



Jurnal Riset Akuntansi dan Keuangan

Journal homepage: <https://ejournal.upi.edu/index.php/JRAK/>



Navigating Financial Integrity: Gender Diversity in Boards as a Moderator in Indonesia's Digital Economy

Ferdinand Morin Alexander^{1*}, Yenni Carolina²

Fakultas Bisnis, Universitas Krister Maranatha, Negara Indonesia

*Correspondence: E-mail: 2257008@bus.maranatha.edu

ABSTRACT	INFO ARTIKEL
The rapid growth of Indonesia's digital economy has highlighted the need for transparent and accountable financial practices. This study examines the factors influencing earnings management practices in technology sector companies in Indonesia, focusing on top management compensation and audit quality, with gender diversity as a moderating variable. Using a quantitative descriptive approach, data from 16 tech companies over the period 2018-2023 were analyzed through panel regression. The findings indicate that top management compensation significantly affects earnings management practices, while audit quality shows a significant but positive impact, and gender diversity does not show a significant moderating effect. The results suggest that adequate compensation structures are essential for reducing earnings management practices, highlighting the need for improved audit standards and further exploration of gender diversity's role in corporate governance.	Article History: <i>Submitted/Received 01 Oct 2024</i> <i>First Revised 01 Nov 2024</i> <i>Accepted 01 Dec 2024</i> <i>First Available online 07 Dec 2024</i> <i>Publication Date 11 Dec 2024</i> Keyword: <i>Audit Quality, Board Gender Diversity, Digital Economy, Earnings Management, Top Management Compensation</i>
© 2024 Kantor Jurnal dan Publikasi UPI	

1. INTRODUCTION

Research Background

Indonesia's digital economic growth shows very positive development. According to a report by Google (2023), Indonesia achieved a Gross Market Value (GMV) of US\$82 billion in 2023, the highest in Southeast Asia. With a Compound Annual Growth Rate (CAGR) of 15%, Indonesia's digital economy GMV is projected to reach US\$109 billion by 2025.

In line with the statement of the 7th President of the Republic of Indonesia, Joko Widodo (2022), this achievement underscores the importance of the technology sector as one of the key drivers of the digital economy, as it not only introduces technological innovations but also empowers SMEs and facilitates access to global markets. However, as a sector that plays a vital role in accelerating digital transformation, this sector is not without challenges, particularly regarding the integrity and transparency of financial reports.

One financial scandal in this sector involves PT Envy Technologies Indonesia Tbk, which raised doubts among investors and the general public about financial governance in the sector. The company was allegedly involved in manipulating financial statements (Yuniarto, 2023). Indicators of financial statement manipulation were also observed in research conducted by Christian et al. (2022), where the company engaged in earnings management to inflate its profit figures.

Financial statement manipulation scandals have the potential to cause lasting negative impacts on the technology sector, which may ultimately hinder the economic development of a country, especially in developing countries like Indonesia (Tsegba & Upaa, 2015). Therefore, research is needed to identify and prevent these negative effects by gaining a deeper understanding of the factors contributing to earnings management practices used to manipulate financial statements.

This research is crucial because investor and stakeholder trust is essential for the development of the digital economy. Without trust, investors will be hesitant to invest, and the public will be reluctant to adopt digital services (Elsayed, 2017). Both of these issues can hinder long-term digital economic growth.

The factors examined in this study are those that may interact with earnings management practices, including internal factors such as top management compensation, as studied by Assenso-Okofu et al. (2020), and external factors such as audit quality, as examined by Nwoye et al. (2021). The study aims to assess the impact of top management compensation and audit quality on earnings management practices, typically represented by the level of Discretionary Accruals. By gaining a deeper understanding of the factors influencing earnings management, investor trust can be maintained to support the sustainability of the digital economy. This initiative can directly contribute to the SDGs (Sustainable Development Goals) adopted by UN member states in the 2030 Sustainable Development Agenda, specifically SDG pillar 8, which focuses on sustainable economic growth.

In line with contributing to the SDGs, this study will also examine whether the presence of women in board positions can serve as a moderating factor to minimize earnings management practices. Having women on boards not only enhances the diversification of perspectives in decision-making and corporate governance (Oyotode-Adebile et al., 2022) but also supports the achievement of Gender Equality, which is the fifth pillar of the SDGs. This research investigates how gender diversity can moderate earnings management practices in the technology sector, with the hope that increased transparency and accountability will support healthier and more sustainable digital economic growth in Indonesia. Therefore, exploring the relationship between internal and external company factors and earnings management practices, while incorporating the role of women (represented by gender diversity) as a moderating variable, becomes crucial for supporting healthy and sustainable growth in Indonesia's digital economy.

Although previous studies have investigated the significant influence of top management compensation or audit quality on earnings management practices, as conducted by Assenso-Okofu et al. (2020) and Nwoye et al. (2021), no research has focused on exploring the moderating role of gender diversity in these factors, to the best of the author's knowledge. Moreover, there has been no research related to earnings management practices focusing on the technology sector in Indonesia.

Therefore, this study aims to fill this gap as its main novelty, namely becoming the first study in Indonesia to specifically explore technology companies by examining the influence of internal and external company factors on earnings management practices, while considering gender diversity in top management positions as a moderating variable. This research also integrates the use of control variables to examine the relationships between the variables tested to allow for more accurate and in-depth analysis.

This study contributes to forensic accounting by highlighting that gender diversity in board positions has the potential to reduce earnings management practices in the technology sector. It offers new perspectives in developing strategies for preventing and monitoring financial fraud in the technology sector. Additionally, the findings of this research contribute to technology companies in formulating and establishing corporate governance policies related to internal and external company factors, while also promoting gender diversity in decision-making at the top management level, thereby empowering women in the technology sector.

Literature Study and Hypothesis Development

Agency Theory can serve as the main foundation for this research. In the theory proposed by Jensen & Meckling (1976), agents (members of the company's board) are required to provide financial reports that accurately reflect the company's performance and financial position to assist the principals (investors and stakeholders) in decision-making. However, inadequate compensation structures and oversight mechanisms have the potential to drive agents to engage in earnings management practices to maximize personal gain, even if it conflicts with the interests of the principals (Inneh et al., 2020).

Building on this analysis, based on Positive Accounting Theory, proposed by Watts & Zimmerman (1990), the board may exhibit opportunistic behavior that benefits them personally if there is information asymmetry, regardless of the compensation structure, which may be considered sufficient (Inneh et al., 2020). In such conditions, they have more and deeper information about the actual state of the company compared to investors and stakeholders, making it necessary to have adequate oversight mechanisms, both internally and externally. Therefore, analyzing both internal and external company factors becomes crucial to understanding their influence on earnings management practices.

According to several sources, earnings management practices have varying definitions, although their essence remains similar. Aljughaiman et al. (2023) conclude that earnings management involves the use of flexibility in accounting rules to manage the measurement and presentation of financial reports for the benefit of the report preparers. Meanwhile, Pratiwi et al. (2022) define earnings management as the illegal manipulation of the content or figures in financial statements to achieve personal objectives.

The compensation of board members, who are part of top management, is one of the common factors that can trigger earnings management practices. Previous studies, such as those conducted by Moardi et al. (2020), have shown a significant negative relationship between executive compensation, specifically focusing on CEOs, and earnings management practices in the machinery, automotive, and chemical industries, indicating that CEO compensation structures may be inadequate. Another study, conducted by Assenso-Okofu et al. (2021), found that earnings management practices were undertaken to increase bonuses received by executives, but this could be mitigated by a strong corporate governance system.

In Indonesia, research by Husni et al. (2021) and Azmi & Aprayuda (2021) also showed that board compensation had a significant relationship with earnings management practices, represented by discretionary accruals. The compensation received by the board is closely related to the company's performance, leading the board to have a tendency to engage in earnings management to report performance conditions that could optimize the compensation they receive. Another cause of earnings management practices by top management members is the disparity in compensation received by each member (Park, 2017). However, this study will use aggregate top management compensation as it has a more significant impact on overall organizational performance (Qiao et al., 2020).

Nevertheless, Moardi et al. (2020) also found that in certain industrial sectors, such as pharmaceuticals and food, executive compensation levels, specifically focusing on CEOs, may not have a significant influence on earnings management practices due to more rigid accounting procedures, which reduce opportunities for earnings management. Fakhfakh (2010) also revealed that the influence of executive management compensation on earnings management practices was weaker in companies before the era of the Sarbanes-Oxley Act, indicating that this influence tends to be higher in companies that are not publicly listed, due to lower levels of oversight.

In addition to the compensation structure, several studies indicate that the presence of adequate oversight mechanisms has a significant relationship with earnings management practices. The oversight mechanism, represented by the quality of external audits, shows this relationship, as evidenced by research conducted by Nwoye et al. (2021) in Nigeria, Lopes (2018) in Portugal, and Kalbuana et al. (2022) in Indonesia. Audit quality reflects how effectively errors

in the presentation of financial information, whether intentional or not, can be detected (Lopes, 2018). Audits conducted by firms within the Big 4 group (Deloitte Touche Tohmatsu, Ernst & Young, KPMG, and PricewaterhouseCoopers) are considered to provide higher quality audits because they possess high technical competencies to maintain their clients and reputation. These higher-quality audit results tend to limit earnings management practices compared to audits conducted by non-Big 4 firms.

However, other research conducted in Indonesia by Masiku & Dewi (2019) shows a significant positive relationship between companies audited by Big 4 firms and earnings management practices, where companies tend to use more discretionary accruals to present favorable profit conditions to the public. This phenomenon indicates a potential decline in audit quality, consistent with Boone et al. (2012), who argue that high market concentration in the Big 4 audit firms can negatively impact audit quality. Limited auditor choices and oligopolistic dominance may cause auditors to become more lenient and less skeptical in performing their duties, thus reducing the effectiveness of oversight on earnings management practices.

Similar findings were also reported by Isaac (2022) in France, where companies audited by Big 4 firms recorded higher levels of discretionary accruals due to the low litigation risk faced by auditors. Other research in Indonesia by Arista & Serly (2023) and Kurniawati & Panggabean (2020) found that audit quality did not have a significant influence on reducing such practices if the integrity of auditors working in Big 4 firms was low.

Although audit quality is an essential form of oversight, gender diversity on boards also helps optimize corporate governance, leading to reduced earnings management practices (Oyotode-Adebile et al., 2022). Research conducted by Goel & Kapoor (2022) found that female directors are more effective in monitoring earnings management, while the presence of independent directors does not necessarily guarantee more optimal corporate governance. In research conducted by Wang et al. (2022), the presence of women on the board also increases the likelihood of detecting corporate fraud through earnings management practices, as women are more risk-averse and committed to ethical practices.

The presence of women on the board also contributes to improved earnings quality, which is associated with transparent and informative financial reporting (Saona et al., 2024). Other studies, such as those by Saraireh et al. (2022) and Umer et al. (2020), also concur, showing that gender equality in board positions is an important factor in reducing earnings management practices. Furthermore, research conducted by Chu et al. (2023) found that gender equality in top management positions can act as a moderator in amplifying other factors, such as corporate social responsibility, to reduce earnings management practices.

According to research by Nawaz (2022) and Usman et al. (2021), the presence of women on the board enhances corporate governance and performance by considering broader social and communal issues in planning more effective top management compensation, compared to boards that consist entirely of men. Therefore, the representation of women on the board has the potential to moderate the influence of top management compensation to be more effective in curbing earnings management practices.

Research by Luh (2024) shows that the presence of women in top management positions can reduce information risk and improve transparency regarding audits conducted on universal banks in Ghana, leading to improved audit quality. Similar findings are mentioned in other research conducted by Rahaman & Karim (2023), where the representation of women on boards and audit

committees increases the disclosure of Key Audit Matters (KAM), which is essential in reducing information asymmetry and enhancing stakeholders' understanding of the underlying reasons for audit opinions. This indicates that gender diversity on the board has the potential to moderate the influence of audit quality to be more effective in reducing earnings management practices.

Although many studies suggest that the presence of women can help reduce earnings management practices, there are several studies that explain why gender diversity may not be effective in curbing such practices. Research by Harris et al. (2019) found no significant difference between men and women in top management in reducing earnings management when there is a high equity-based compensation component in the board's compensation structure. Additionally, study from Uddin (2022) in Bangladesh posited that women in board positions may be involved in financial manipulation by compromising quality to enhance their financial benefits and professional status.

Based on the literature review presented, this study will examine the presence of women, represented by board gender diversity, as a factor that can moderate the relationship between internal factors, represented by top management compensation, and external company factors, represented by audit quality, in relation to earnings management practices. Therefore, this study will formulate the following four hypotheses to be tested:

H1: Top Management Compensation has a negative effect on Earnings Management.

H2: Audit Quality has a negative effect on Earnings Management.

H3: Board Gender Diversity moderates the effect of Top Management Compensation on Earnings Management.

H4: Board Gender Diversity moderates the effect of Audit Quality on Earnings Management

2. RESEARCH METHODOLOGY

This study employs a descriptive quantitative approach to describe and analyze numerical data related to the variables under investigation. The approach aims to evaluate how top management compensation and audit quality—as internal and external factors—affect earnings management, with board gender diversity as a moderating variable. The research model can be seen in **Figure 1**.

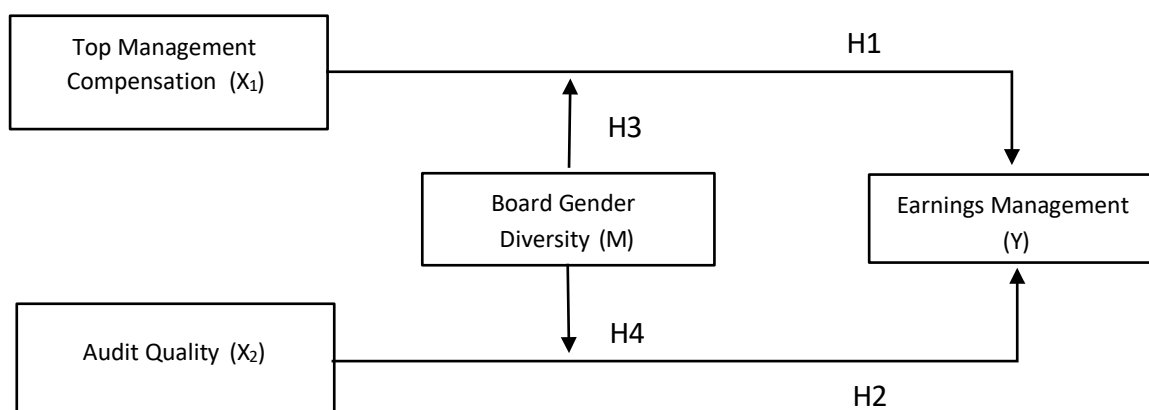


Figure 1. Research Model

The study utilizes panel data to observe the time dynamics of the variables being studied. The data source consists of secondary data from publicly listed technology companies on the Indonesia Stock Exchange (IDX) during the 2019-2023 period, specifically from the IDXTECHNO group.

This study adopts purposive sampling to select the sample based on specific criteria relevant to the research objectives. This sampling method is applied to the total population of companies that have been continuously listed on the IDX from 2019 to 2023 and have complete financial reports from 2018 to 2023. Out of the total 46 companies, 16 companies met these criteria, yielding 96 units of observation. **Table 1** presents the list of companies that meet the criteria.

Table 1. List of Selected Technology Sector Companies for Research Samples

Number	Ticker	Company Name
1	MTDL	Metrodata Electronics Tbk.
2	KREN	Quantum Clovera Investama Tbk.
3	PTSN	Sat Nusapersada Tbk
4	EMTK	Elang Mahkota Teknologi Tbk.
5	MLPT	Multipolar Technology Tbk.
6	ATIC	Anabatic Technologies Tbk.
7	KIOS	Kioson Komersial Indonesia Tbk.
8	MCAS	M Cash Integrasi Tbk.
9	NFCX	NFC Indonesia Tbk.
10	DIVA	Distribusi Voucher Nusantara Tbk.
11	LUCK	Sentral Mitra Informatika Tbk.
12	ENVY	Envy Technologies Indonesia Tbk.
13	HDIT	Hensel Davest Indonesia Tbk.
14	TFAS	Telefast Indonesia Tbk.
15	DMMX	Digital Mediatama Maxima Tbk.
16	GLVA	Galva Technologies Tbk.

Source: Website idx.co.id (2024)

The data used in this study come from audited financial statements and financial market data from Refinitiv Eikon, the primary data sources. Audited financial statements are considered reliable as they have been reviewed by independent external parties, while Refinitiv Eikon holds a globally reputable status for providing credible financial data. **Table 2** summarizes the main variables of this study.

Table 2. Operationalization of Main Research Variables

Variable Name	Abbreviation	Variable Type	Description	Reference
Top Management Compensation	KMP	Independent (X1)	The logarithm of the value of board of directors and commissioners' compensation	Husni et al. (2021), Azmi & Aprayuda (2021), Alhebri et al. (2021)
Audit Quality	KA	Independent (X2)	A dummy variable with a value of 1 for Big 4 audit firms and 0 if not	Arista & Serly (2023), Nwoye et al. (2021), Viana et al. (2022)
Board Gender Diversity	KG	Moderating (M)	The ratio of the number of female board members to the total number of board members	Saraireh et al. (2022), Chu et al. (2023), Wang et al. (2022)
Earnings Management	AEM	Dependent (Y)	Discretionary Accruals based on the Jones model	Husni et al. (2021), Aljughaiman et al. (2023)

Source: Processed by Author (2024)

Based on the data sources, the top management compensation variable will be measured using the logarithm of the board's compensation taken from financial statements, while audit quality will be represented by a dummy variable, where a value of 1 is assigned if the company's auditor belongs to a Big 4 audit firm. Gender diversity will be measured using the ratio of the number of female board members to the total number of board members.

Previous studies, such as those by Aljughaiman et al. (2023) and Husni et al. (2021), measured indications of earnings management practices using the concept of Accrual Earnings Management (AEM). This study will apply the Jones model (Dechow et al., 1995), modified by Kothari et al. (2005) to include the company's performance element in calculating the earnings management indicator and developing the regression equation model based on the AEM concept.

To implement the AEM concept, this study will adopt the steps taken by Husni et al. (2021) dan Bouaziz et al. (2020) by first calculating the Total Accruals (TACC) of the company. For each year, the total accrual value can be obtained by subtracting Net Income Before Extraordinary Items and Discontinued Operations (EARN) from Cash Flow from Operations (CFO) using the following formula:

$$TACC_{jt} = EARN_{jt} - CFO_j \dots\dots\dots (1)$$

After obtaining this value, the next step is to construct a regression model based on Dechow et al. (1995) with modifications by Kothari et al. (2005) for the total accruals of each company-year combination. The regression model is developed by normalizing total accruals against total assets, resulting in the following model:

$$\frac{TACC_{jt}}{TA_{jt-1}} = \beta_0 + \beta_1 \left[\frac{1}{TA_{jt-1}} \right] + \beta_2 \left[\frac{(\Delta Rev - \Delta ARt)}{TA_{jt-1}} \right] + \beta_3 \left[\frac{GPPE_{jt}}{TA_{jt-1}} \right] + \beta_4 ROA_{jt} + s_{it} \dots \dots \dots (2)$$

Where:

β = Constant

TA_{jt-1} = Total assets of company j in period t-1

ΔRev = Change in revenue in period t

ΔARt = Change in accounts receivable in period t

GPPE = Gross property, plant, and equipment in period t

ROA = Return on assets in period t

The value of Non-Discretionary Accruals (NDA) is obtained from the estimation results of the previously adjusted regression model. The Earnings Management variable, predicted using Discretionary Accruals (DA), can be obtained by calculating the residual value from the regression model.

To achieve more accurate analysis results, this study will integrate several control variables. This study adopts the approach of Aljughaiman et al. (2023) in analyzing control variables to isolate other factors that may potentially influence earnings management. **Table 3** presents the control variables used in this study.

The control variables are related to the company's operational and structural factors, namely company size (calculated as the logarithm of market capitalization), leverage (debt-to-asset ratio), company performance (represented by Return on Assets, calculated by dividing net income by total assets), company growth (the difference between total sales in period t and period t-1, divided by sales in period t-1), and board size (the logarithm of the number of board directors and commissioners).

Table 3. Operationalization of Control Variables

Variable Name	Abbreviation	Description	Reference
Company Size	UP	The logarithm of market capitalization	Nguyen et al. (2023)
Leverage	LV	Total liabilities divided by total assets	Tulcanaza-Prieto et al. (2020)
Company Performance	ROA	Total net income divided by total assets	Nafisah et al. (2018)

Company Growth	GROW	The difference between sales in period t and t-1, divided by sales in period t-1	Aljughaiman et al. (2023)
Board Size	BS	The logarithm of the number of board members	Aljughaiman et al. (2023)

Source: Processed by Author (2024)

This study will use panel data regression techniques to test the previously formulated hypotheses. The regression technique, with the Ordinary Least Squares (OLS) approach, will be applied to estimate the regression coefficients.

Once the relationships between the variables are identified, the analysis will proceed with classical assumption tests to check whether the data meets the fundamental requirements for regression analysis. After the data has been verified through the classical assumption tests, the next step is to use the t-test to assess the significance of the regression coefficients. This test is used to evaluate whether there are significant relationships between the variables tested. The entire analysis process will be conducted using statistical software Stata 17.0, with the two empirical models of the study as follows:

$$AEM = \beta_0 + \beta_1 KMP + \beta_2 KA + \beta_3 KG + \beta_4 UP + \beta_5 LV + \beta_6 ROA + \beta_7 GROW + \beta_8 BS + \epsilon \dots\dots\dots (3)$$

$$AEM = \beta_0 + \beta_1 KMP + \beta_2 KA + \beta_3 KG + \beta_4 (KMP \times KG) + \beta_5 (KA \times KG) + \beta_6 UP + \beta_7 LV + \beta_8 ROA + \beta_9 GROW + \beta_{10} BS + \epsilon \dots\dots\dots (4)$$

3. RESULTS AND DISCUSSION

Table 4 presents the descriptive statistics of the variables used in this study. The average value of 0.1667 for Audit Quality (KA) indicates that approximately 16.67% of the companies in the sample were audited by Big 4 audit firms. The standard deviation of 0.3746 demonstrates significant variation between companies audited by Big 4 firms and those that were not.

Table 4. Descriptive Statistics of Combined Research Variables

Variable	N	Mean	Std. Deviation	Min	Max
KA	96	0.1667	0.3746	0.0000	1.0000
KMP	96	9.8096	0.7192	8.0445	11.6788
KG	96	0.1602	0.1282	0.0000	0.5000
AEM	96	-1.62e ⁻⁹	0.5295	-3.2332	1.4504
UP	96	12.0964	0.7624	10.7062	14.1449
LV	96	0.1357	0.1608	0.0000	0.7278
ROA	96	0.0047	0.2447	-12.9080	0.7206
GROW	96	0.6763	2.6781	-0.9964	24.2489
BS	96	0.8289	0.1215	0.3010	1.0792

Source: Stata 17.0 (2024)

This significant variation allows for more in-depth analysis by showing the descriptive statistical differences between the group of companies audited by Big 4 audit firms and those that were not, as outlined in **Table 5** and **Table 6**. This separation is performed to provide a deeper understanding since these two groups have different financial characteristics.

Table 5. Descriptive Statistics of Companies Audited by Big 4

Variable	N	Mean	Std. Deviation	Min	Max
KMP	16	10.8238	0.6059	9.6998	1.1679
KG	16	0.1663	0.1249	0.0000	0.3636
AEM	16	0.0774	0.1846	-0.4762	0.3346
UP	16	12.9505	0.7207	11.9579	14.1449
LV	16	0.1346	0.1736	0.0000	0.5176
ROA	16	0.0602	0.0976	-0.1289	0.2148
GROW	16	0.1088	0.1439	-0.2324	0.3194
BS	16	0.9403	0.0995	0.8451	1.0792

Source: Stata 17.0 (2024)

Table 6. Descriptive Statistics of Companies Audited by Non-Big 4

Variable	N	Mean	Std. Deviation	Min	Max
KMP	80	9.6068	0.5499	8.0444	1.0597
KG	80	0.1589	0.1296	0.0000	0.5000
AEM	80	-0.0155	0.5738	-3.2332	1.4504
UP	80	11.9256	0.6505	10.7060	13.3206
LV	80	0.1359	0.1593	0.0000	0.7278
ROA	80	-0.0064	0.2635	-12.9080	0.7206
GROW	80	0.7898	2.9227	-0.9964	24.2489
BS	80	0.8067	0.1135	0.3010	1.0414

Source: Stata 17.0 (2024)

In general, Top Management Compensation (KMP) shows an average value of 9.8096 with a standard deviation of 0.7192, indicating a small variation in the distribution of compensation across the sample. Companies audited by Big 4 firms have a higher average compensation (10.8238) compared to those not audited by Big 4 firms (9.6068). This suggests that companies audited by Big 4 firms tend to offer higher compensation to their top management.

Regarding board gender diversity (KG), the average proportion of women on the board is 0.1602 (16.02%) with a standard deviation of 0.1282. There is no significant difference between companies audited by Big 4 firms and those that were not. This indicates relatively similar gender diversity in both groups.

For earnings management practices measured using Discretionary Accruals (AEM), although the average value across the sample is close to zero, the standard deviation is 0.5295. This indicates significant variation in earnings management practices among companies. Companies audited by Big 4 firms show a positive average AEM (0.0774) with a lower standard deviation, indicating that earnings management practices in this group tend to be used to increase profits. Meanwhile, companies not audited by Big 4 firms have a negative average AEM (-0.0155) with a higher standard deviation, suggesting that earnings management practices in this group tend to be used to reduce profits.

The value of market capitalization representing company size (UP) has an average of 12.0964 with a standard deviation of 0.7624. Companies audited by Big 4 firms have a larger average UP (12.9505) compared to those not audited (11.9256). This shows that companies audited by Big 4 firms tend to be larger in scale.

The average leverage (LV) across the sample is 0.1357 with a standard deviation of 0.1608, indicating significant variation in the capital structure of each company. However, there is no significant difference in LV between companies audited by Big 4 firms and those not audited. This suggests that both groups of companies have relatively similar capital structures.

The average return on assets (ROA) across the sample is 0.0047 with a standard deviation of 0.2447, indicating varying financial performance. Companies audited by Big 4 firms show more stable performance with a higher average ROA (0.06024) compared to those not audited (-0.0064).

The average company growth (GROW) is 0.6763 with a standard deviation of 2.6781, indicating significant variation in company growth. Companies audited by Big 4 firms have a higher and more stable average GROW (1.1088) compared to those not audited (0.7898).

The number of board members (BS) shows an average of 0.8289 with a standard deviation of 0.1215, indicating that the number of board members does not vary much. However, companies audited by Big 4 firms have a larger board size with an average of 0.9403 compared to those not audited, which have an average of 0.8067.

This study does not conduct normality tests, as it refers to the Central Limit Theorem, where the sample distribution curve with more than 30 observation units will concentrate on the population curve (Navidi, 2020). This indicates that the data will follow a normal distribution.

Furthermore, **Table 7** below presents the results of the multicollinearity test on the main variables and control variables used in this study. From the table, it can be seen that no variable has a Variance Inflation Factor (VIF) exceeding 10. Thus, the variables in this study are free from multicollinearity issues.

Table 7. Multicollinearity Test Results

<u>Independent Variable</u>	<u>VIF</u>	<u>1/VIF</u>
KA	1.88	0.5323
KMP	3.34	0.2990
KG	1.27	0.7858

UP	2.35	0.4257
LV	1.09	0.9180
ROA	1.20	0.8336
GROW	1.10	0.9113
BS	1.39	0.7182
Mean of VIF		<u>1.70</u>

Source: Stata 17.0 (2024)

Next, for regression analysis, this study will use robust standard errors by White (1980) to prevent heteroskedasticity, which can lead to bias in parameter estimation. White (1980) proposed a covariance matrix estimator that is consistent even in the presence of heteroskedasticity, while Croux et al. (2004) demonstrated that robust standard errors based on this covariance remain reliable despite heteroskedasticity. In the Stata application used for data processing in this study, the `vce(robust)` command allows users to directly generate robust standard errors, thereby improving the reliability and validity of the regression results (Mitchell, 2021).

Table 8 shows the regression results without the moderating variable to identify the effects of top management compensation (KMP) and audit quality (KA) on earnings management. From the table, it can be seen that the p-values for the KMP variable (0.095) and KA variable (0.062) are below alpha, indicating that both variables have a significant independent effect on AEM. The KG variable (0.784) is above alpha, suggesting that it does not have a significant impact on AEM. The control variable with a p-value below alpha is LV (0.013).

Table 8. Regression Results for Research Variables (Without Moderating Variables)

Variable	Coefficient	Robust Std. Error	t	p Value
<i>Main Research Variables</i>				
KA	0.2791	0.1479	1.89	**0.062
KMP	-0.1975	0.1172	-1.69	**0.095
KG	-0.0549	0.2945	-0.19	0.852
<i>Control Variables in the Study</i>				
UP	0.0175	0.0757	0.23	0.818
LV	-1.5635	0.6153	-2.54	*0.013
ROA	0.1442	0.1290	1.12	0.267
GROW	-0.0229	0.0305	-0.75	0.454
BS	0.0699	0.3285	0.21	0.832
Konstanta	1.8579	0.8817	2.11	0.038
Obs. N.				96
R-squared				0.2375
* showing significance at the 5% and 10% alpha levels				

Source: Stata 17.0 (2024)

Based on this regression analysis, it can be concluded that the top management compensation (KMP) variable has a significant negative effect on earnings management practices (AEM). This shows that the results of this study support several previous studies related to the relationship between management compensation and earnings management practices, such as those conducted by Moardi et al. (2020), Assenso-Okofu et al. (2020), Husni et al. (2021), and Azmi & Aprayuda (2021).

Inadequate management compensation levels can trigger earnings management practices, as explained by Moardi et al. (2020). This is also in line with Agency Theory, where the board may be motivated to manipulate financial statements to increase their compensation for personal gain. Therefore, compensation structures that are considered fair and adequate for board members and aligned with the interests of the company's stakeholders are crucial to reducing the occurrence of earnings management practices.

Furthermore, from the same regression analysis, it can be concluded that the audit quality (KA) variable has a significant but positive effect on earnings management practices (AEM). This indicates that the results of this study are consistent with previous research on the positive influence of audit quality on earnings management practices, such as studies by Isaac (2022) and Masiku & Dewi (2019).

Based on the descriptive statistics, companies audited by Big 4 firms tend to be large firms that face greater pressure to present favorable financial performance. Consistent with the research by Isaac (2022), this study's findings potentially suggest that large firms audited by Big 4 firms have greater incentives to engage in earnings management, possibly due to the low litigation risk for audits in Indonesia and the concentration of the Big 4 audit market among large companies, rendering audit quality inadequate.

Next, the regression analysis was extended to include the moderating variable, as shown in **Table 9**. From the table, it can be seen that the p-values for KA (0.195) and KMP (0.185) are above alpha, indicating that the moderating factor has a weak influence on the relationship between these two variables and AEM. The two moderating variables, KA*KG (0.369) and KMP*KG (0.610), have p-values above alpha, indicating no significant relationship between the moderating variables and AEM. Additionally, the control variable LV (0.014) continues to have a p-value below alpha, showing that this variable still has a significant influence on AEM.

Table 9. Regression Results for Research Variables (With Moderating Variables)

Variable	Coefficient	Robust Std. Error	t	p Value
<i>Main Research Variables</i>				
KA	0.4344	0.3324	1.31	0.195
KMP	-0.3754	0.2812	-1.34	0.185
KG	-8.8319	9.6473	-0.92	0.363
KA*KG	0.9000	0.9966	0.90	0.369
KMP*KG	-0.8630	1.6862	-0.51	0.610
<i>Control Variables in the Study</i>				
UP	0,0066	0,0771	0,09	0.932

LV	-1,5526	0,6193	-2,51	*0.014
ROA	0,2229	0,1349	1,65	0.102
GROW	-0,0279	0,0334	-0,83	0.407
BS	0,2398	0,5374	0.45	0.657
Konstanta	3,5576	2,1720	1,64	0.105
Obs. N.				96
R-squared				0.2482
<i>* showing significance at the 5% alpha levels</i>				

Source: Stata 17.0 (2024)

Based on the regression analysis conducted, it can be concluded that the gender diversity (KG) variable is not able to moderate the relationships between top management compensation (KMP) and audit quality (KA) on earnings management (AEM) in technology sector companies. This indicates that the findings of this study are not in line with some previous research, such as that conducted by Chu et al. (2023), Wang et al. (2022), Sarairoh et al. (2022), and Umer et al. (2020).

However, this study is consistent with previous research conducted by Uddin (2022) and Harris et al. (2019), where gender diversity does not influence the reduction of earnings management practices if there is a significant equity-based compensation component. In the technology sector, board members' compensation structures tend to have a high proportion of equity-based compensation (Galligan & Canavan, 2023) to attract and retain them in the long term (Jose, 2023). If this is the case, gender diversity alone is insufficient to moderate other factors in curbing earnings management practices in technology companies, as both men and women have the potential to be involved in profit manipulation, as shown in previous research and the results of this study.

In addition to the main research variables, the regression results indicate that control variables also have a significant influence on earnings management practices in technology sector companies in Indonesia. The debt structure (LEV), represented by leverage, shows that companies with high debt levels are more likely to engage in earnings management due to the pressure to present favorable financial results to lenders to facilitate debt refinancing (Tulcanaza-Prieto et al., 2020). This control variable strengthens the main findings of this study by providing a more complete picture of earnings management dynamics within companies.

4. CONCLUSION

This study aims to examine the factors that can reduce earnings management practices in technology sector companies, such as top management compensation, audit quality, and gender diversity as a moderating variable. The study finds that top management compensation has a significant negative influence on earnings management practices in technology companies, while audit quality also has a significant positive influence on earnings management. Meanwhile, gender diversity does not have a significant effect on earnings management practices.

This suggests that an adequate top management compensation structure is necessary to reduce these practices. Moreover, the audit quality in Indonesia is not sufficient to curb earnings management practices, and gender diversity on the board cannot moderate the effects of top management compensation and audit quality on earnings management in technology companies.

This study makes a valuable contribution to accounting and management literature by supporting Agency Theory and Positive Accounting Theory, where appropriate incentives can reduce managers' opportunistic behavior. As the first study focusing on the technology sector in Indonesia, this research is expected to open new avenues for further exploration of earnings management practices in this specific sector.

Furthermore, the findings imply the importance of adequate compensation policies to reduce earnings management practices in technology companies, which significantly contribute to the growth of Indonesia's digital economy. Therefore, investor and public confidence can be maintained to ensure sustainable and unhindered digital economic growth. For company stakeholders, these findings imply the need to design more effective compensation policies to align the interests of the board with stakeholders, particularly in technology companies. Additionally, the findings provide guidance for evaluating management quality and corporate governance by considering compensation structures and the reputation of the audit firms used. For the government, the results of this study indicate the need to reassess and improve audit quality standards to ensure that audit firms can effectively detect and prevent earnings management practices, particularly in the rapidly growing technology sector.

This study has limitations in examining the structure of board member compensation in detail, particularly the separation of cash and equity-based compensation. This is due to the use of data from Refinitiv Eikon and financial reports, which do not explicitly separate these two types of compensation. Additionally, the number of technology companies in the sample is relatively limited because many companies only conducted their IPOs after 2020, making them ineligible for the research sample. Only 16 companies met the criteria out of a total of 46 technology companies listed on the stock exchange. This limitation may affect the study's results and interpretation, as technology companies tend to have higher equity-based compensation.

Given these limitations, future research is recommended to use more comprehensive data sources or conduct primary data collection to obtain more detailed information about compensation structures. Extending the research period or considering different sample criteria may also help to include more technology companies, including those that recently conducted IPOs. Future studies could further investigate the relationship between differences in compensation structure, audit quality, and gender diversity with earnings management, while considering relevant control variables in the context of technology companies. By addressing these limitations, a deeper understanding of earnings management practices in the technology sector can be obtained.

5. REFERENCES

Alhebri, A. A., Al-Duais, S. D., & Almasawa, A. M. (2021). The Influence of Independence and Compensation of the Directors on Family Firms and Real Earnings Management. *Cogent Economics and Finance*, 9(1). <https://doi.org/10.1080/23322039.2021.1934977>

- Aljughaiman, A. A., Nguyen, T. H., Trinh, V. Q., & Du, A. (2023). The Covid-19 Outbreak, Corporate Financial Distress and Earnings Management. *International Review of Financial Analysis*, 88. <https://doi.org/10.1016/j.irfa.2023.102675>
- Arista, S. P., & Serly, V. (2023). Pengaruh Financial Distress, Karakteristik Komite Audit dan Kualitas Auditor Eksternal terhadap Manajemen Laba Akrua. *Jurnal Eksplorasi Akuntansi*, 5(3), 917–935. <https://doi.org/10.24036/jea.v5i3.796>
- Assenso-Okofu, O., Ali, J., & Ahmed, K. (2020). The Effects of Global Financial Crisis on the Relationship between CEO Compensation and Earnings Management. *International Journal of Accounting and Information Management*, 28(2), 389–408. <https://doi.org/10.1108/IJAIM-08-2019-0101>
- Assenso-Okofu, O., Jahangir Ali, M., & Ahmed, K. (2021). The Impact of Corporate Governance on the Relationship between Earnings Management and CEO Compensation. *Journal of Applied Accounting Research*, 22(3), 436–464. <https://doi.org/10.1108/JAAR-11-2019-0158>
- Azmi, Z., & Aprayuda, R. (2021). Apakah Kompensasi Eksekutif Bank Dapat Mempengaruhi Manajemen Laba? *Jurnal Kajian Akuntansi*, 5(2), 2579–9975. <https://doi.org/https://dx.doi.org/10.33603/jka.v5i2.4871>
- Boone, J. P., Khurana, I. K., & Raman, K. K. (2012). Audit Market Concentration and Auditor Tolerance for Earnings Management*. *Contemporary Accounting Research*, 29(4), 1171–1203. <https://doi.org/https://doi.org/10.1111/j.1911-3846.2011.01144.x>
- Bouaziz, D., Salhi, B., & Jarboui, A. (2020). CEO Characteristics and Earnings Management: Empirical Evidence from France. *Journal of Financial Reporting and Accounting*, 18(1), 77–110. <https://doi.org/10.1108/JFRA-01-2019-0008>
- Christian, N., Yukie, H., Sitorus, R., & Angelina, V. (2022). Pendeteksian Fraudulent Financial Reporting dengan Earnings Manipulation Financial Shenanigans: Studi Kasus PT Envoy Technologies Indonesia Tbk. *Jurnal Ilmiah Akuntansi Dan Bisnis*, 7(1), 2528–1216. <https://doi.org/https://doi.org/10.38043/jiab.v7i1.3543>
- Chu, S., Oldford, E., & Wang, J. (2023). Corporate Social Responsibility and Corporate Fraud in China: The Perspective of Moderating Effect of Board Gender Diversity. *International Review of Economics and Finance*, 88, 1582–1601. <https://doi.org/10.1016/j.iref.2023.07.062>
- Croux, C., Dhaene, G., & Hoorelbeke, D. (2004). Robust Standard Errors for Robust Estimators. *Katholieke Universiteit Leuven, Open Access Publications from Katholieke Universiteit Leuven*.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting Earnings Management. *The Accounting Review*, 70(2), 193–225. <http://www.jstor.org/stable/248303>
- Elsayed, A. (2017). The Financial Statement Fraud Risk. *Accounting*. <https://doi.org/https://dx.doi.org/10.2139/ssrn.3039035>

- Fakhfakh, I. (2010). Impact of CEO Compensation on Earnings Management. *Corporate Governance: Compensation of Executive & Directors EJournal*.
<https://doi.org/https://doi.org/10.2139/ssrn.1621807>
- Galligan, H., & Canavan, J. (2023). *Technology's Executive Compensation Update: 2023*. BDO.
<https://www.upstock.io/post/equity-compensation-in-tech>
- Goel, S., & Kapoor, N. (2022). Is Earnings Management Related to Board Independence and Gender Diversity? Sector-wise Evidence from India. *International Journal of Disclosure and Governance*, 19(4), 363–373. <https://doi.org/10.1057/s41310-021-00130-4>
- Google. (2023). *e-Conomy SEA 2023 Report: Indonesia*.
https://services.google.com/fh/files/misc/indonesia_e_conomy_sea_2023_report.pdf
- Harris, O., Karl, J. B., & Lawrence, E. (2019). CEO compensation and earnings management: Does gender really matters? *Journal of Business Research*, 98, 1–14.
<https://doi.org/10.1016/j.jbusres.2019.01.013>
- Husni, T., Rahim, R., Ade WIRANDA, N., & Fadhel, R. D. (2021). The Impact of Executive Compensation, Ownership, and Capital Requirement on Earning Management: Evidence from Indonesia Banking Companies*. *Journal of Asian Finance*, 8(6), 849–0858.
<https://doi.org/10.13106/jafeb.2021.vol8.no6.0849>
- Inneh, E. G., Obokoh, L. O., & Busari, R. R. (2020). Executive Compensation and Earnings Management of Nigerian Listed Non-Financial Firms. *International Journal of Economics and Finance Studies*, 12(2), 369–387. <https://doi.org/10.34109/ijefs.202012208>
- Isaac, S. A. (2022). The Impact of Audit Quality on Earnings Management: Evidence from France. *Journal of Accounting and Taxation*, 14(1), 52–63.
<https://doi.org/10.5897/jat2021.0514>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3, 305–360.
[https://doi.org/https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/https://doi.org/10.1016/0304-405X(76)90026-X)
- Jose, N. (2023). *Equity Compensation in Tech: A Comprehensive Guide*. Upstock.io.
<https://www.upstock.io/post/equity-compensation-in-tech>
- Kalbuana, N., Suryati, A., Puspa, C., & Pertiwi, A. (2022). Effect of Company Age, Audit Quality, Leverage, and Profitability on Earnings Management. *Business and Accounting Research (IJEBA) Peer Reviewed-International Journal*, 6(1), 389–399.
<https://doi.org/10.29040/ijebar.v6i1.4796>
- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance Matched Discretionary Accrual Measures. *Journal of Accounting and Economics*, 39(1), 163–197.
<https://doi.org/https://doi.org/10.1016/j.jacceco.2004.11.002>
- Kurniawati, A., & Panggabean, R. R. (2020). Firm Size, Financial Distress, Audit Quality, and Earnings Management of Banking Companies. *Advances in Social Science, Education, and Humanities Research*, 436, 413–417. <https://ssrn.com/abstract=3597676>

- Lopes, A. P. (2018). Audit Quality and Earnings Management: Evidence from Portugal. *Athens Journal of Business & Economics*, 4(2), 179–192. <https://doi.org/10.30958/ajbe.4.2.4>
- Luh, P. K. (2024). Gender of Firm Leadership, Audit Committee Gender Diversity and Audit Quality through the Lens of Audit Fee: a Ghanaian Insight. *Gender in Management*, 39(3), 388–408. <https://doi.org/10.1108/GM-06-2022-0215>
- Masiku, R. A., & Dewi, C. N. (2019). Ukuran Kantor Akuntan Publik Discretionary Accrual dan Opini Audit Going Concern. *Jurnal Riset Akuntansi Dan Keuangan*, 15(1), 11–29. <https://doi.org/https://doi.org/10.21460/jrak.2019.151.320>
- Mitchell, M. N. (2021). *Interpreting and Visualizing Regression Models Using Stata* (2nd ed.). Stata Press.
- Moardi, M., Salehi, M., Poursasan, S., & Molavi, H. (2020). Relationship Between Earnings Management, CEO Compensation, and Stock Return on Tehran Stock Exchange. *International Journal of Organization Theory and Behavior*, 23(1), 1–22. <https://doi.org/10.1108/IJOTB-12-2018-0133>
- Nafisah, N. I., Halim, A., & Sari, A. R. (2018). Pengaruh Return on Assets (ROA), Debt to Equity Ratio (DER), Current Ratio (CR), Return on Equity (ROE), Price Earning Ratio (PER), Total Assets Turnover (TATO), dan Earning Per Share (EPS) Terhadap Nilai Perusahaan Manufaktur yang Terdaftar di BEI. *Jurnal Riset Mahasiswa Akuntansi*, 6(2), 1–17. <https://doi.org/https://doi.org/10.21067/jrma.v6i2.4217>
- Navidi, W. (2020). *Statistics for Engineers and Scientists* (5th ed.). McGraw-Hill Education.
- Nawaz, T. (2022). How Much Does the Board Composition Matter? The Impact of Board Gender Diversity on CEO Compensation. *Sustainability (Switzerland)*, 14(18). <https://doi.org/10.3390/su141811719>
- Nguyen, H. M., Wong, W. K., & Vuong, T. H. G. (2023). Market Capitalized Scale and Corporate Capital Structure — Evidence from CSI300's Listed Firms. *Annals of Financial Economics*, 18(03), 2350002. <https://doi.org/10.1142/S2010495223500021>
- Nwoye, C. M., Anichebe, A. S., & Osegbu, I. F. (2021). Effect of Audit Quality on Earnings Management in Insurance Companies in Nigeria. *Athens Journal of Business & Economics*, 7(2), 173–202. <https://doi.org/10.30958/ajbe.7-2-4>
- Oyotode-Adebile, R., Hibbert, A. M., & Shankar, S. (2022). The Impact of Gender-Diverse Board and Institutional Investors on Accruals Management. *Journal of Behavioral and Experimental Finance*, 34. <https://doi.org/10.1016/j.jbef.2021.100621>
- Park, K. E. (2017). Pay Disparities within Top Management Teams and Earning Management. *Journal of Accounting and Public Policy*, 36(1), 59–81. <https://doi.org/10.1016/j.jaccpubpol.2016.11.002>
- Pratiwi, C. I. E., Suprasto, H. B., Sari, M. M. R., & Ariyanto, D. (2022). The Effect of Financial Distress on Earning Management Practices Using Classification Shifting: The Moderating

- Effect of Good Corporate Governance. *Accounting*, 8(2), 187–196.
<https://doi.org/10.5267/j.ac.2021.7.002>
- Qiao, K., Yang, C. L., & Yin, X. (2020). The Effects of CEO-TMT Interaction on Organizational Performance. *International Journal of Organizational Analysis*, 29(3), 585–602.
<https://doi.org/10.1108/IJOA-01-2020-1996>
- Rahaman, M. M., & Karim, M. R. (2023). How do Board Features and Auditor Characteristics Shape Key Audit Matters Disclosures? Evidence from Emerging Economies. *China Journal of Accounting Research*, 16(4). <https://doi.org/10.1016/j.cjar.2023.100331>
- Saona, P., Muro, L., San Martín, P., & McWay, R. (2024). Do Board Gender Diversity and Remuneration Impact Earnings Quality? Evidence from Spanish Firms. *Gender in Management*, 39(1), 18–51. <https://doi.org/10.1108/GM-04-2021-0113>
- Saraireh, S., Owais, W., Abbas, N., Matar, G. A., Aryan, L. A., Alrahamneh, A. A. A., & Al-Hawary, S. I. S. (2022). The Effect of Corporate Social Responsibility and Board Diversity on Earnings Management: Evidence from Jordanian Listed Firms. *Uncertain Supply Chain Management*, 10(4), 1260–1270. <https://doi.org/10.5267/j.uscm.2022.8.003>
- Tsegba, I. N., & Upaa, J. U. (2015). Consequences of Financial Statement Fraud: A Developing Country Perspective. *International Journal of Business and Management*, 10(8).
<https://doi.org/10.5539/ijbm.v10n8p115>
- Tulcanaza-Prieto, A. B., Lee, Y., & Koo, J. H. (2020). Effect of Leverage on Real Earnings Management: Evidence from Korea. *Sustainability (Switzerland)*, 12(6).
<https://doi.org/10.3390/su12062232>
- Uddin, M. H. (2022). Gender diversity and earnings management: Evidence from Bangladesh. *IIUC Business Review*, 9(1), 111–133. <https://doi.org/10.3329/iiucbr.v9i1.62186>
- Umer, R., Abbas, N., & Hussain, S. (2020). The Gender Diversity and Earnings Management Practices: Evidence from Pakistan. *City University Research Journal*, 10(2), 342–357.
<https://www.cusitjournals.com/index.php/CURJ/article/view/426>
- Usman, M., Siddique, M. A., Makki, M. A. M., Gull, A. A., Dardour, A., & Yin, J. (2021). Executives' Pay–Performance Link in China: Evidence from Independent and Gender - Diverse Compensation Committees. *International Journal of Emerging Markets*, 16(8), 1984–2008. <https://doi.org/10.1108/IJOEM-09-2019-0701>
- Viana, D. B. C., Lourenço, I., & Black, E. L. (2022). Financial Distress, Earnings Management and Big 4 Auditors in Emerging Markets. *Accounting Research Journal*, 35(5), 660–675.
<https://doi.org/10.1108/ARJ-06-2021-0165>
- Wang, Y., Yu, M., & Gao, S. (2022). Gender Diversity and Financial Statement Fraud. *Journal of Accounting and Public Policy*, 41(2). <https://doi.org/10.1016/j.jaccpubpol.2021.106903>
- Watts, R. L., & Zimmerman, J. L. (1990). Positive Accounting Theory: A Ten Year Perspective. *The Accounting Review*, 65(1), 131–156. <http://www.jstor.org/stable/247880>

- White, H. (1980). A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity. *Econometrica*, 48(4), 817–838.
<https://doi.org/10.2307/1912934>
- Widodo, J. (2022). Presiden Jokowi Dorong Investasi pada Ekonomi Digital Indonesia yang Berkembang Pesat. *Presidenri.Go.Id*. <https://www.presidentri.go.id/siaran-pers/president-jokowi-dorong-investasi-pada-ekonomi-digital-indonesia-yang-berkembang-pesat/>
- Yuniarto, N. I. (2023, August 11). *Yuk Ikut Waspada, Ini Deretan Skandal di Pasar Modal Indonesia*. *Idxchannel.Com*. <https://www.idxchannel.com/market-news/yuk-ikut-waspada-ini-deretan-skandal-di-pasar-modal-indonesia>

