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**Annual Report Readability, Value Relevance, and Agency
Costs: The Moderating Role of Analyst Coverage**

Rhenaldy Pius Wicaksono¹, Tarsisius Renald Suganda², and Rino Tam Cahyadi³
^{1,2,3} Digital Business Accounting, Faculty of Economics and Business, Ma Chung University
Corresponding authors: rhenaldypius100603@gmail.com

Abstract: Excessive information asymmetry can generate agency costs that reduce operational efficiency. Enhancing annual report readability and accounting information relevance is expected to reduce asymmetry and suppress agency costs, while analyst coverage may influence this effectiveness through external monitoring. In Indonesia, the absence of readability standards causes variations in disclosure quality. This study examines the effects of annual report readability and value relevance on agency costs, and the moderating role of analyst coverage. Readability is measured using total pages, word count, and the Fog Index, while value relevance is proxied by the association between market value and EPS, BVPS, and OCFPS. Agency costs are represented by asset turnover and operating expense ratios. The sample consists of 80 non-financial firms listed on the Indonesia Stock Exchange from 2019–2024, analyzed using panel data regression. The findings show that readability increases agency costs, value relevance reduces them, and analyst coverage weakens the positive readability and agency costs relationship and strengthens the value relevance effect.

Keywords: Annual Report Readability, Value Relevance, Agency Cost, Analyst Coverage

Introduction

Agency costs are one of the most effective mechanisms to ensure that management continues to carry out its responsibilities properly (Chaudhary, 2022). Through the allocation of agency costs, companies can enhance monitoring systems such as auditing, management control, managerial incentives, and the strengthening of corporate governance mechanisms (Sdiq & Abdullah, 2022). This is reflected in the findings of Mansour et al. (2022), who revealed that the allocation of agency costs is proven effective in reducing opportunistic managerial behavior. Therefore, given its crucial function, modern companies naturally incorporate agency cost allocation as part of their operational strategic planning (Ahmed et al. 2023).

Given its crucial role, implementation requires considerable sacrifice, as excessive allocations can become burdensome, damage corporate reputation, and reduce productivity (Matinheikki et al., 2022). Therefore, agency cost allocation must be managed efficiently to minimize the emergence of additional issues (Piscesta & Gunawan, 2022). The relationship between information asymmetry and agency costs presents a significant challenge, as reducing information asymmetry necessitates agency expenditures, yet increasing such costs may ultimately impair firm performance (Baykara & Baykara, 2021). According to Sun et al. (2020), addressing this issue requires a foundation in agency theory; thus, this research is theoretically grounded in agency theory.

Based on agency theory, Khan et al. (2020) explain that agency costs arise from conflicts between owners and management, which, according to Jensen and Meckling (1976), emerge due to differences in interests between shareholders and managers. Agency costs tend to increase when shareholders face high levels of information asymmetry, making it essential to examine its sources in order to reduce the allocation of agency expenditures. This study investigates factors that may decrease agency costs by reducing information asymmetry, with annual report readability and the value relevance of accounting information serving as the primary variables (Soesanto & Wijaya, 2022). Thus, efforts to suppress agency costs through improvements in information asymmetry are expected to contribute to enhanced firm performance. Despite extensive research on agency costs, empirical evidence on how both narrative disclosure quality (readability) and accounting value relevance jointly reduce agency costs (particularly under varying levels of analyst coverage) remains limited, especially in emerging markets.

The annual report is a crucial source of information for shareholders in assessing corporate performance. According to Dau et al. (2024), annual reports not only present financial information but also provide narrative explanations regarding corporate strategies and future prospects. This narrative presentation is based on the premise that narrative disclosures are more informative than quantitative disclosures (Tarjo, 2022), and recent years have shown a growing trend in reporting practices (Mbithi et al., 2022). However, excessive and increasingly complex reporting practices may negatively affect report readability, leading to reader confusion; overly extensive disclosures tend to obscure essential information and make it difficult for investors to understand a firm's condition (Latella & Veltri, 2024). Therefore, enhancing the readability of annual reports becomes a critical variable to evaluate in efforts to reduce information asymmetry.

Beyond narrative aspects, accounting information plays a crucial role in reducing information asymmetry (Donkor et al., 2024). The value relevance of accounting information reflects the extent to which financial information can be used to predict a firm's future performance (Azarberahman et al., 2023). Accounting information is considered value relevant when it exhibits an association with market value, for example, when reported earnings, assets, or equity influence or explain stock price movements. Accordingly, higher accounting value relevance contributes more substantially to supporting more accurate economic decision-making (Khaldi & Hamama, 2024).

This critical issue of information asymmetry motivates external parties to seek ways to mitigate it, one of which is through the role of financial analysts (Das, 2020). However, high-quality information alone may not be sufficient to discipline managerial behavior unless it is actively interpreted, verified, and disseminated by sophisticated information

intermediaries such as financial analysts. Analysts evaluate managerial decisions and disseminate their assessments to the public, thereby establishing a mechanism known as analyst coverage. Analyst coverage reflects the level of analysts' attention and scrutiny toward a firm and plays an important role in reducing information asymmetry between management and shareholders (Martinez and Leal 2023). Through continuous monitoring and performance evaluation, analysts can discipline management to act more cautiously and refrain from opportunistic behavior (Naqvi et al., 2021). Moreover, a higher number of analysts following a firm enhances the effectiveness of oversight over managerial practices and information disclosure, thereby further mitigating information asymmetry (Ali & Ali, 2025).

Several prior studies exhibit limitations related to the readability proxies employed, particularly in the Indonesian context. Soesanto and Wijaya (2022), for instance, did not incorporate globally recognized readability measures such as the Fog Index, despite the fact that the Fog Index can be applied in Indonesia through word stemming techniques using Natural Language Processing (NLP) (Rianto et al., 2021). This gap motivates the present study to employ an adjusted Fog Index to generate a more accurate readability measure that better reflects the linguistic characteristics of Indonesian-language annual reports.

In addition, this study focuses on non-financial firms because the reporting structures of financial sector companies differ fundamentally from those of non-financial firms. Banks and insurance companies typically do not report sales-related accounts, in contrast to firms in the non-financial sector (Mehmood and Luca 2023). Consequently, commonly used proxies for measuring agency costs are less applicable to financial firms (Nguyen, et al., 2020). For this reason, many prior studies exclude financial sector firms to ensure greater relevance and accuracy in empirical testing (D'Augusta et al., 2023).

Taken as a whole, our research makes three essential contributions. First, it extends agency theory by jointly examining narrative readability and accounting value relevance as a mechanisms to mitigate agency costs. Second, it introduces an adjusted Fog Index tailored to Indonesian language annual reports using NLP techniques, addressing a methodological gap in emerging market research. Third, it highlights the contingent role of analyst coverage as an external governance mechanism that strengthens the information & agency cost relationship.

Literature Review

Agency Theory

Agency Theory, introduced by Jensen and Meckling (1976), serves as the most appropriate theoretical foundation for this study. The theory focuses on conflicts that arise between management and principals due to differences in interests (Piscesta & Gunawan, 2022). One of the key issues highlighted by agency theory is information asymmetry. Information asymmetry refers to a condition in which managers possess substantially more information about the firm's performance than shareholders. This imbalance provides opportunities for agents to act in their own self-interest rather than in alignment with the interests and expectations of principals.

Al-Faryan (2024) demonstrated that, in developing countries, the value relevance of accounting information constitutes a crucial source of information for shareholders. Additionally, Soesanto and Wijaya (2022) investigated the effect of annual report readability on agency costs, with analyst coverage serving as a moderating variable in this relationship. Their findings are consistent with agency theory, which posits that agency costs can be reduced through the mitigation of information asymmetry, among others, by enhancing the readability of annual reports and strengthening the value relevance of accounting information.

Annual Report Readability and Agency Cost

From the perspective of agency theory, there is a close relationship between the readability of annual reports and agency costs. Annual reports play a crucial role in reducing information asymmetry between principals and agents. Gu and Doodoo (2020) argue that firms with less readable annual reports may reflect managerial attempts to obscure information, thereby creating opportunities for self-serving behavior. Such conditions increase agency costs, as principals face greater difficulty in objectively assessing managerial performance (Luo et al., 2018).

In contrast, annual reports that are more readable and transparently prepared facilitate principals' monitoring of managerial performance, reduce monitoring costs, and enhance the alignment of interests between principals and agents (Bessler et al., 2023). Improved readability reduces agency costs by lowering information processing costs, constraining managerial opportunism, and strengthening shareholders' ability to evaluate firm's performance. Accordingly, consistent with agency theory, the readability of annual reports is expected to have a negative effect on agency costs, as improved readability helps mitigate conflicts of interest arising from information asymmetry.

H₁: Annual report readability negatively affects agency costs.

Value Relevance and Agency Cost

Beyond the readability of annual reports, the value relevance of accounting information plays a crucial role in reducing agency conflicts between principals and agents. Value-relevant accounting information provides a faithful representation of a firm's financial condition and performance, enabling shareholders to evaluate managerial actions more objectively and efficiently (Visedsun et al., 2025). By enhancing transparency, relevant accounting information reduces uncertainty and strengthens the monitoring function of financial reporting.

In contrast, when accounting information lacks value relevance, information asymmetry between managers and shareholders increases, creating opportunities for managerial opportunism and weakening shareholders' ability to effectively monitor management (Ayagi & Salisu, 2023). This condition leads to higher agency costs, both in the form of increased monitoring expenses and residual losses resulting from suboptimal managerial decisions (Khaldi & Hamama, 2024). Higher relevance mitigates agency costs by improving monitoring efficiency, strengthening contracting effectiveness, and constraining opportunistic managerial behaviour. Therefore, higher value relevance of accounting information is expected to reduce agency costs, indicating a negative relationship between value relevance and agency costs.

H₂: Value relevance negatively affects agency costs

Moderating Role of Analyst Coverage

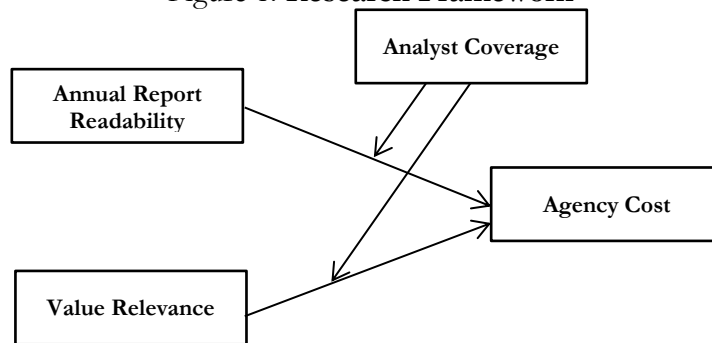
In addition to annual report readability and the value relevance of accounting information, analyst coverage plays an important role in reducing information asymmetry and mitigating agency costs. Analyst coverage enhances corporate transparency because financial analysts act as external information intermediaries who collect, process, interpret, and disseminate firm-specific information to the capital market (Zhang & Wu, 2023). By improving the interpretation, verification, and dissemination of information, analyst coverage enhances the accessibility, credibility, and understandability of both readable annual reports and value-relevant information.

This enhanced information environment not only strengthens the benefits of annual report readability and the value relevance of accounting information but also constrains managers' opportunities to engage in opportunistic behaviour. By reducing information asymmetry and improving external monitoring, analyst coverage lowers agency costs arising from monitoring expenditures and residual losses (Soesanto & Wijaya, 2022). Accordingly, analyst coverage functions as a moderating variable that reinforces the negative effect of annual report readability and the value relevance of accounting information on agency costs through the reduction of information asymmetry.

H₃: Analyst coverage strengthens the negative effect of annual report readability on agency costs.

H₄: Analyst coverage strengthens the negative effect of the value relevance of accounting information on agency costs.

Figure 1. **Research Framework**



Source: Data Processed (2025)

Methods

Sampling Criteria

The population of this study consists of companies listed on the Indonesia Stock Exchange (IDX) that are included in the KOMPAS-100 index during the 2019–2024 period. This study excludes firms from the financial sector. The sampling criteria are presented in Table 1.

Table 1. Sampling Criteria

No	Criteria	Total
1.	Companies listed in KOMPAS 100	100
2.	Financial sector companies	(15)
3.	Delisted companies	(2)
4.	Negative Equity companies	(2)
5.	Companies with unavailable data	(1)
	Research period	5 years
	Firm-year observations	400

Source: Data Processed (2025)

Research Variables

This study employs three types of variables, namely independent variables, a dependent variable, and a moderating variable. Annual report readability and value relevance serve as the independent variables, agency cost acts as the dependent variable, and analyst coverage functions as the moderating variable. The complete definitions of all variables are presented in Table 2.

Table 2. Variable Definitions

Variables	Measurements	Source
Dependent Variable	Agency Cost _{it+1}	$ATR = \frac{\text{Revenue}}{\text{Total Assets}}$ Patin et al. (2020)
		$OCR = \frac{\text{Operating Expense}}{\text{Revenue}}$ Bijoy and Mangla (2023)
		PAGES = Ln(Total Pages) Luo et al. (2018)
Independent Variable	Annual Report Readability	WORDS = Ln(Total Words) Goswami et al. (2023)
		$FOG = 0,4 \times \left(\left(\frac{\text{Total Words}}{\text{Total Sentences}} \right) + 100 \times \left(\frac{\text{Complex Words}}{\text{Total Words}} \right) \right)$ Toerien and Toit (2024)
		Value Relevance $P_{it+1} = \beta_0 + \beta_1 BVPS_{it} + \beta_2 EPS_{it} + \beta_3 OCFPS_{it} + \varepsilon_{it}$ Soesanto and Wijaya (2022)
Moderating Variable	Analyst Coverage	Indicates whether a firm has analyst coverage in year <i>t</i> . A dummy value of 1 is assigned if analyst coverage exists, and 0 is assigned if there is no analyst coverage data available. Chen et al. (2024)
		EPS $EPS = \frac{\text{Net Income}}{\text{Share Outstanding}}$ Park et al. (2025)
Control Variable	PROF	$PROF = \frac{\text{Net Income}}{\text{Total Aseets}}$ Arifuddin et al. (2023)
	LEV	$LEV = \frac{\text{Total Debts}}{\text{Total Assets}}$ Wahyuni et al. (2022)

Research Method

This study employed panel data regression analysis using a fixed effects model to examine the effect of annual report readability and value relevance on agency costs, as well as the moderating role of analyst coverage. The analysis was conducted on cross-sectional and time-series, capturing both firm-specific and time-specific heterogeneity. The fixed effects approach was selected to control for unobserved characteristics that vary across firms but remain constant over time. The regression equations for each hypothesis are specified as follows:

$$ATR = \alpha + \beta_{1READABILITY} + \beta_{2VALUE} + \beta_{3ANALYST} + \beta_{4READABILITY*ANALYST} + \beta_{5VALUE*ANALYST} + \beta_{6EPS} + \beta_{7PROF} + \beta_{8LEV} + \varepsilon$$

$$OCR = \alpha + \beta_{1READABILITY} + \beta_{2VALUE} + \beta_{3ANALYST} + \beta_{4READABILITY*ANALYST} + \beta_{5VALUE*ANALYST} + \beta_{6EPS} + \beta_{7PROF} + \beta_{8LEV} + \varepsilon$$

Notes:

ATR : Asset Turnover Ratio at the year t+1
OCR : Operating Cost Ratio at the year t+1
READABILITY : Annual Report Readability
VALUE : Value Relevance
ANALYST : Analyst Coverage
EPS : Earning Per Share
PROF : Profitability
LEV : Leverage

Findings

Table 3. Descriptive Statistic

Variable	Obs.	Mean	Std. dev.	Min	Max
ATR	400	0.724	0.600	0.025	4.018
OCR	400	0.135	0.097	0.010	0.488
PAGES	400	5.958	0.459	4.883	7.145
WORDS	400	11.972	0.536	10.236	13.234
FOG	400	17.781	1.251	14.360	27.390
VALUE	400	0.156	0.278	-0.009	2.307
ANALYST	400	0.490	0.501	0.000	1.000
EPS	400	0.432	5.875	-44.125	70.088
PROF	400	0.060	0.074	-0.171	0.455
LEV	400	0.460	0.205	0.081	0.995

Source: Data Processed (2025)

Table 3 presents the descriptive statistics for 400 observations. The dependent variables representing agency costs, $ATR_{\{t+1\}}$ and $OCR_{\{t+1\}}$, have mean values of 0.724 (standard deviation = 0.600) and 0.135 (standard deviation = 0.097), respectively. ATR exhibits a relatively wide range (0.025–4.018), indicating substantial variation in agency costs across firms, whereas OCR is more concentrated, ranging from 0.010 to 0.488.

The main independent variables capturing annual report readability, namely PAGES, WORDS, and FOG, have mean values of 5.958 (standard deviation = 0.459), 11.972

(standard deviation = 0.536), and 17.781 (standard deviation = 1.251), respectively. PAGES and WORDS show relatively homogeneous distributions, while FOG displays greater dispersion with values ranging from 14.360 to 27.390, reflecting differences in linguistic complexity across firms.

The VALUE variable, which proxies value relevance, has a mean of 0.156 (standard deviation = 0.278) and ranges from -0.009 to 2.307, suggesting a non-symmetric distribution influenced by extreme values. The moderating variable ANALYST has a mean of 0.490, indicating that nearly half of the firms in the sample are covered by financial analysts. Finally, the control variables EPS, PROF, and LEV have mean values of 0.432 (standard deviation = 5.875), 0.060 (standard deviation = 0.074), and 0.460 (standard deviation = 0.205), respectively, indicating substantial variation in earnings performance, profitability, and capital structure across firms.

Table 4. **Pearson Correlation Matrix**

Variable	ATR	OCR	PAG	WOR	FOG	VAL	ALY	EPS	PRF	LEV
ATR	1.000									
OCR	-0.093	1.000								
PAGES	-0.128**	-0.271***	1.000							
WORDS	-0.202***	-0.235***	0.915***	1.000						
FOG	-0.171***	-0.111**	0.136***	0.161***	1.000					
VALUE	0.103**	-0.158***	-0.086*	-0.124**	-0.053	1.000				
ANALYST	-0.157***	-0.191***	0.440***	0.463***	-0.013	0.010	1.000			
EPS	0.038	0.244***	-0.023	-0.021	-0.081*	-0.019	-0.009	1.000		
PROF	0.258***	0.185***	-0.109**	-0.145***	-0.108**	0.241***	-0.093*	0.246***	1.000	
LEV	-0.050	-0.123**	0.382***	0.395***	0.023	-0.154***	0.251***	0.110**	-0.351***	1.000

Source: Data Processed (2025)

Table 4 presents the correlation matrix of the variables used in this study. Overall, the correlation coefficients are relatively low to moderate, indicating the absence of serious multicollinearity in the estimation model. The correlations between annual report readability, proxied by ATR and OCR, and value relevance (VAL) are weak, at -0.097 and 0.004 , respectively. Analyst coverage shows a weak positive correlation with value relevance (0.144), while EPS, profitability, and leverage also exhibit relatively low correlations with value relevance. Overall, the correlation matrix provides an initial overview of the relationships among variables prior to the panel data regression analysis.

Table 5 presents the testing of Hypotheses 1 and 2, which examine the effect of annual report readability and value relevance as independent variables on agency cost as the dependent variable. This analysis aims to assess the relationship between the readability of annual reports and the value relevance of accounting information with firms' agency costs. The hypotheses are tested using the regression model specified in this study.

Table 5. Regression Result

Variable	Dependent Variable: ATR			Dependent Variable: OCR		
	(1)	(2)	(3)	(4)	(5)	(6)
PAGES	-0.079 (0.103)			-0.021** (0.012)		
WORDS		-0.062 (0.085)			-0.017** (0.008)	
FOG			0.014 (0.012)			-0.005** (0.002)
VALUE	0.075* (0.050)	0.079* (0.048)	0.076* (0.051)	-0.013* (0.009)	-0.012* (0.009)	-0.007 (0.010)
EPS	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.002*** (0.000)	0.001*** (0.000)	0.002*** (0.000)
PROF	0.145 (0.233)	0.169 (0.226)	0.158 (0.233)	-0.006 (0.056)	0.000 (0.055)	0.003 (0.056)
LEV	0.010 (0.402)	0.014 (0.397)	0.017 (0.394)	-0.067** (0.032)	-0.066** (0.032)	-0.062** (0.031)
Constant	1.167* (0.779)	1.433 (1.179)	0.454*** (0.171)	0.291*** (0.075)	0.365*** (0.095)	0.251*** (0.050)
R² Within	0.011	0.011	0.010	0.086	0.086	0.092
F Statistic (Robust)	1.13***	1.16***	0.99**	98 734.78***	102 116.26***	202 238.85***

Source: Data Processed (2025)

Notes: Values in parentheses represent the Clustered Standard Errors. The symbols *, , and *** indicate significance levels at 0.10, 0.05, and 0.01, respectively.

The first hypothesis testing results indicate that the p-value of the annual report readability variable exceeds the 0.10 significance level, leading to the rejection of Hypothesis 1. Using ATR as an indicator, the findings show that annual report readability does not significantly affect firms' asset turnover, implying that clearer reporting does not necessarily translate into more efficient asset utilization. From an agency theory perspective, this suggests that managers may enhance the readability of annual reports as a form of impression management to preserve shareholder perceptions without substantively improving operational performance, thereby failing to reduce agency problems (Pouryousof et al., 2025). Consequently, information asymmetry remains high, limiting the effectiveness of readability as a monitoring mechanism. This result is consistent with Jain et al. (2023), who alleviating it.

In contrast, tests using the OCR proxy yield p-values below 0.05 with negative coefficients ranging from -0.005 to -0.021 , indicating that annual report readability has a significant effect on increasing agency costs. This result suggests that shareholders respond to perceived information inconsistencies or strategic disclosure by intensifying monitoring efforts over management, argued that annual reports are often strategically polished to appear informative while not fully reflecting actual performance, reinforcing information asymmetry rather than thereby raising monitoring related agency costs. According to Gu and Dodoo (2020), based on the perspective of agency theory, higher readability may facilitate closer scrutiny by principals, prompting them to invest more resources in oversight mechanisms when disclosures appear misaligned with underlying performance. Consequently, rather than mitigating agency problems, improved readability can trigger greater monitoring costs as shareholders seek to curb managerial opportunism. This

finding is consistent with Njoku and Lee (2025), reinforcing the view that annual report readability is closely associated with monitoring costs within the agency cost framework.

The testing of Hypothesis 2 using ATR as the dependent variable shows p-values below 0.10 with positive coefficients ranging from 0.075 to 0.079 across all regression models, indicating that the value relevance of accounting information positively affects firms' asset turnover efficiency. This finding suggests that more relevant accounting information provides a credible positive signal regarding management's ability to utilize assets efficiently and reduces information asymmetry between managers and shareholders (Ayagi & Salisu, 2023). From an agency theory perspective, the value relevance accounting information enhances the monitoring function of financial reporting, constrains managerial opportunism, and aligns managers' actions with shareholders' interests, thereby lowering agency costs through improved operational efficiency. This result is consistent with Khaldi and Hamama (2024) who found that lower information asymmetry reflects higher asset efficiency of firms.

Furthermore, tests of agency costs using the OCR proxy reinforce these findings, with p-values below 0.10 and negative coefficients ranging from -0.012 to -0.013 . These results indicate that the value relevance of accounting information has a negative effect on agency costs, particularly operating expenses, as transparent and economically meaningful information reduces information asymmetry and diminishes the need for intensive monitoring costs (Gowry et al. 2025). From an agency theory perspective, value-relevant accounting information strengthens the monitoring and contracting role of financial reporting by enabling principals to better assess managerial performance, thereby constraining managerial opportunism and lowering agency costs. Consequently, efficient and transparent reporting systems allow firms to allocate resources more productively toward value-creating activities rather than toward excessive supervisory and control mechanisms, consistent with Shamki and Al-Hamashi (2024).

Table 6 presents the testing of the moderating effect of analyst coverage on the relationship between annual report readability, value relevance, and agency cost. This analysis examines whether analyst coverage strengthens or weakens the influence of the independent variables on agency cost. The moderation effect is tested using interaction terms included in the regression model.

Table 6. **Moderated Regression Result**

Variable	Dependent Variable: ATR			Dependent Variable: OCR		
	(7)	(8)	(9)	(10)	(11)	(12)
PAGES	-0.024 (0.068)			-0.037*** (0.014)		
WORDS		-0.021 (0.055)			-0.027*** (0.010)	
FOG			0.010 (0.010)			-0.004* (0.003)
VALUE	0.052 (0.061)	0.059 (0.058)	0.060 (0.059)	-0.010 (0.008)	-0.011 (0.009)	-0.010 (0.009)
ANALYST	-1.862* (1.025)	-1.463 (0.975)	-2.426* (1.319)	-0.056 (0.073)	-0.138 (0.099)	-0.113 (0.127)
PAGES* ANALYST	-0.097 (0.068)			0.036** (0.014)		

Variable	Dependent Variable: ATR			Dependent Variable: OCR		
	(7)	(8)	(9)	(10)	(11)	(12)
WORDS*		-0.080			0.025**	
ANALYST		(0.077)			(0.009)	
FOG*			0.288			0.332**
ANALYST			(0.457)			(0.134)
VALUE*	0.110**	0.109**	0.108*	-0.007**	-0.008**	0.003
ANALYST	(0.053)	(0.053)	(0.058)	(0.003)	(0.003)	(0.006)
EPS	0.001	0.001	0.000	0.001***	0.001***	0.001***
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)
PROF	0.083	0.088	0.084	-0.009	0.004	0.013
	(0.244)	(0.238)	(0.247)	(0.054)	(0.054)	(0.046)
LEV	-0.009	-0.005	0.028	-0.064**	-0.063**	-0.034
	(0.333)	(0.329)	(0.295)	(0.032)	(0.032)	(0.042)
Constant	0.913**	1.022*	0.565***	0.382***	0.478***	0.229***
	(0.533)	(0.782)	(0.160)	(0.083)	(0.114)	(0.057)
R² Within	0.11	0.11	0.11	0.11	0.10	0.21
F Statistic				64	67	155
(Robust)	6.34***	6.00***	8.19***	690.46***	631.27***	588.84***

Source: Data Processed (2025)

Notes: Values in parentheses represent the Clustered Standard Errors. The symbols *, , and *** indicate significance levels at 0.10, 0.05, and 0.01, respectively.

In Hypothesis 3, using ATR as the dependent variable, the results show p-values above 0.10 across all regression models, indicating that analyst coverage does not significantly moderate the negative relationship between annual report readability and agency costs as proxied by asset turnover. This finding suggests that analyst presence has not provided sufficient external pressure to induce managerial discipline in improving asset utilization efficiency. According to Muslim and Setiawan (2021) from an agency theory perspective, although analysts function as external monitors, their influence appears limited when annual reports still contain substantial information asymmetry. Under such conditions, managerial discretion over asset allocation remains largely unconstrained, weakening the ability of analyst monitoring to directly affect asset turnover and operational efficiency (Das, 2020; Gomez & Warren, 2022).

In contrast, the results for the relationship between annual report readability and OCR show that analyst coverage yields p-values below 0.05 across all models and reverses the coefficient direction to positive, ranging from 0.036 to 0.332. These findings indicate that analyst coverage is effective in reducing operating expenses associated with monitoring costs. Luo et al. (2018) argued that analyst presence transforms the effect of report readability on agency costs from positive to negative by exerting pressure on management to produce more transparent, readable, and credible disclosures. When information asymmetry is high, analysts enhance governance effectiveness by constraining managerial opportunism and lowering agency related costs. Thus, analyst coverage contributes to strengthening corporate governance primarily through cost-based monitoring mechanisms rather than asset efficiency channels, consistent with prior evidence (Lim & Monroe, 2022).

In the fourth hypothesis with ATR as the dependent variable, the findings indicate that analyst coverage significantly strengthens the relationship between the value relevance of accounting information and asset turnover ratio, as reflected by p-values below 0.05 to 0.10

and positive coefficients ranging from 0.108 to 0.110. This result is consistent with agency theory, which emphasizes the role of analysts as an external monitoring mechanism that reduces information asymmetry between managers and principals. When accounting information is highly value-relevant, analysts act as information intermediaries who enhance the clarity and credibility of economic signals transmitted to the market (Azarberahman et al., 2023). This external scrutiny incentivizes management to optimize asset utilization and improve operational efficiency, which is ultimately reflected in higher asset turnover. These findings align with prior studies by Zeng and Tang (2023) highlighting that analyst activities deepen information quality and strengthen managerial discipline.

Not only that, the results based on the OCR proxy indicate that agency costs are also effectively lowered by analyst coverage, even as it attenuates the negative effect of value relevance, as evidenced by statistically significant coefficients ranging from -0.007 to -0.008 . From an agency theory perspective, this attenuation does not imply that analysts increase agency costs, rather analyst monitoring actively reduces agency costs while balancing cost efficiency with long-term operational sustainability by discouraging excessive cost-cutting behavior that could undermine firm performance and going-concern prospects (Wang et al., 2024). Not only that, the results based on the OCR proxy indicate that agency costs are also effectively lowered by analyst coverage, even as it attenuates the negative effect of value relevance, as evidenced by statistically significant coefficients ranging from -0.007 to -0.008 . From an agency theory perspective, this attenuation does not imply that analysts increase agency costs; rather, analyst monitoring actively reduces agency costs while balancing cost efficiency with long-term operational sustainability by discouraging excessive cost-cutting behavior that could undermine firm performance and going-concern prospects (Zhang & Wu, 2023).

Conclusion

This study primarily examines whether annual report readability and the value relevance of accounting information affect agency costs, as well as the moderating role of analyst coverage in shaping these relationships. Annual report readability is measured using three proxies like total pages, total words, and the Fog Index—computed through tokenizing and stemming processes using Natural Language Processing (NLP). Value relevance is proxied by the regression of earnings per share (EPS), book value per share (BVPS), and operating cash flow per share (OCFPS) on future stock prices. Agency costs, as the dependent variable, are measured using the Asset Turnover Ratio (ATR) and Operating Cost Ratio (OCR), while analyst coverage is captured through a dummy variable. The sample consists of non-financial firms included in the KOMPAS-100 index over the 2019–2024 period.

The results indicate that annual report readability is positively associated with agency costs as measured by OCR, but shows no significant effect on ATR. In contrast, the value relevance of accounting information positively affects ATR while exhibiting no significant relationship with OCR. The findings further reveal that analyst coverage plays a role in reducing information asymmetry by functioning as an external monitoring mechanism that enhances managerial efficiency, particularly when firms face high levels of information asymmetry. However, analyst coverage also strengthens the negative relationship between

value relevance and operating costs, suggesting that analysts balance efficiency pressures with the need to maintain operational stability.

From a theoretical and practical perspective, these findings support agency theory, which posits that conflicts between managers and shareholders arise from divergent interests and information asymmetry, thereby necessitating agency costs as a mechanism to monitor managerial behavior. The results indicate that higher annual report readability reflects increased agency costs borne by shareholders, while value-relevant and transparent accounting information mitigates information asymmetry, strengthens monitoring, and enhances operational efficiency and firm value. Empirically, lower report readability is associated with reduced asset turnover efficiency and higher operating costs, whereas greater value relevance improves asset utilization and lowers operating cost ratios. Persistent information asymmetry particularly stemming from low report readability continues to elevate agency costs. In this context, analyst coverage plays a crucial role in reinforcing external governance by enhancing managerial discipline, improving transparency, and supporting firms' going-concern prospects through more effective and balanced agency cost management, underscoring the interdependence between agency costs and external monitoring mechanisms within the agency theory framework.

References

- Ahmed, A. M., Nugraha, D. P., & Hågen, I. (2023). The Relationship between Capital Structure and Firm Performance: The Moderating Role of Agency Cost. *Risks*, 11(6), 102. <https://doi.org/10.3390/risks11060102>
- Al-Faryan, M. A. S. (2024). Agency theory, corporate governance and corruption: an integrative literature review approach. *Cogent Social Sciences*, 10(1). <https://doi.org/10.1080/23311886.2024.2337893>
- Ali, A., & Ali, F. (2025). External governance monitoring and corporate behavior: Impact of negative media coverage pressure on ESG rating divergence. *Borsa Istanbul Review*, 25(5), 895–907. <https://doi.org/10.1016/j.bir.2025.05.005>
- Arifuddin, A., Hadisantoso, E., Sari, I. M., & Yulianti, A. F. (2023). How liquidity, profitability, and leverage ratios influence financial distress: A study on Indonesian mining firms. *Jurnal Perspektif Pembiayaan Dan Pembangunan Daerah*, 11(3), 243–252. <https://doi.org/10.22437/ppd.v11i3.27470>
- Ayagi, S. R., & Salisu, M. (2023). Financial Reporting Quality and Information Asymmetry: A Review of Empirical Literature. *FUDMA Journal of Accounting and Finance Research [FUJAFR]*, 1(3), 19–29. <https://doi.org/10.33003/fuj afr-2023.v1i3.51.19-29>
- Azarberahman, A., Pakdelan, S., & Tohidinia, M. (2023). Accounting similarities, sophisticated investors, relevance and information asymmetry. *International Journal of Applied Economics, Finance and Accounting*, 17(1), 186–201. <https://doi.org/10.33094/ijaefa.v17i1.1097>
- Baykara, B., & Baykara, S. (2021). The impact of agency costs on firm performance: an analysis on BIST SME firms. *Pressacademia*, 14(1), 28–32. <https://doi.org/10.17261/Pressacademia.2021.1481>
- Bessler, W., Gonenc, H., & Tinoco, M. H. (2023). Information asymmetry, agency costs, and payout policies: An international analysis of IFRS adoption and the global financial crisis. *Economic Systems*, 47(4), 101129. <https://doi.org/10.1016/j.ecosys.2023.101129>
- Bijoy, K., & Mangla, K. (2023). Agency cost: Ownership structure and board composition

- An empirical analysis. *Corporate Ownership and Control*, 20(3, special issue), 351–358. <https://doi.org/10.22495/cocv20i3siart10>
- Chaudhary, P. (2022). Agency costs, board structure and institutional investors: case of India. *Asian Journal of Accounting Research*, 7(1), 44–58. <https://doi.org/10.1108/AJAR-12-2020-0130>
- Chen, T., Lin, C., Luo, X., & Qin, S. (2024). Analyst Coverage and Informed Trading: Evidence From Natural Experiments. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4707471>
- D’Augusta, C., De Vito, A., & Grossetti, F. (2023). Words and numbers: A disagreement story from post-earnings announcement return and volume patterns. *Finance Research Letters*, 54, 103694. <https://doi.org/10.1016/j.frl.2023.103694>
- Das, R. C. (2020). Does analysts following impede information asymmetry Evidence from analyst coverage firms. *International Journal of Comparative Management*, 3(4), 258. <https://doi.org/10.1504/IJCM.2020.114146>
- Donkor, A., Trireksani, T., & Djajadikerta, H. G. (2024). Incremental value relevancies in the development of reporting of sustainability performance. *Journal of Corporate Accounting & Finance*, 35(3), 44–65. <https://doi.org/10.1002/jcaf.22694>
- Gomez, E., & Warren, J. (2022). Analyst Coverage and Managerial Learning from Prices. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4169130>
- Goswami, R., Maji, S. G., & Hussain, F. (2023). Annual Report Readability and Agency Cost: The Influence of Firm Size. *Business Perspectives and Research*, 227853372211488. <https://doi.org/10.1177/22785337221148832>
- Gowry, Y., Subadar Agathee, U., & Soobaroyen, T. (2025). IFRS and the evolution of value relevance: evidence from an African developing country. *Journal of Financial Reporting and Accounting*, 23(4), 1609–1629. <https://doi.org/10.1108/JFRA-07-2022-0252>
- Gu, S., & Dodoo, R. N. A. (2020). The Impact of Firm Performance on Annual Report Readability: Evidence from Listed Firms in Ghana. *Journal of Economics, Business, & Accountancy Ventura*, 22(3), 444–454. <https://doi.org/10.14414/jebav.v22i3.2097>
- Huong Dau, N., Van Nguyen, D., & Thi Thanh Diem, H. (2024). Annual report readability and firms’ investment decisions. *Cogent Economics & Finance*, 12(1). <https://doi.org/10.1080/23322039.2023.2296230>
- Huu Nguyen, A., Thuy Doan, D., & Ha Nguyen, L. (2020). Corporate Governance and Agency Cost: Empirical Evidence from Vietnam. *Journal of Risk and Financial Management*, 13(5), 103. <https://doi.org/10.3390/jrfm13050103>
- Jain, A., Manchiraju, H., & Sunder, S. V. (2023). Institutional ownership and the informativeness of disclosure tone. *Journal of Business Finance & Accounting*, 50(1–2), 61–90. <https://doi.org/10.1111/jbfa.12640>
- 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)
- Khaldi, H., & Hamama, F. (2024). Value relevance of accounting information in uncertain economic policy context: evidence from Tunisia. *Journal of Accounting and Management Information Systems*, 23(3). <https://doi.org/10.24818/jamis.2024.03006>
- Latella, P., & Veltri, S. (2024). The drivers of nonfinancial disclosure quality: A systematic literature review analysis. *Corporate Social Responsibility and Environmental Management*, 31(6), 5524–5542. <https://doi.org/10.1002/csr.2880>
- Lim, Y., & Monroe, G. S. (2022). Analyst Coverage and Audit Fees: International Evidence. *Journal of Accounting, Auditing & Finance*, 37(2), 466–492. <https://doi.org/10.1177/0148558X20928243>

- Luo, J., Li, X., & Chen, H. (2018). Annual report readability and corporate agency costs. *China Journal of Accounting Research*, 11(3), 187–212. <https://doi.org/10.1016/j.cjar.2018.04.001>
- Mansour, M., Al Amosh, H., Alodat, A. Y., Khatib, S. F. A., & Saleh, M. W. A. (2022). The Relationship between Corporate Governance Quality and Firm Performance: The Moderating Role of Capital Structure. *Sustainability*, 14(17), 10525. <https://doi.org/10.3390/su141710525>
- Martinez, A. L., & Viana Leal, L. (2023). Analyst Coverage and its Impact on Tax Aggressiveness: A Study on B3-listed Brazilian Companies. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4595953>
- Matinheikki, J., Kauppi, K., Brandon-Jones, A., & van Raaij, E. M. (2022). Making agency theory work for supply chain relationships: a systematic review across four disciplines. *International Journal of Operations & Production Management*, 42(13), 299–334. <https://doi.org/10.1108/IJOPM-12-2021-0757>
- Mbithi, E., Moloi, T., & Wangombe, D. (2022). Corporate risk disclosure: A systematic literature review and future research agenda. *Cogent Business & Management*, 9(1). <https://doi.org/10.1080/23311975.2022.2105569>
- Mehmood, A., & De Luca, F. (2023). How does non-interest income affect bank credit risk? Evidence before and during the COVID-19 pandemic. *Finance Research Letters*, 53, 103657. <https://doi.org/10.1016/j.frl.2023.103657>
- Muslim, A. I., & Setiawan, D. (2021). Information Asymmetry, Ownership Structure and Cost of Equity Capital: The Formation for Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(1), 48. <https://doi.org/10.3390/joitmc7010048>
- Naqvi, S. K., Shahzad, F., Rehman, I. U., Qureshi, F., & Laique, U. (2021). Corporate social responsibility performance and information asymmetry: The moderating role of analyst coverage. *Corporate Social Responsibility and Environmental Management*, 28(6), 1549–1563. <https://doi.org/10.1002/csr.2114>
- Njoku, O. E., & Lee, Y. (2025). Agency Costs, Ownership Structure, and Cost Stickiness: Implications for Sustainable Corporate Governance. *Sustainability*, 17(11), 5144. <https://doi.org/10.3390/su17115144>
- Nur Wahyuni, & Achriansyah Achmad Gani. (2022). Reviewing the Firm Value in terms of Profit, Debt, and Growth. *Jurnal Manajemen*, 26(1), 121–139. <https://doi.org/10.24912/jm.v26i1.843>
- Park, W. (Albert), Sernova, E., & Park, C.-Y. (2025). From Short-Term Volatility to Long-Term Growth: Restricted Stock Units' Impact on Earnings per Share and Profit Growth Across Sectors. *International Journal of Financial Studies*, 13(2), 104. <https://doi.org/10.3390/ijfs13020104>
- Patin, J.-C., Rahman, M., & Mustafa, M. (2020). Impact of Total Asset Turnover Ratios on Equity Returns: Dynamic Panel Data Analyses. *Journal of Accounting, Business and Management (JABM)*, 27(1), 19. <https://doi.org/10.31966/jabminternational.v27i1.559>
- Piscesta, F., & Gunawan, A. (2022). Pengaruh Kepemilikan Manajerial Dan Ukuran Perusahaan Terhadap Biaya Keagenan. *Jurnal Informasi Akuntansi (JIA)*, 1(1), 90–99. <https://doi.org/10.32524/jia.v1i1.473>
- Pouryousof, A., Nassirzadeh, F., & Askarany, D. (2025). Unravelling the complex link between managers' disclosure of abnormal tone and opportunistic behaviour. *European Research on Management and Business Economics*, 31(2), 100277. <https://doi.org/10.1016/j.iedeen.2025.100277>
- Rashid Khan, H. ur, Khidmat, W. Bin, Hares, O. Al, Muhammad, N., & Saleem, K. (2020). Corporate Governance Quality, Ownership Structure, Agency Costs and Firm

- Performance. Evidence from an Emerging Economy. *Journal of Risk and Financial Management*, 13(7), 154. <https://doi.org/10.3390/jrfm13070154>
- Rianto, Mutiara, A. B., Wibowo, E. P., & Santosa, P. I. (2021). Improving the accuracy of text classification using stemming method, a case of non-formal Indonesian conversation. *Journal of Big Data*, 8(1), 26. <https://doi.org/10.1186/s40537-021-00413-1>
- Sdiq, S. R., & Abdullah, H. A. (2022). Examining the effect of agency cost on capital structure-financial performance nexus: empirical evidence for emerging market. *Cogent Economics & Finance*, 10(1). <https://doi.org/10.1080/23322039.2022.2148364>
- Shamki, D., & Al-Hamashi, S. C. K. (2024). The Value Relevance of Accounting Information in Iraq. *European Journal of Business and Management Research*, 9(6), 27–33. <https://doi.org/10.24018/ejbmr.2024.9.6.2496>
- Soesanto, S., & Wijaya, H. (2022). The Effect of Readability of Annual Reports and Value Relevance of Financial Information on Agency Costs with Analyst Coverage as Moderating Variable. *Jurnal Akuntansi Dan Keuangan*, 24(1), 56. <https://doi.org/10.9744/jak.24.1.46-56>
- Sun, R.-T., Garimella, A., Han, W., Chang, H.-L., & Shaw, M. J. (2020). Transformation of the Transaction Cost and the Agency Cost in an Organization and the Applicability of Blockchain—A Case Study of Peer-to-Peer Insurance. *Frontiers in Blockchain*, 3. <https://doi.org/10.3389/fbloc.2020.00024>
- Tarjo, T. (2022). The The Impact of Annual Report Readability on Agency Costs: Internal Control as Moderating Variable. *Journal of Accounting, Business and Management (JABM)*, 29(1), 96. <https://doi.org/10.31966/jabminternational.v29i1.831>
- Toerien, F. E., & du Toit, E. (2024). Fighting through the Flesch and Fog: the readability of risk disclosures. *Accounting Research Journal*, 37(1), 39–56. <https://doi.org/10.1108/ARJ-03-2023-0094>
- Visedsun, N., Hackerd, K., Kwanmuang, P., & Aujirapongpan, S. (2025). Does Audit Quality Enhance the Value Relevance of Earnings and Book Value on the Market Price of Common Shares? Evidence from Thailand. *Journal of Risk and Financial Management*, 18(10), 547. <https://doi.org/10.3390/jrfm18100547>
- Wang, Y., Hu, F., & Wang, Y. (2024). Analyst coverage and greenwashing: Evidence from Chinese A-Share listed corporations. *International Review of Economics & Finance*, 94, 103423. <https://doi.org/10.1016/j.iref.2024.103423>
- Zeng, C., & Tang, S. (2023). Does common analyst coverage improve suppliers' investment efficiency? *China Journal of Accounting Studies*, 11(3), 602–630. <https://doi.org/10.1080/21697213.2023.2167724>
- Zhang, C., & Wu, X. (2023). Analyst Coverage and Corporate ESG Performance. *Sustainability*, 15(17), 12763. <https://doi.org/10.3390/su151712763>