

The Influence of Internal Control and External Financing Activities on Earnings Management: Evidence from Indonesian State-Owned Enterprises (2020–2023)

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ABSTRACT

This study investigates the influence of internal control and external financing activities on earnings management within Indonesian state-owned enterprises (SOEs) during 2020–2023. Using a quantitative approach with purposive sampling, the research analyzes 164 firm-year observations from non-financial SOEs listed on the Indonesia Stock Exchange. Internal control is measured using the COSO framework, while external financing is proxied by the debt-to-assets ratio. Earnings management is assessed using the Modified Jones Model. The findings reveal that stronger internal control significantly reduces earnings management, while greater reliance on external financing increases its likelihood. These results highlight the importance of robust financial governance in mitigating opportunistic managerial behavior, particularly in highly leveraged government-linked firms.

INTRODUCTION

Financial statements play a pivotal role in communicating a company's financial condition, especially for stakeholders seeking to make informed decisions regarding investment, lending, or policy-making. Among financial metrics, earnings are often considered the most critical indicator of performance. In Indonesia, state-owned enterprises (SOEs) represent a substantial portion of the national economy, operating in strategic sectors such as energy, infrastructure, and transportation. These entities bear not only commercial obligations but also socio-political responsibilities. Consequently, financial transparency in SOEs becomes a matter of public concern. The pressure to present favorable earnings—whether to appease political interests, maintain investor confidence, or meet debt covenants—creates a strong incentive for earnings management.

The phenomenon of earnings manipulation within SOEs has gained increasing attention following several financial scandals. For instance, PT Garuda Indonesia was found to have misreported its earnings in 2018 by recognizing unearned revenue, and PT Jiwasraya's investment mismanagement led to massive losses. These incidents highlight vulnerabilities in internal governance and signal a deeper structural issue: the dual role of SOEs as both economic drivers and political instruments. This complexity often results in blurred accountability and weak internal controls, leaving room for opportunistic behavior by management.

Theoretically, this research is grounded in agency theory, which posits that conflicts of interest between managers (agents) and stakeholders (principals) may lead to moral hazard when monitoring mechanisms are weak. Internal control systems, particularly those aligned with the COSO framework, are designed to reduce such agency costs by ensuring compliance, accuracy, and operational effectiveness. Simultaneously, debt covenant hypothesis suggests that firms under financial pressure—especially those reliant on external financing—are more likely to engage in earnings management to meet contractual obligations. These two frameworks jointly offer a lens through which to examine how governance structures and capital structures interact in shaping financial reporting quality.

Despite a growing body of international literature on earnings management, relatively few studies have examined its drivers in SOEs—particularly in emerging markets where state control, institutional quality, and transparency standards vary considerably. Previous works (e.g., Li et al., 2020; Mousa & Desoky, 2019) focus primarily on private firms or single-variable analyses, lacking integration between governance mechanisms and financing structures. This study addresses that gap by analyzing the interaction between internal control and external financing activities in Indonesian SOEs, a context marked by high public scrutiny, increasing debt exposure, and evolving regulatory demands.

By focusing on a post-pandemic observation period (2020–2023), this research captures a unique institutional environment where SOEs are tasked with balancing fiscal recovery, public service obligations, and financial integrity.

The novelty of this study lies in its simultaneous examination of internal governance and capital pressure within a highly politicized organizational setting. Empirically, the study uses the COSO-based internal control index and the debt-to-assets ratio to measure the two predictors, while earnings management is proxied using the Modified Jones Model for discretionary accruals. This paper contributes both to the enrichment of agency and covenant theories and to policy discussions on SOE financial governance reform in emerging economies.

Accordingly, this study aims to assess whether stronger internal controls are associated with lower levels of earnings management, and whether a higher reliance on external financing leads to increased earnings manipulation in Indonesian state-owned enterprises.

LITERATURE REVIEW

Agency Theory

Agency theory, as introduced by Jensen and Meckling (1976), describes the contractual relationship between principals (owners) and agents (managers), where information asymmetry and divergent interests can lead to opportunistic behavior. Managers may prioritize personal objectives such as job security, bonuses, or reputation over maximizing shareholder value. This problem is particularly acute in state-owned enterprises (SOEs), where bureaucratic oversight may be weaker, political goals often intersect with business operations, and public accountability is dispersed.

Earnings management, defined as the deliberate manipulation of accounting figures to meet certain financial targets (Healy & Wahlen, 1999), is one of the most common agency problems. It is typically motivated by managerial incentives to achieve performance benchmarks, fulfill debt covenants, or enhance the firm's public image. In the context of SOEs, these incentives are further complicated by political objectives and reduced monitoring effectiveness, making such firms fertile ground for earnings manipulation.

Internal control systems are posited to reduce agency costs by establishing procedures that monitor, verify, and constrain managerial behavior. The COSO framework, developed by the Committee of Sponsoring Organizations of the Treadway Commission (2013), provides a comprehensive structure for designing effective internal controls. It includes five integrated components—control environment, risk assessment, control activities, information and communication, and monitoring—that together serve to detect errors, prevent fraud, and ensure the reliability of financial reporting.

Empirical studies consistently show that effective internal control mechanisms are negatively associated with earnings management. Leung and Sun (2020) demonstrate that firms with strong internal control systems have lower levels of both accrual-based and real earnings management. Zhang and Li (2022) further find that the implementation of COSO-based internal control reduces the likelihood of accounting irregularities. In the Indonesian context, Rahmawati and Pratiwi (2021) note that many SOEs exhibit deficiencies in internal control systems, particularly in the segregation of duties and audit

independence, which makes them more vulnerable to financial manipulation. This leads to the formulation of the following hypothesis:

H1: Internal control has a negative effect on earnings management.

Debt Covenant Hypothesis

The debt covenant hypothesis, rooted in Positive Accounting Theory (Watts & Zimmerman, 1986), suggests that firms with high levels of debt are more inclined to engage in earnings management to avoid violating loan agreements. Debt covenants often stipulate specific financial ratios – such as the debt-to-assets ratio or interest coverage ratio – that firms must maintain. Failure to comply can lead to penalties such as accelerated debt repayment, higher interest rates, or loss of access to financing. These pressures create strong incentives for managers to manipulate reported earnings to appear compliant with the terms of their financing.

Earnings management in this context is often driven by the need to sustain a perception of financial health, particularly when firms rely heavily on external funding sources. This behavior has been documented across various markets. For example, Mousa and Desoky (2019) find that firms in the Middle East with weak internal governance and high financial leverage are significantly more likely to manipulate earnings. Sun and Zhang (2021) observe that companies with pending equity issuances or bank loan negotiations tend to inflate reported earnings in the short term. In Indonesia, SOEs have historically relied on debt markets for infrastructure and development financing, often under public pressure to show profitability and efficiency. Garcia and Gonzales (2018) argue that SOEs under such pressure are prone to earnings manipulation to meet financial expectations imposed by both investors and regulators.

This study follows this line of reasoning by investigating whether Indonesian SOEs with higher external financing exposure are more likely to engage in earnings management. Accordingly, the second hypothesis is proposed as follows:

H2: External financing activities have a positive effect on earnings management.

Contextual Framework

This study proposes an integrated framework based on agency theory and the debt covenant hypothesis. It posits that earnings management is a function of both internal governance (internal control quality) and external capital pressure (financing activities). Internal control is expected to reduce the propensity for earnings manipulation by increasing transparency and accountability. In contrast, reliance on external financing is expected to increase the likelihood of earnings management due to pressures to meet financial covenants and satisfy creditors.

The context of Indonesian SOEs from 2020 to 2023 offers a unique institutional setting. These firms operate under dual mandates – delivering public services while maintaining commercial viability – and often face budget constraints, political scrutiny, and performance demands. The post-pandemic fiscal environment has further intensified these pressures, making the quality of internal controls and the structure of financing particularly salient.

This relationship is visually represented as follows:

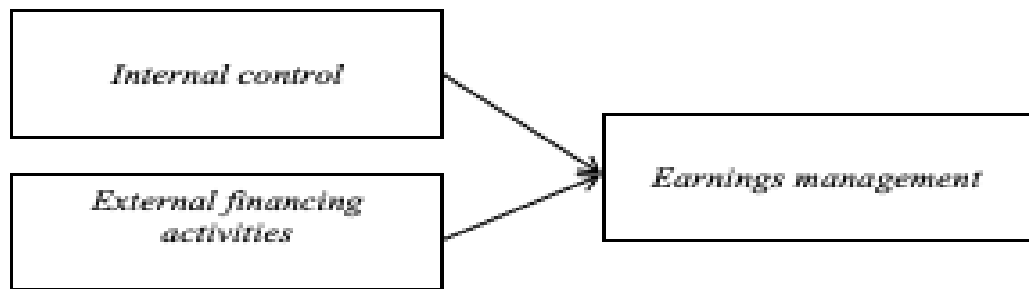


Figure 1. Conceptual Framework

METHODOLOGY

This study employs a quantitative research design using a causal-comparative approach to examine the effect of internal control and external financing activities on earnings management. The population consists of state-owned enterprises (SOEs) listed on the Indonesia Stock Exchange (IDX) during the period 2020–2023. The sample is selected through purposive sampling based on the following criteria:

1. the company is classified as a non-financial SOE
2. it publishes audited financial statements consistently during the observation period.
3. complete data related to the research variables are available.

Based on these criteria, a total of 41 firms with 164 firm-year observations were included in the final dataset. The detail of Research Sample :

Tabel 1. Research Sample

No	Criteria	Total
1.	Non-financial State-Owned Enterprises	57
2.	Companies that did not publish complete, intact, or had damaged annual reports and financial statements during the 2020-2023 period	(6)
3.	Companies whose annual reports did not provide information regarding internal control, making this aspect immeasurable and unanalyzable.	0
4.	Companies not involved in external financing activities	0

5.	Companies whose information could not be used due to abnormal data	(10)
	Total companies excluded from research	(16)
	Total companies eligible for research	41
	Total samples analyzed	164

The dependent variable, earnings management, is measured using discretionary accruals based on the Modified Jones Model. The independent variables include internal control, which is proxied using a composite index constructed in accordance with the COSO framework, and external financing activities, proxied by the ratio of total debt to total assets. Control variables such as firm size and return on assets (ROA) are also included to reduce omitted variable bias.

The data is analyzed using multiple linear regression with the help of statistical software. Classical assumption tests including normality, multicollinearity, heteroskedasticity, and autocorrelation are conducted to ensure the validity of the regression model. Hypothesis testing is performed using a 5% significance level to determine the statistical influence of each independent variable on earnings management.

RESEARCH RESULT

Descriptive Statistics

Table 2 summarizes the descriptive statistics of the study variables: Internal Control (IC), Debt to Asset Ratio (DAR), and Earnings Management (EM), across 164 observations.

Tabel 2. Result Analisis
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
IC	164	.71	1.00	.9124	.08142
DTA	164	.04	1.19	.4727	.25675
EM	164	-1.76	5.31	.0899	.53219
Valid (listwise)	N 164				

The IC variable shows high consistency across firms, with a narrow range and low standard deviation, suggesting a uniform application of internal controls. In contrast, DAR values vary more widely, reflecting differences in external financing practices. EM displays the highest variability, indicating diverse earnings management behavior among the sampled SOEs. This dispersion highlights the complexity of managerial discretion in financial reporting and underscores the relevance of further investigation.

Classical Assumption

Table 3. Classical Assumption Test Results

Type	Variable	Value	Description
Normality Test	Residual	0.200	Data is normally distributed
Multicollinearity	Internal Control	VIF: 1.184	No multicollinearity (Tolerance > 0.1; VIF < 10)
	External Financing Activities	VIF: 1.184	No multicollinearity (Tolerance > 0.1; VIF < 10)
Heteroskedasticity	Internal Control	p = 0.454	No heteroskedasticity (Sig. > 0.05)
	External Financing Activities	p = 0.758	No heteroskedasticity (Sig. > 0.05)
Autocorrelation	DW Statistic	1.821	No autocorrelation (between du = 1.769 and 4-du)

The multiple linear regression analysis was conducted to examine the influence of internal control (IC) and external financing activities (measured by DAR) on earnings management (EM). The regression equation is as follows:

$$\text{Earnings management} = 6,011 - 13,791 X_1 + 4,040 X_2 + \varepsilon$$

The regression results show that the coefficient for internal control is -13.791 with a significance level of 0.000 ($p < 0.05$), indicating a statistically significant negative relationship between IC and earnings management. This suggests that a one-point increase in internal control score is associated with a 13.791-point decrease in earnings management, assuming other variables remain constant. Strong internal governance mechanisms likely limit managerial discretion in financial reporting, thus reducing earnings manipulation tendencies.

Conversely, the coefficient for external financing (DAR) is 4.040 and statistically significant at the 0.000 level ($p < 0.05$), indicating a positive influence on earnings management. A one-point increase in DAR is expected to increase earnings management by 4.040 points, *ceteris paribus*. This supports the notion that higher leverage creates pressure on management to report favorable financial outcomes, particularly to meet debt covenants or maintain investor confidence.

The model demonstrates robust explanatory power, with an Adjusted R² of 0.520, meaning that 52% of the variance in earnings management is explained by the independent variables IC and DAR. Additionally, the F-test value is 89.262 with a significance level of 0.000, confirming that the model is statistically significant and fit for inference

Hypothesis Testing

Table 4. Summary of Hypothesis Testing Results

Test Type	Result
Coefficient of Determination	Adjusted R ² = 0.520
Model Fit (F-test)	Sig. = 0.000
Regression Coefficient (t-test)	Sig. IC = 0.000
	Sig. DAR = 0.000

The adjusted R² value of 0.520 indicates that 52% of the variation in earnings management can be explained by the two independent variables: internal control (IC) and debt to asset ratio (DAR). The remaining 48% is likely influenced by other factors not included in the model.

The F-test result shows a significance value of 0.000, confirming that the regression model is statistically fit and significant as a whole. Furthermore, the t-test results reveal that both internal control and external financing activities (DAR) significantly affect earnings management. The IC variable has a significance value of 0.000 with a negative coefficient, indicating that better internal control reduces the tendency for earnings management. Similarly, DAR also has a significance value of 0.000, with a positive coefficient, suggesting that higher leverage increases the likelihood of earnings management. Thus, both hypotheses are supported by the data.

The Effect of Internal Control on Earnings Management

The results indicate that internal control has a statistically significant negative effect on earnings management. This implies that stronger internal control mechanisms within a firm are associated with a lower tendency to engage in earnings management practices. Therefore, Hypothesis 1 (H1), which states that internal control negatively affects earnings management, is supported.

The Effect of External Financing Activities (DAR) on Earnings Management

The Debt to Asset Ratio (DAR), as a proxy for external financing activities, shows a significant and positive relationship with earnings management. The positive beta coefficient (4.040) suggests that firms with higher levels of debt relative to their assets are more likely to engage in earnings management. Accordingly, Hypothesis 2 (H2), which posits that external financing activities positively influence earnings management, is supported.

DISCUSSION

Based on the results of the research, data analysis, and discussion described in the previous sections, it can be concluded that:

1. Internal control has a significant negative effect on earnings management in Indonesian state-owned enterprises during the 2020–2023 period. This finding is supported by the negative regression coefficient of -13.791, indicating that stronger internal control reduces the level of earnings management. This aligns with agency theory and is consistent with previous

research such as Leung and Sun (2020), which found that effective governance mechanisms reduce opportunistic financial reporting.

2. External financing activities, proxied by the debt to asset ratio (DAR), show a significant positive influence on earnings management. The positive coefficient of 4.040 suggests that greater financial leverage increases the likelihood of earnings manipulation. This supports the debt covenant hypothesis and is in line with findings by Mousa and Desoky (2019), who noted similar patterns in highly-leveraged firms. The implication is that SOEs with high debt exposure must implement tighter financial supervision to prevent reporting distortion.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that internal control has a significant negative effect on earnings management, while external financing activities, proxied by the debt to asset ratio (DAR), have a significant positive effect. Strong internal control systems—through audit mechanisms, digital governance tools, and organizational oversight—help mitigate discretionary financial reporting. Conversely, high DAR reflects financial pressure that increases the likelihood of earnings manipulation, especially in SOEs operating under performance and regulatory scrutiny.

Based on these findings, it is recommended that non-financial state-owned enterprises strengthen their internal control frameworks by enhancing audit independence, improving risk-based monitoring, and integrating digital reporting systems. In parallel, financial policies should address leverage thresholds by balancing funding sources and reinforcing transparency in debt-related disclosures. Future regulations should be designed to support compliance without unintentionally increasing pressure for short-term reporting adjustments.

ADVANCED RESEARCH

This study is limited to non-financial state-owned enterprises (SOEs) in Indonesia during the 2020–2023 period, which may restrict the generalizability of the findings to private firms or entities in different regulatory environments. The scope of the study also focuses solely on internal control and external financing (DAR) as predictors of earnings management, without incorporating other potentially influential variables such as ownership structure, profitability, or market competition.

Future research could expand the model by including additional governance and financial indicators to capture a more comprehensive view of earnings management behavior. Comparative studies between SOEs and private firms, or cross-country analyses within Southeast Asia, may also provide broader insights into institutional and cultural effects. Additionally, qualitative approaches such as interviews with internal auditors or regulators could enrich the understanding of how control systems are implemented in practice.

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REFERENCES

- Garcia, M., & Gonzales, R. (2018). Leverage structure and financial reporting incentives: Evidence from state-owned firms. *Journal of Financial Accountability*, 12(3), 112–127.
- Healy, P. M., & Wahlen, J. M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 13(4), 365–383. <https://doi.org/10.2308/acch.1999.13.4.365>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Leung, S., & Sun, L. (2020). Internal control and earnings quality: Evidence from SOEs. *International Journal of Accounting and Finance*, 15(2), 87–103.
- Mousa, G. A., & Desoky, A. M. (2019). The impact of debt financing and internal control on earnings management in Middle Eastern firms. *International Journal of Accounting and Finance*, 10(3), 215–231.
- Rahmawati, A., & Pratiwi, D. (2021). Kasus skandal keuangan di PT Jiwasraya (Persero). *Jurnal Investigasi Akuntansi*, 15(3), 122–135.
- Roychowdhury, S. (2021). Real activities manipulation and its impact on earnings quality: A review. *Journal of Accounting and Economics*, 71(1), 101–118. <https://doi.org/10.1016/j.jacceco.2021.101118>
- Scott, W. R. (2015). *Financial accounting theory* (7th ed.). Pearson.
- Sun, Y., & Zhang, J. (2021). Financial pressure and earnings manipulation: Evidence from firms in Asia. *Asian Journal of Business and Accounting*, 14(1), 45–66.
- Zhang, L., & Li, H. (2022). COSO-based internal control and accounting irregularities: Evidence from emerging markets. *Journal of Accounting and Governance*, 17(1), 33–49.