International Journal of Engineering Inventions
e-ISSN: 2278-7461, p-ISSN: 2319-6491
Volume 15, Issue 1 [January 2026] PP: 70-74

Financial Ratios and Corporate Social Responsibility Disclosure: Evidence from the Banking Sector

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Abstract
This study aims to analyze the effect of the Loan to Deposit Ratio (LDR), profitability, and leverage on corporate social responsibility (CSR) disclosure in banking companies listed on the Indonesia Stock Exchange during the 2020–2024 period. This study employed a quantitative research design using secondary data obtained from annual reports and sustainability reports of banking companies listed on the Indonesia Stock Exchange. CSR disclosure was measured using the Corporate Social Disclosure (CSR) Index based on the Global Reporting Initiative (GRI) indicators. Data analysis was performed using multiple linear regression with the help of E-Views software to examine the relationships between variables. Using a fixed effect panel regression model, this study finds that leverage has a significant negative effect on Corporate Social Responsibility (CSR) disclosure at the 5% significance level. In contrast, Loan to Deposit Ratio and profitability do not have significant individual effects on CSR disclosure. The joint test indicates that the three financial variables simultaneously affect CSR disclosure, with an adjusted R^2 of 0.85, indicating strong explanatory power.

Keywords: *Loan to Deposit Ratio, Profitability, Leverage, CSR Disclosure*

Date of Submission: 03-01-2026 Date of acceptance: 11-01-2026

I. Introduction

The banking sector plays a vital role in national economic development through its intermediation function in mobilizing deposits, distributing credit, and supporting financial system stability. Due to its systemic importance and high public visibility, the banking industry faces stronger pressure to maintain transparency and accountability compared to other sectors. In Indonesia, the banking sector has experienced increasing scrutiny from regulators, investors, and the public, particularly regarding sustainability practices and corporate social responsibility (CSR) disclosure (International Monetary Fund & Monetary and Capital Markets Department, 2024).

CSR disclosure has become an essential component of corporate reporting as stakeholders increasingly demand information beyond traditional financial performance. According to legitimacy theory, companies seek to align their operations with societal norms and expectations to maintain organizational legitimacy (Suchman, 1995; Crossley et al., 2021). CSR disclosure functions as a communication mechanism through which firms demonstrate compliance with social and environmental expectations and mitigate legitimacy threats, particularly in highly regulated industries such as banking (Hummel & Jobst, 2024a; A. M. Sebastião et al., 2024a).

From the perspective of signaling theory, CSR disclosure represents a non-financial signal used by management to reduce information asymmetry between firms and external stakeholders (Spence, 1973; Connelly et al., 2011). Transparent and credible CSR reporting signals long-term sustainability, sound risk management, and managerial quality, thereby strengthening stakeholder confidence (Xu et al., 2023; Reimsbach et al., 2018). In the banking sector, where trust and reputation are critical, CSR disclosure plays a particularly important role in shaping stakeholder perceptions.

Financial characteristics are among the key internal factors influencing CSR disclosure practices. One important indicator in banking is the Loan to Deposit Ratio (LDR), which reflects a bank's liquidity management and effectiveness in channeling third-party funds into credit. LDR is widely used by regulators and investors to assess bank stability and risk exposure (He et al., 2025). Banks with well-managed liquidity positions are more likely to allocate sufficient resources to social and environmental activities, while extreme LDR levels may shift managerial priorities toward liquidity risk management and limit CSR engagement (Seow et al., 2024).

Profitability is another critical determinant of CSR disclosure. Profitable firms generally have greater financial flexibility to invest in CSR activities and are subject to higher public expectations regarding social accountability. Profitability also strengthens incentives for CSR disclosure as a tool to enhance corporate reputation and legitimacy (Rivandi et al., 2021; Kuncorowati et al., 2021). Empirical studies have shown that firms with higher profitability tend to disclose CSR information more extensively, although some findings suggest that the relationship may vary across industries and institutional contexts (Hasbiyadi et al., 2023).

Leverage reflects a firm's capital structure and financial risk exposure. High leverage increases financial pressure and bankruptcy risk, which may constrain discretionary expenditures, including CSR activities and disclosure (Q. Chen et al., 2022). However, signaling theory suggests that firms with higher leverage may strategically increase CSR disclosure to reduce perceived risk and maintain legitimacy in the eyes of creditors and stakeholders (Tawfiq et al., 2024). Prior empirical evidence indicates that the relationship between leverage and CSR disclosure is often negative or context-dependent, particularly in regulated sectors such as banking (Malik & Kashiramka, 2025).

Despite growing interest in CSR disclosure, empirical findings on the effects of LDR, profitability, and leverage remain inconclusive, especially in emerging markets. Most prior studies focus on manufacturing firms or incorporate additional variables such as firm size and investor reaction, leading to mixed results. Moreover, research that specifically examines bank-specific liquidity indicators such as LDR in relation to CSR disclosure is still limited, particularly in the Indonesian banking context.

Therefore, this study aims to examine the effect of Loan to Deposit Ratio, profitability, and leverage on Corporate Social Responsibility disclosure in banking companies listed on the Indonesia Stock Exchange. By focusing on key financial indicators that are highly relevant to banking operations, this research seeks to provide clearer empirical evidence on the financial determinants of CSR disclosure. The findings are expected to contribute to the CSR literature by reinforcing the applicability of legitimacy theory and signaling theory in the banking sector, while also offering practical insights for bank management and regulators in improving sustainability reporting practices.

II. Materials and Methods

This study adopts a quantitative approach using secondary data from the annual reports of banking companies listed on the Indonesia Stock Exchange. The sample is selected through purposive sampling based on data availability. Corporate Social Responsibility (CSR) disclosure is measured using a disclosure index, while Loan to Deposit Ratio represents liquidity, profitability reflects earning performance, and leverage indicates capital structure. The data are analyzed using multiple linear regression to examine the effect of LDR, profitability, and leverage on CSR disclosure, with classical assumption tests conducted prior to hypothesis testing.

Data and Sample

The study population includes all banking companies listed on the IDX. The sample was determined using a purposive sampling technique based on the availability of complete financial statements and sustainability reports. The resulting data set is a panel data set covering five years of observation for each sampled bank.

Variables and Measurement

This study consists of independent variables (Loan to Deposit Ratio, profitability, leverage) and a dependent variable (CSR disclosure).

1. Loan to Deposit Ratio (X1) – measured using the LDR, which represents the company's ability to meet short-term obligations.
2. Profitability (X2) – represented by return on assets (ROA), which reflects management's efficiency in generating profits from total assets.
3. Leverage (X3) – measured using the debt-to-equity ratio (DER), which indicates the company's reliance on debt financing.
4. CSR Disclosure (Z) – measured using the Corporate Social Disclosure Index (CSDI) based on Global Reporting Initiative (GRI) indicators. Each disclosed item receives a score of 1, otherwise 0, and the index is calculated as the ratio of the disclosed items to the total indicator.

Data Analysis Technique

The data were analyzed using panel data regression with a Fixed Effect Model (FEM). Classical assumption tests were conducted prior to hypothesis testing to ensure the validity of the regression model. All analyses were performed using EViews software.

III. Results and Discussion

Based on the panel data regression analysis using the Fixed Effect Model (FEM), the effect of Loan to Deposit Ratio (LDR), profitability, and leverage on Corporate Social Responsibility (CSR) disclosure is presented in Table 1.

Table 1. Panel Regression Results (Fixed Effect Model)

Variable	Coefficient	t-Statistic	Probability
Constant	0.66	–	–
Loan to Deposit Ratio (LDR)	-0.01	-0.9791	0.3291
Profitability	0.42	1.6212	0.1070
Leverage	-0.02	-3.9950	0.0001
F-statistic	27.8279		0.0000
Adjusted R^2	0.8501		

At a significance level of 5% ($\alpha = 0.05$), the regression results indicate that leverage has a statistically significant effect on CSR disclosure, while LDR and profitability do not show significant individual effects. The adjusted R^2 value of 0.85 indicates that 85% of the variation in CSR disclosure can be explained by the independent variables, suggesting strong explanatory power of the model. The F-test result further confirms that LDR, profitability, and leverage jointly have a significant effect on CSR disclosure.

Effect of Loan to Deposit Ratio on CSR Disclosure

From a signaling perspective, liquidity strength may serve as a positive signal of financial stability, encouraging firms to disclose more CSR information. However, under legitimacy theory, CSR disclosure in the banking sector is largely institutionalized and regulated, reducing managerial discretion to adjust disclosure levels based on liquidity conditions. As a result, changes in liquidity do not necessarily translate into variations in CSR disclosure.

The empirical results indicate that the Loan to Deposit Ratio (LDR) has a negative but statistically insignificant effect on CSR disclosure. This finding suggests that liquidity does not significantly influence CSR disclosure practices in Indonesian banking firms.

This result is supported by empirical studies such as Putri and Yuliandhari (2020) and Rahman et al. (2021), who find that liquidity ratios do not significantly affect CSR disclosure in financial institutions. These studies argue that banking CSR disclosure is more driven by regulatory compliance and legitimacy concerns than by liquidity-based signaling.

Effect of Profitability on CSR Disclosure

According to signaling theory, profitable firms are expected to disclose more CSR information to signal strong financial performance and long-term sustainability. CSR disclosure becomes a strategic communication tool to attract investors and enhance corporate reputation.

However, legitimacy theory suggests that when CSR disclosure becomes a normative expectation, profitability loses its role as a distinguishing signal. In such conditions, firms disclose CSR primarily to maintain legitimacy rather than to signal superior profitability.

The results show that profitability has a positive but statistically insignificant effect on CSR disclosure. This indicates that higher profitability does not necessarily lead to greater CSR disclosure in Indonesian banks.

This finding is consistent with Branco and Rodrigues (2008), who report that profitability does not consistently influence CSR disclosure in the banking sector. Similar evidence from Indonesia is provided by Sari and Marsono (2019) and Gunawan et al. (2020), who find that CSR disclosure is driven more by legitimacy considerations than by profit-based signaling.

Effect of Leverage on CSR Disclosure

From a signaling perspective, high leverage may send a negative signal regarding financial risk, prompting firms to limit voluntary disclosures to avoid increased scrutiny. Under legitimacy theory, firms with higher debt burdens tend to focus on maintaining financial credibility and meeting contractual obligations, which may constrain their ability to engage in extensive CSR disclosure. Thus, high leverage weakens the firm's capacity to use CSR disclosure as a positive signal and shifts managerial focus toward preserving financial legitimacy.

The empirical findings reveal that leverage has a negative and statistically significant effect on CSR disclosure. This indicates that banks with higher leverage disclose less CSR information. This result aligns with empirical evidence from Eng and Mak (2003) and Sembiring (2005), who document a negative relationship between leverage and voluntary disclosure. More recent studies, such as Utomo et al. (2022), also confirm that highly leveraged firms tend to limit CSR disclosure due to financial risk considerations and legitimacy pressures from creditors.

Joint Effect of Financial Variables on CSR Disclosure

Although liquidity and profitability do not have significant partial effects, the F-test results indicate that LDR, profitability, and leverage jointly have a significant effect on CSR disclosure. This suggests that CSR disclosure decisions are shaped by the interaction of financial characteristics, rather than by individual variables in isolation.

The high adjusted R^2 value of 85% further indicates that CSR disclosure in Indonesian banking firms is strongly explained by firm-specific financial conditions, supporting both signaling and legitimacy theories.

IV. Conclusion

This study examines the effect of Loan to Deposit Ratio (LDR), profitability, and leverage on Corporate Social Responsibility (CSR) disclosure in banking companies listed on the Indonesia Stock Exchange. The results indicate that leverage has a significant negative effect on CSR disclosure, suggesting that higher debt levels constrain banks' ability and willingness to disclose social and environmental responsibilities. In contrast, LDR and profitability do not have a statistically significant effect on CSR disclosure, indicating that liquidity conditions and earning capacity are not primary determinants of CSR disclosure practices in the banking sector.

Simultaneously, LDR, profitability, and leverage jointly have a significant effect on CSR disclosure, with a high explanatory power of the model. These findings imply that financial characteristics collectively influence CSR disclosure, although financial risk, as reflected by leverage, plays a more dominant role than liquidity and profitability. Overall, the results highlight that CSR disclosure in the banking sector is more sensitive to financial risk considerations than to short-term performance indicators.

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