas demonstrações financeiras. Esses achados apoiam a Teoria do Triângulo da Fraude, destacando especialmente a pressão e a oportunidade como principais fatores que impulsionam a ocorrência de fraudes. O estudo

Keyword: Financial Statement Fraud. Modified Beneish M-score. Fraud Triangle. Islamic Banks.

ressalta a importância de sistemas robustos de supervisão em conformidade com a Sharia e recomenda a adoção do Modelo Beneish M como uma ferramenta de detecção precoce de fraudes nas demonstrações financeiras no setor bancário islâmico da Indonésia.

Palavras-chave: *Fraude nas Demonstrações Financeiras. Modelo Beneish M Modificado. Triângulo da Fraude. Bancos Islâmicos.*

1 INTRODUCTION

Financial statement fraud is the most complex form of fraud and has the broadest impact on the credibility of financial institutions. Although its incidence is relatively lower compared to other types of fraud, the magnitude of losses it causes is substantial. According to the Association of Certified Fraud Examiners (ACFE, 2022), financial statement fraud accounts for only about 9% of total fraud cases but incurs the highest losses, with an average of over USD 500,000 per case.

In the context of Indonesia's financial industry, financial statement fraud occurs not only in conventional banking but also in Islamic banking. Several cases, such as misuse of financing and irregular profit reporting at Bank Syariah Mandiri, BJB Syariah, Panin Dubai Syariah, and Bank Syariah Indonesia (BSI), demonstrate that institutions grounded in Islamic principles are not entirely immune to fraud risk. This is particularly concerning given that Islamic banking is founded on core values of trustworthiness, honesty, and fairness, which should serve as primary safeguards in all business practices. This phenomenon suggests weaknesses in internal control systems and the effectiveness of Sharia governance. Financial statement fraud typically arises from a combination of internal and external factors. CRESSEY's (1953) Fraud Triangle Theory identifies three key elements that motivate individuals or entities to commit fraud: pressure, opportunity, and rationalization. In the banking context, pressure often stems from performance-related demands, such as profit targets or return on assets (ROA), financial stability concerns, and external pressures. Such pressures may drive management to manipulate financial reports to present a more favorable image to shareholders, investors, and regulators. Opportunity emerges from weak internal control systems, ineffective internal audit functions, and insufficient oversight by the board of commissioners or audit committees. When monitoring mechanisms are inadequate, the potential for manipulation

increases significantly. Rationalization involves the moral justification of fraudulent actions. Management may convince themselves that earnings manipulation is a temporary measure necessary to preserve the institution's stability or reputation, despite violating ethical and legal standards.

These three elements are often interrelated and collectively create an environment conducive to financial statement fraud. In Islamic banking, this presents a paradox: while all financial activities are theoretically guided by principles of honesty and justice, management still faces real-world business pressures, including performance expectations and shareholder demands. To detect potential financial statement fraud, various analytical models have been developed. One widely used model is the Beneish M-Score (BENEISH, 1999), a statistical tool based on financial ratios designed to identify firms likely to engage in earnings management. Although the original Beneish M-Score was developed primarily to measure earnings management, several studies, including ABBAS (2017), BIDURI; TJAHJADI (2024), CHRISTIAN et al. (2015), KAMAL et al. (2016), KHATUN et al. (2022), NGUYEN; NGUYEN (2016), RAMÍREZ-ORELLANA et al. (2017), have demonstrated its applicability in detecting financial statement fraud.

Over time, modifications to the Beneish model have become necessary. The original model employs eight key financial ratios that capture significant changes in accounts such as revenue, expenses, and assets. However, it was developed based on U.S. corporate contexts, which differ substantially from Indonesian firms, particularly Islamic banks. Recent studies have therefore adapted the Beneish M-Score, for example, by incorporating the Fixed Asset Index (FAI) to detect potential manipulation in fixed asset accounts and by adjusting ratio formulas to align with local financial reporting standards (NARSA et al., 2023).

This study employs the Modified Beneish M-Score to enhance the accuracy of early detection of financial statement fraud in Islamic banking. By integrating this model within the Fraud Triangle Theory framework, the research seeks to explain how financial pressures (financial targets, financial stability, and external pressure), opportunities (nature of the industry and ineffective monitoring), and rationalization (auditor changes) influence management's propensity to commit financial statement fraud. This research offers two main contributions. First, theoretically, it expands the literature on financial statement fraud detection in the context of Islamic financial institutions by combining a theoretical framework (Fraud Triangle Theory) with an empirical model (Modified

Beneish M-Score). Second, practically, the findings are expected to assist regulatory authorities, such as the Financial Services Authority (*Otoritas Jasa Keuangan* or OJK) and the Sharia Supervisory Board (*Dewan Pengawas Syariah* or DPS), in developing early-warning systems to identify potential fraud in Islamic banking.

Based on the above discussion, this study aims to analyze the influence of financial targets, financial stability, external pressure, opportunity (nature of industry and ineffective monitoring), and rationalization (change in auditor) on financial statement fraud in Indonesian Islamic banks using the Modified Beneish M-Score model. It is hoped that this research will provide empirical insights into the drivers of financial statement fraud and serve as a foundation for formulating more effective supervisory policies in the Islamic banking sector.

2 LITERATURE REVIEW

2.1 Fraud Triangle Theory

The Fraud Triangle Theory was first introduced by CRESSEY (1953), who posited that fraudulent behavior occurs when three key conditions are simultaneously present: pressure, opportunity, and rationalization. This model has become a foundational framework for understanding the motivations and behaviors of fraud perpetrators across various sectors, including financial institutions and banking. Pressure refers to financial stress or performance targets that individuals or management are compelled to meet. The pressure to achieve specific profit targets often incentivizes management to manipulate financial statements to present results that appear more favorable than the actual financial condition (SKOUSEN et al., 2009). Opportunity arises when weaknesses exist in internal control systems or when oversight by management or the board of commissioners is inadequate. Such conditions create an environment where individuals can commit fraud without easy detection (DORMINEY et al., 2012). Rationalization involves the moral justification used by perpetrators to legitimize their fraudulent actions. This often takes the form of a belief that the act is harmless or even necessary for the organization's greater good (ALBRECHT et al., 2012). The Fraud Triangle model has been widely adopted in contemporary research to explain the root causes of financial statement fraud in both public and private sectors. In the context of Islamic banking, these three elements provide

a useful lens for understanding how performance pressures, weak oversight mechanisms, and ethical rationalizations may compromise the integrity of financial reporting.

2.2 Financial statement fraud

Financial statement fraud refers to deliberate actions by management to present misleading financial information, such as inflating fictitious revenues, deferring expense recognition, or overstating asset values to create an artificially favorable impression of the company's financial performance and position (REZAEE, 2005). The primary objective is to manipulate stakeholders' perceptions of the firm's financial health. According to the ACFE (2022), although financial statement fraud constitutes a relatively small proportion of total fraud cases, it results in the highest financial losses. In Islamic banking, such fraud is often associated with the manipulation of financing income, unrealistic asset valuations, and profit reporting that deviates from prudential principles (prudential reporting), thereby violating both regulatory standards and Sharia compliance.

2.3 Modified Beneish M-Score Model

BENEISH (1999) developed the M-Score model to detect earnings manipulation using eight financial ratios that reflect significant changes in key financial statement accounts. The model has since been widely employed by auditors and researchers as a quantitative tool for identifying potential earnings management. Recent studies in Indonesia have modified the original Beneish M-Score by incorporating an additional variable: the FAI, designed to capture potential manipulation related to fixed assets (NARSA et al., 2023). The Modified Beneish M-Score is formulated as follows:

$$\text{M-Score} = -2.634 + (0.009 \times \text{GMI}) + (0.043 \times \text{SGI}) + (0.067 \times \text{DEPI}) + (0.236 \times \text{SGAI}) - (2.191 \times \text{TATA}) - (0.11 \times 1/\text{CAT}) - (0.253 \times \text{FAR}) - (1.869 \times \text{EC}) + (0.437 \times \text{AO}) \quad (1)$$

The model uses a cutoff threshold of –1.78. If the calculated M-Score exceeds –1.78 (is greater than –1.78), the firm is flagged as likely engaging in financial statement manipulation. This modified version enhances the model's applicability to the Indonesian

context, particularly for Islamic banks, by better reflecting local financial reporting practices and asset structures.

2.4 Relationship among variables and hypothesis development

2.4.1 The effect of financial targets on financial statement fraud

Pressure to meet financial targets is one of the most dominant drivers of financial statement manipulation. Management is often confronted with expectations to maintain stable performance to retain the confidence of investors, shareholders, and regulators (SKOUSEN et al., 2009). In the context of Islamic banking, this pressure is typically reflected in profit targets or ROA. Research by NARSA et al. (2023) demonstrates a positive relationship between financial pressure and the likelihood of financial statement fraud. The higher the financial targets set, the greater the incentive for management to manipulate financial reports to meet those expectations.

H_1: Financial target has a positive effect on financial statement fraud.

2.4.2 The effect of financial stability on financial statement fraud

Financial instability stemming from operational pressures and entity-specific challenges can hinder investment and signal poor corporate health (HONESTY et al., 2024). Financial stability, often proxied by consistent asset growth, reflects a firm's ability to meet both current and unexpected future obligations. According to the Fraud Triangle Theory, instability acts as a form of pressure, potentially motivating individuals to distort financial figures to portray organizational viability. While some studies (e.g., EGBUNIKE; IGBINOVIA, 2018; HAQQ; BUDIWITJAKSONO, 2020; LESTARI; HENNY, 2019; SITUNGKIR; TRIYANTO, 2020) report a positive relationship between financial stability and fraud, others, such as APRILIA and FURQANI (2021), find a negative association, suggesting that more stable firms are less likely to engage in manipulation. Consistent with the latter perspective and the underlying logic of pressure-induced fraud, this study posits that greater financial stability reduces the incentive to commit fraud.

H_2: Financial stability has a negative effect on financial statement fraud.

2.4.3 The effect of external pressure on financial statement fraud

Financial institutions, including banks, operate within an ecosystem heavily influenced by external stakeholders, particularly creditors and investors, whose expectations can exert significant pressure. External pressure is commonly measured using leverage (total liabilities divided by total assets). High leverage indicates substantial debt and elevated credit risk, which may trigger covenant violations (KLEIN, 2002). According to agency theory, management may manipulate earnings or liabilities to attract investors or avoid breaching loan covenants (BENEISH, 1999). Empirical studies support this view (BAWEKES et al., 2018; FITRI et al., 2019; KURNIA; ASYIK, 2020; NURBAITI; HANAFI, 2017; TARJO; HERAWATI, 2017; WAHYUNI; BUDIWITJAKSONO, 2017), which consistently find that firms with high leverage are more prone to financial statement fraud, often through profit inflation to signal repayment capacity. Thus, greater external pressure increases the likelihood of fraud.

H_3: External pressure has a positive effect on financial statement fraud.

2.4.4 The effect of ineffective monitoring on financial statement fraud

Ineffective monitoring occurs when a corporation lacks a proper monitoring mechanism for its personnel. PRADESYAH et al. (2021) note that most fraud involves exploiting technology or using tools that can penetrate financial institutions' systems, often referred to as cybercrime. AL BAQIR and SULHANI (2023) suggest that the effectiveness of the internal audit function can reduce fraud in Islamic banking in Indonesia, thereby creating opportunities for fraud under the opportunity dimension of the Fraud Triangle Theory. When internal controls, audit committees, independent commissioners, or DPS fail to function effectively, management may exploit these gaps to manipulate financial reports undetected (BEASLEY, 1996). While AGUSPUTRI and SOFIE (2019) report a positive link between ineffective monitoring and fraud, SUNARDI and AMIN (2018) find a negative relationship. However, the dominant theoretical and empirical consensus supported by HANDOKO and OLIVia (2022) suggests that weak monitoring increases fraud risk, particularly in manufacturing companies.

H_4: Ineffective monitoring has a positive effect on financial statement fraud.

2.4.5 The effect of the nature of industry on financial statement fraud

The nature of industry, as an opportunity factor in the Fraud Triangle, refers to inherent industry characteristics that may facilitate fraud. For instance, accounts receivable, which involve subjective estimates (e.g., allowance for doubtful accounts), can be manipulated to overstate profits (YANTI; RIHARJO, 2021). Industries with complex or judgment-intensive accounting practices provide more room for misstatement. RAMDANY (2020) finds a positive relationship between industry nature and fraud detection, whereas AGUSPUTRI and SOFIE (2019) report a negative effect. Given that banking, especially Islamic banking, involves intricate financing structures and asset valuations, this study assumes that industry-specific complexities increase fraud susceptibility.

H_5: The Nature of the industry has a positive effect on financial statement fraud.

2.4.6 The effect of change in auditor on financial statement fraud

Auditor change is a common proxy for rationalization in forensic accounting research. Repeated auditor switches may indicate management's attempt to find a more lenient auditor who is willing to accept aggressive or non-compliant reporting practices (LOU; WANG, 2011). DALTON and RADTKE (2013) confirm a positive association between auditor changes and financial manipulation. In Islamic banking, such behavior could also reflect efforts to seek auditors more accommodating of practices that deviate from strict Sharia reporting standards. This moral justification, framed as necessary for survival or industry practice, constitutes rationalization.

H_6: Change in auditor has a positive effect on financial statement fraud.

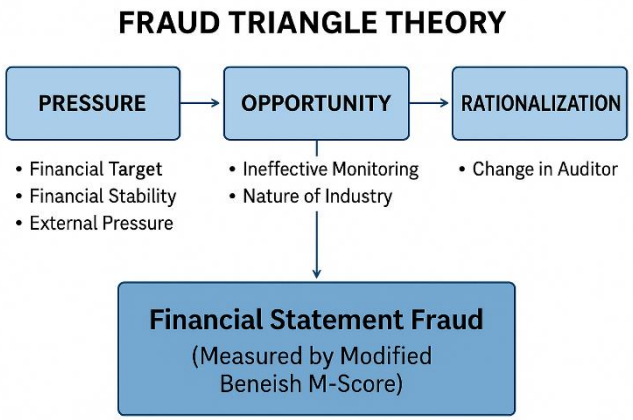
2.5 Conceptual framework

This study adopts the Fraud Triangle Theory as its theoretical foundation to examine how pressure (financial target, financial stability, external pressure), opportunity (ineffective monitoring, nature of industry), and rationalization (change in auditor) influence financial statement fraud in Indonesian Islamic banks. Financial statement fraud

is measured using the Modified Beneish M-Score. The conceptual framework is illustrated as follows:

Figure 1

Conceptual Framework



3 METHODOLOGY

This study employs a quantitative approach with an explanatory research design to empirically examine the influence of independent variables on the dependent variable. A quantitative approach was selected because the study aims to measure and test causal relationships among variables based on an established theoretical framework, namely, the Fraud Triangle Theory (CRESSEY, 1953). The population of this study comprises all Islamic Commercial Banks (*Bank Umum Syariah* or BUS) registered with the OJK during the period 2014–2023. According to OJK data, 12 BUS operated during this period. Using purposive sampling, only banks with complete and consistent financial statements throughout the entire research period were selected as samples. Nine BUS met these criteria, resulting in a total of 90 observations over the 10-year observation window. Data analysis was conducted using logistic regression. This method was chosen because the dependent variable in this study is a dummy (non-metric) variable, while the independent variables include both metric and non-metric data. Logistic regression is appropriate for testing whether the probability of occurrence of the dependent variable can be predicted by the independent variables (GHOZALI; RATMONO, 2018). Hypothesis testing was performed using EViews software.

4 RESULTS

4.1 Descriptive statistics

Table 1

Descriptive Statistics

	FSF	ROA	GPM	DR	IND	PP	AUDCHANGES
Mean	0.511	1.461	0.534	0.180	0.653	-0.160	0.311
Median	1.000	0.009	0.516	0.155	0.666	-0.113	0.000
Maximum	1.000	0,136	0.935	0.894	1.000	1.942	1.000
Minimum	0.000	-0,052	0.095	0.041	0.333	-2.500	0.000
Std. Dev.	0.502	3.622	0.212	0.145	0.169	0.744	0.465
Skewness	-0.044	0.741	0.161	3.717	0.608	-0.143	0.816
Kurtosis	15.000	6.789	3.848	17.919	5.877	4.587	1.665
Observations	90	90	90	90	90	90	90

Source: EViews 13.0 (processed data) (2025)

Table 1 reports descriptive statistics from 90 observations of nine BUS (2014–2023). Approximately 51.1% of observations show fraud signals (FSF = 0.511). Average ROA is 1.5%, indicating moderate profitability. The low Debt Ratio (0.180) reflects conservative leverage, consistent with Sharia principles. Board independence (IND = 0.653) implies moderate governance quality, yielding an average ineffective monitoring score (IM = 1 – IND) of 0.347. Auditor changes occurred in 31.1% of cases. The industry nature proxy (PP) exhibits high volatility due to sensitivity to sales fluctuations, but is retained for its theoretical relevance.

4.2 Logistic regression analysis

4.2.1 Model Fit Test (Hosmer and Lemeshow's Goodness of Fit Test)

The Hosmer and Lemeshow goodness-of-fit test is conducted to evaluate the null hypothesis that there is no significant difference between the predicted probabilities generated by the model and the actual observed outcomes, in other words, that the model fits the data well. According to GHOZALI and RATMONO (2018), if the p-value of the Hosmer and Lemeshow test is less than 0.05, the null hypothesis is rejected, indicating a significant discrepancy between the model's predictions and the observed data. This suggests that the model does not fit the data adequately and lacks predictive accuracy.

Conversely, if the p-value is greater than 0.05, the null hypothesis is not rejected, implying that the model's predicted values are consistent with the observed data and that the model provides a good fit for the dataset. This test is therefore critical in validating the reliability of the logistic regression model before interpreting the significance of individual predictors.

Table 2

Results of the Hosmer and Lemeshow Goodness-of-Fit Test

Goodness-of-Fit Evaluation for Binary Specification Andrews and Hosmer-Lemeshow Tests			
H-L Statistic	0.4644	Prob. Chi-Sq (8)	7.6893
Andrews Statistic	0.0653	Prob. Chi-Sq (10)	21.9535

Source: EViews 13.0 (processed data) (2025)

Table 2 presents the goodness-of-fit test results for the logistic regression model. The Hosmer Lemeshow test yields a p-value of 0.4644 ($\chi^2 = 7.6893$, df = 8), and the Andrews test produces a p-value of 0.0653 ($\chi^2 = 21.9535$, df = 10). Since both p-values exceed the conventional 0.05 significance level, we fail to reject the null hypothesis of model fit. This indicates that the predicted probabilities align well with the observed outcomes, confirming the model's suitability for hypothesis testing.

4.2.2 Prediction Accuracy Test (Percent Correctly Predicted)

The Percent Correctly Predicted is a widely used metric in logistic regression analysis to assess the predictive accuracy of a model. It represents the proportion of observations that the model correctly classifies as either fraud or non-fraud cases. A higher percentage indicates greater alignment between predicted and actual outcomes, reflecting strong predictive performance. Conversely, a low accuracy rate suggests substantial discrepancies between predictions and observed data, implying that the model has limited explanatory power (GHOZALI; RATMONO, 2018). In fraud detection studies, a classification accuracy above 70–75% is generally considered acceptable, though this threshold may vary depending on sample characteristics and research context.

Table 3

Presents the Percent Correctly Predicted result

Expectation-Prediction Evaluation for Binary Specification						
Equation: UNTITLED						
Success cutoff: C = 0.5						
	Estimated Equation			Constant Probability		
	Dep=0	Dep=1	Total	Dep=0	Dep=1	Total
% Correct	65	73.91	70	0	100	51.11
% Incorrect	34	26.09	30	100	0	49.99

Source: EViews 13.0 (processed data) (2025)

Table 3 presents the Percent Correctly Predicted result, which yields an accuracy rate of 73.91%. This indicates that the model correctly classifies 73.91% of all observations, both fraud and non-fraud cases. The value exceeds the commonly accepted threshold of 70% in financial statement fraud detection studies (GHOZALI; RATMONO, 2018), suggesting that the model demonstrates acceptable predictive accuracy and is sufficiently reliable for identifying financial statement fraud in Islamic banking.

4.2.3 The Coefficient of Determination (McFadden R-squared)

Table 4

Logit Regression Analysis Test Results

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-1.669	1.236	-1.350	0.176
ROA	0.336	0.121	2.772	0.005
GPM	-3.873	1.712	-2.262	0.023
DR	1.738	1.624	1.069	0.284
IND	4.836	1.695	2.851	0.004
PP	-0.019	0.332	-0.058	0.953
AUDCHANGES	-0.730	0.522	-1.398	0.162
McFadden R-squared	0.390	Mean dependent var		0.511
LR statistic	19.439	Avg. log likelihood		-0.584
Prob (LR statistic)	0.000			
Obs with Dep=0	44	Total obs		90
Obs with Dep=1	46			

Source: EViews 13.0 (processed data) (2025)

4.2.4 Model Fit and McFadden's Pseudo R-Squared

The coefficient of determination used in this study is McFadden's Pseudo R-Squared, which assesses the extent to which the independent variables, namely financial

target, financial stability, external pressure, ineffective monitoring, nature of industry, and auditor changeexplain the variation in the dependent variable, financial statement fraud. Unlike the R^2 in ordinary least squares regression, McFadden's R^2 ranges from 0 to 1, where values closer to 1 indicate a stronger explanatory power of the model (GHOZALI; RATMONO, 2018). A low value suggests that the independent variables have limited ability to describe the dependent variable.

As shown in Table 5, the McFadden's Pseudo R-Squared is 0.390 (or 39%). This means that approximately 39% of the variation in financial statement fraud can be explained by the set of independent variables included in the model. The remaining 61% is attributed to factors not captured in this study. According to Hosmer, Lemeshow, and Sturdivant (2013), an McFadden's R^2 between 0.2 and 0.4 is generally considered to represent a "good fit" in logistic regression models, particularly in social and behavioral sciences. Thus, the model in this study demonstrates an acceptable level of explanatory power.

Based on the logistic regression results presented in Table 4, the estimated logistic regression equation is as follows:

$$Ln\left(\frac{FSF}{1-FSF}\right) = -1.669 + 0.336ROA - 3.873GPM + 1.738DR + 4.836IND - 0.019PP - 0.0730\,AUD + \varepsilon \qquad (2)$$

4.3 Hypothesis testing and interpretation of results

The logistic regression results indicate the financial target (ROA) has a coefficient of 0.336 with a p-value of 0.005 (< 0.05). This positive and statistically significant coefficient suggests that pressure to meet financial performance targets increases the likelihood of financial statement fraud. Specifically, a one-unit increase in ROA (in decimal form) raises the log-odds of fraud by 0.336. This finding supports Hypothesis 1 and aligns with the pressure dimension of the Fraud Triangle Theory. The variable financial stability (gross profit margin or GPM) shows a coefficient of –3.873 with a p-value of 0.023 (< 0.05), indicating a negative and significant effect. This implies that Islamic banks with greater financial stability are less likely to engage in financial statement fraud, as they face less pressure to artificially enhance reported performance. This result is consistent with Hypothesis 2. In contrast, external pressure (DR) has a

coefficient of 1.738 but is not statistically significant (p-value = 0.284). Although the sign is positive, external pressures, such as debt obligations or creditor expectations, do not significantly drive fraud in the context of Indonesian Islamic banking. Thus, Hypothesis 3 is not supported. The variable nature of industry (PP) has a coefficient of –0.019 and is not significant (p = 0.953), indicating that structural characteristics of the Islamic banking industry, such as financing complexity or reliance on subjective estimates, do not significantly influence fraud propensity. Therefore, Hypothesis 4 is rejected. The variable ineffective monitoring (IND) has a regression coefficient of 4.836 with a positive direction and a probability value (p-value) of 0.004. Since the probability value is less than 0.05, it indicates that ineffective monitoring has a positive and significant effect on the likelihood of financial statement fraud. This finding supports Hypothesis 5 and aligns with the opportunity dimension of the Fraud Triangle Theory. Finally, change in auditor (AUDCHANGES) yields a coefficient of –0.730 with a p-value of 0.162 (> 0.05). The negative sign suggests that auditor changes are associated with a lower likelihood of fraud, although this relationship is not statistically significant. This contradicts the expectation that auditor switching reflects rationalization—an attempt to select a more lenient auditor. Consequently, Hypothesis 6 is not supported.

5 DISCUSSION

5.1 The effect of financial targets on financial statement fraud

Empirical findings show that financial targets, proxied by ROA, have a positive and significant effect on financial statement fraud. This indicates that the higher the financial targets that management must achieve, the greater the potential for manipulating financial statements to present a favorable performance image. The pressure to meet profit targets represents a form of pressure as described by CRESSEY (1953), where individuals commit fraud because they feel pressured by performance expectations or certain financial needs. In the context of Islamic banking, this pressure arises not only from profit demands but also from the drive to maintain reputation and public trust in Islamic value–based financial institutions.

This result is consistent with the studies of BIDURI and TJAHJADI (2024), NARSA et al. (2023), and SKOUSEN et al. (2009), which found that financial pressure

significantly increases the likelihood of financial statement manipulation. Thus, increasing financial performance targets without being balanced by effective risk management and strong supervision may cause reporting distortion, ultimately threatening the integrity of the Islamic financial system itself. Financial targets set by management represent one form of pressure in the Fraud Triangle Theory. The pressure to achieve specific profit or growth targets can drive management to commit financial statement fraud to meet stakeholder expectations, such as shareholders, regulators, and the public (RAHMAN; ANWAR, 2014). However, empirical evidence in Indonesian Islamic banking shows mixed results. Some studies find that financial targets have a positive and significant effect on financial statement fraud in the conventional banking sector, where higher targets increase the tendency for management to commit fraud (RAHMAN; ANWAR, 2014). Similar findings were observed in Malaysian Islamic banking, where financial pressure was a key determinant of fraud (RAHMANl; ANWAR, 2014). RATMONO et al. (2020) also found that financial targets significantly affect financial statement fraud in Indonesian public companies using both the Beneish M-Score and Dechow F-Score approaches.

5.2 The effect of financial stability on financial statement fraud

Empirical findings show that financial stability, measured by the GPM, has a negative effect on indications of financial statement fraud. This means that if the gross profit margin increases year by year, it can reduce the indication of fraud. Financial stability, as measured by GPM, theoretically serves as an indicator of a company's financial health. Within the framework of the Fraud Triangle, companies with high financial stability (high GPM) generally face less pressure to commit financial statement fraud because stable firms do not need to manipulate figures to present good performance (PRAJANTO; PRATIWI, 2016). In Islamic banking, GPM reflects a bank's ability to generate profit from its operations. A high GPM indicates operational efficiency and sound risk management, thereby reducing the pressure to engage in fraud. Islamic banks with stable GPMs tend to have healthy financial performance, reducing the need for manipulation. Operating under principles of justice, transparency, and social responsibility, Islamic banks with high GPMs are more likely to comply with these values, as they have no reason to conceal poor performance. Furthermore, the OJK and

the National Sharia Council (*Dewan Syariah Nasional* or DSN) enforce strict regulations on Islamic banking. Banks with high GPMs tend to comply with financial reporting standards, thus minimizing opportunities for fraud. Strong oversight also encourages banks to maintain reporting integrity. Since Islamic banking heavily relies on public trust, particularly among clients who choose Islamic banks for ethical reasons, a high GPM helps reinforce credibility and transparency, aligning with Sharia values.

5.3 The effect of external pressure on financial statement fraud

Empirical findings indicate that external pressure does not significantly affect financial statement fraud. Although external pressure may increase the likelihood of fraud, its influence is not statistically significant. Islamic banking operates under Sharia principles such as justice, transparency, and accountability, which foster an ethical environment that discourages fraud. Despite external pressures like competition or performance demands, Islamic banks tend to be more resistant to fraudulent behavior because of their obligation to uphold Sharia compliance and maintain public trust. This aligns with Sharia Enterprise Theory, which emphasizes that managerial accountability extends beyond investors and creditors to God (Allah SWT) as the ultimate owner. Islamic banking is also subject to strict regulatory supervision by the OJK and DSN, which minimizes opportunities for fraud even under pressure. Furthermore, legitimacy theory supports these findings, as Islamic banks must maintain legitimacy among stakeholders through transparent and ethical practices. From an agency theory perspective, conflicts of interest between principals and agents are mitigated by Sharia governance, making management less likely to commit fraud. Similarly, stakeholder theory suggests that Islamic banks prioritize broader stakeholder interests, not just short-term profits. These findings imply that strong Sharia principles and tight regulations can reduce the impact of external pressure on financial statement fraud. Islamic banks should continue reinforcing transparency and integrity training, while regulators must ensure that institutions have mechanisms to handle pressure without compromising ethical standards.

5.4 The effect of ineffective monitoring on financial statement fraud

Empirical findings show that ineffective monitoring has a positive and significant effect on financial statement fraud. The variable, measured by the ratio of independent commissioners, indicates that a higher ratio of independent commissioners to total board members may create opportunities for management to commit fraud. Agency theory describes this as a conflict of interest between principals (shareholders) and agents (management). Managers operating in weak monitoring environments have more freedom to engage in opportunistic behavior (GINTING; DALJONO, 2023). Theoretically, this supports Agency Theory JENSEN and MECKLING (2019), which highlights that ineffective monitoring allows management to exploit internal control weaknesses for personal gain, including manipulating financial reports. According to CRESSEY (1953) Fraud Triangle Theory, opportunity arises when monitoring and control systems fail. In Islamic banking, monitoring effectiveness depends not only on the board of commissioners but also on the DPS, which ensures compliance with Islamic principles. When oversight from either the DPS or the board of commissioners is weak, the potential for financial statement fraud increases.

This finding is consistent with GINTING and DALJONO (2023), who found that a high ratio of independent commissioners does not always guarantee effective oversight. Often, independent commissioners serve merely a formal role and lack active involvement in auditing practices, leading to weak management control and greater fraud opportunities. Similar results were reported by BEASLEY (1996) and SKOUSEN et al. (2009), who emphasized that weak board and internal audit functions are key determinants of financial statement fraud. In practice, Islamic banks in Indonesia still face challenges in ensuring effective monitoring, especially in integrating internal audit, the board of commissioners, and the DPS. Organizational complexity limited supervisory competence, and potential conflicts of interest can reduce oversight quality. This creates an environment conducive to manipulation, violating Islamic values of *amanah* (trust) and *adl* (justice). Normatively, the findings emphasize that effective monitoring depends not only on structure but also on the quality of supervisory performance. Strengthening good corporate governance and implementing risk-based supervision should be priorities for Islamic banks to minimize financial statement fraud. Ineffective monitoring thus fosters conditions conducive to fraud due to weak internal and external controls. Effective

supervision must incorporate integrity, independence, and professional competence to ensure that Islamic financial reporting continues to reflect honesty and transparency, the core foundations of Islamic economics.

5.5 The effect of the nature of industry on financial statement fraud

The results of this study show that the nature of the industry variable has no significant effect on financial statement fraud. In the Fraud Triangle theory, this variable represents opportunity, particularly opportunities that arise from complex or volatile industry characteristics. In the case of Islamic banking, strict regulations, intensive supervision by the OJK, and compliance with Sharia principles appear to limit the impact of industry characteristics on fraud risk. This finding does not support Agency Theory, which suggests information asymmetry between principals and agents. When management (the agent) perceives that the company is performing poorly, managers may manipulate receivables or other accounting items to portray a better financial position. However, in Islamic banking, tight regulation and oversight reduce such opportunities.

Empirical research in Indonesia shows that the relationship between the nature of industry and financial statement fraud varies across sectors, time periods, and research methods. For instance, SIDAURUK and ABIMANYU (2022) found a significant relationship in manufacturing companies, while YUSRIANTI et al. (2020) confirmed that the nature of the industry can influence fraud as an opportunity factor within the Fraud Triangle framework. Conversely, RATNASARI and ROFI (2020), other banking studies found no significant impact of this variable. These mixed results may stem from differences in industry characteristics, internal control strength, and operational complexity. Industries with higher inventory levels or more complex business cycles may be more prone to fraud, but strong internal controls can mitigate this risk.

Overall, while the nature of the industry can influence financial statement fraud, the strength and direction of its effect depend heavily on the industry context, corporate governance, and other moderating factors. For Islamic banking, maintaining strong oversight and regulatory standards remains crucial even if industry characteristics appear insignificant. Management should remain vigilant to structural or environmental changes that might increase operational complexity and fraud risk.

5.6 The effect of change in auditor on financial statement fraud

The variable rationalization, proxied by a change in auditor, has a positive but insignificant effect on financial statement fraud. This result suggests that frequent auditor changes do not necessarily reflect a higher tendency toward fraudulent financial reporting. Although auditor changes can sometimes serve as a form of rationalization for fraud, justified by reasons such as efficiency but aimed at avoiding strict scrutiny, this is not evident in Indonesian Islamic banking.

The limited impact of auditor change on fraud is due to the strong adherence of Islamic banks to Sharia principles and the strict supervision enforced by OJK and DSN. These institutions ensure that every auditor operates within Sharia auditing standards and professional ethics. This finding aligns with RATMONO et al. (2020), who observed that a change in auditor was not significant in several non-financial industries, possibly due to differences in audit complexity or long-term relationships between companies and their auditors.

The managerial implication is that auditor rotation should be conducted under the principle of continuity of audit knowledge. Management and audit committees must ensure that new auditors receive complete information about previous audit findings to prevent any gaps that could be exploited for fraudulent purposes. Regulators such as OJK and DSN should also establish strict transition guidelines and encourage thorough and independent audits, especially during auditor changes, to maintain transparency and integrity in Islamic financial reporting.

6 CONCLUSION

6.1 Conclusion

The study concludes that several key factors influence financial statement fraud in Islamic banking, offering both theoretical and practical insights. First, financial target exerts a positive and significant effect on financial statement fraud. Managerial pressure to achieve profit goals, particularly ROA, often drives manipulation to present more favorable financial performance. This finding reinforces the pressure component of the

Fraud Triangle Theory, demonstrating that even within the ethical context of Islamic banking, performance expectations can motivate fraudulent behavior.

In contrast, financial stability shows a negative relationship with financial statement fraud. Banks with higher GPM tend to exhibit stronger financial health, which in turn reduces the incentive to manipulate financial information. This stability reflects adherence to key Sharia principles such as *amanah* (trust) and transparency, suggesting that sound financial conditions naturally promote ethical behavior and reduce fraudulent tendencies.

Meanwhile, external pressure is found to have no significant effect on financial statement fraud. Although external demands such as market competition and investor expectations could theoretically create stress, they are insufficient to trigger fraud in the context of Islamic banking. This outcome aligns with the Sharia Enterprise Theory, which emphasizes strong ethical foundations, accountability, and comprehensive oversight as protective mechanisms against fraudulent practices.

The study also identifies that ineffective monitoring has a positive and significant effect on financial statement fraud. Weak supervision by boards of directors or ineffective internal control systems increases the opportunity for manipulation. This result supports Agency Theory, which highlights how conflicts of interest between principals and agents can foster unethical actions when proper monitoring mechanisms are lacking.

Furthermore, the nature of the industry does not have a significant impact on fraud occurrence. The inherent complexity of Islamic banking operations, combined with rigorous regulatory and Sharia-based oversight, appears to constrain opportunities for manipulation. Lastly, a change in auditor exhibits a positive but statistically insignificant relationship with financial statement fraud. Although changing auditors may serve as a potential avenue for rationalizing unethical actions, the presence of robust regulatory frameworks and strict Sharia auditing standards effectively mitigates its influence.

Overall, the findings highlight that pressure and opportunity are the strongest determinants of financial statement fraud in Indonesian Islamic banking (2014–2023). Meanwhile, rationalization and external factors are less impactful due to robust regulation and Sharia-based governance.

6.2 Implications

6.2.1 Theoretical implications

This research enriches the literature on financial statement fraud by integrating the Fraud Triangle Theory and the Modified Beneish M-Score into the context of Islamic banking. Empirical evidence supports the effectiveness of the modified Beneish model as an early warning system for detecting potential manipulation in Islamic financial reports, thus contributing to fraud detection methodologies within value-based financial institutions.

6.2.2 Practical implications

For Regulators (OJK & DSN-MUI): The results can serve as a basis for strengthening risk-based supervision and Sharia governance mechanisms, including adopting the Modified Beneish M-Score as a compliance analysis tool. For Islamic Bank Management: The findings emphasize the need to balance performance pressure with ethical reporting standards, fostering a culture of integrity and transparency. For Internal and External Auditors: Auditor rotation should be guided by professionalism and continuity of knowledge, rather than used to avoid strict audits.

6.2.3 Social and moral implications

The study also delivers a moral message that the integrity of financial reporting is not merely a technical accounting issue but a reflection of Islamic values such as *amanah* (honesty), *adl* (justice), and *sidq* (truthfulness). Upholding these principles strengthens public trust in Islamic finance.

6.3 Recommendations

Based on the study's findings, several practical recommendations are proposed to enhance fraud prevention and detection within Islamic banking institutions.

For the OJK and DPS, it is recommended to adopt the Modified Beneish M-Score as a regular monitoring tool for evaluating the financial reports of BUS. This proactive approach would enable regulatory bodies to identify early warning signs of financial statement manipulation and ensure compliance with both financial reporting standards and Sharia principles.

For bank management, it is crucial to strengthen internal control systems and establish effective whistleblowing mechanisms. Robust internal controls help minimize opportunities for fraud, while confidential and protected whistleblowing channels encourage employees to report unethical practices without fear of retaliation. Together, these measures can significantly enhance fraud detection and promote a culture of transparency and integrity.

For external auditors, the study recommends the use of risk-based auditing approaches that incorporate indicators from the Beneish model. By focusing audit procedures on areas with higher fraud risk, auditors can improve the effectiveness of their assessments and contribute to more reliable financial reporting, especially in the context of Islamic banking, where ethical compliance is paramount.

Finally, for future researchers, it is suggested to expand the scope of analysis by including the capability and arrogance elements from the Fraud Pentagon Theory, in addition to the traditional Fraud Triangle variables. Moreover, exploring cross-industry data could provide broader insights into fraud mechanisms across different sectors, enriching both academic understanding and practical applications in financial governance.

This research reaffirms that fraud prevention and early detection are integral to good Sharia governance. By applying empirical approaches such as the Modified Beneish M-Score, the Islamic banking industry can strengthen accountability, transparency, and public trust, upholding the Islamic economic principles of honesty and justice in every financial transaction.

AUTHOR CONTRIBUTIONS

Author 1 (Nurbayani):

Conceptualisation; Methodology; Formal analysis; Data curation; Investigation; Writing – original draft; Writing – review & editing.

Author 1 conceptualised the research idea and design, developed the methodological framework, conducted formal data analysis and investigation, managed research data, and prepared the original draft as well as subsequent revisions.

Author 2 (Nirwana):

Supervision; Validation; Methodology; Writing – review & editing.

Author 2 contributed to developing the conceptual and methodological framework, provided academic supervision, validated analytical results, offered critical feedback on the manuscript, and ensured research integrity.

Author 3 (Amiruddin):

Validation; Resources; Theoretical support; Writing – review & editing.

Author 3 provided theoretical and methodological insights, assisted in validating findings related to Islamic banking and fraud detection, and contributed to improving the manuscript through critical review and substantive recommendations.

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Authors' Contribution

Both authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

How to cite this article (APA)

Nurbayani, Nirwana, & Amiruddin. (2025). DETECTING FINANCIAL FRAUD IN INDONESIAN ISLAMIC BANKS. *Veredas Do Direito*, 22(4), e223520. https://doi.org/10.18623/rvd.v22.n4.3520