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Institutional Ownership as a Moderator: Exploring the Effect of Investment Opportunities and Business Risk on Dividend Policy

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Abstract---This study aims to examine the effect of investment opportunity and business risk on dividend policy, as well as the moderating role of institutional ownership in these relationships. The research is grounded in the pecking order theory and the clientele theory. The population comprises companies listed on the Indonesia Stock Exchange (IDX) from 2021 to 2023 in the healthcare, basic materials, consumer non-cyclicals, industrials, and consumer cyclicals sectors. A total of 311 firms were selected using a non-probability purposive sampling method. Data were collected through non-participant observation by downloading financial reports from the official IDX website (www.idx.co.id) and analyzed using Moderated Regression Analysis (MRA). The results indicate that both investment opportunity and business risk have a negative effect on dividend policy. Furthermore, institutional ownership strengthens the negative effect of business risk on dividend policy. However, institutional ownership does not moderate the relationship between investment opportunity and dividend policy. These findings support the pecking order theory in terms of internal financing preferences and the clientele theory regarding how dividend policies may vary based on the preferences of majority shareholders, particularly institutional investors.

Keywords---Business Risk, Dividend Policy, Institutional Ownership, Investment Opportunity.

Introduction

The distribution of corporate dividends must consider the company's capital structure. According to the pecking order theory, firms prioritize their financing sources based on associated costs and risks. In funding business projects, the primary preference is internal financing (retained earnings), followed by debt, and finally equity (Novendra et al., 2023). Companies tend to utilize internal funds for investment activities (Aini & Sawitri, 2020) and prioritize such funds for operational needs due to their lower risk (Tinungki et al., 2021).

Investment opportunity is one of the factors that may influence dividend policy (Jovković et al., 2021). It also serves as an indicator of how a company can increase its firm value based on strategic decisions (Natalia, 2013, as cited in Wulandari & Suardana, 2017). Investment opportunities can be seen as current options that companies undertake in the hope of generating greater future returns (Gaver & Gaver, 1993). Consequently, companies are more inclined to invest in multiple projects to maximize potential benefits (Bataineh, 2021) and achieve higher returns (Septiani et al., 2020).

The level of investment realization in Indonesia has continued to increase, indicating that external financing for investment activities remains relatively high. Nevertheless, companies tend to retain earnings for investment project financing rather than distribute them as dividends (Lotto, 2020; Bataineh, 2021; Aini & Sawitri, 2020). This tendency arises because external financing is generally more expensive than using internal funds (Lotto, 2020). Moreover, relying more heavily on internal funding helps reduce a company's dependency on external sources (Moin et al., 2020), thereby making firms less inclined to pay cash dividends to shareholders (Wu et al., 2020; Fahmi & Sulhan, 2020). This condition aligns with the pecking order theory, which states that companies will prioritize

internal financing for operational and investment activities (Myers & Majluf, 1984). Hence, dividend payments are not a priority when firms have substantial investment opportunities (Lotto, 2020).

Empirical evidence supports this notion, with several studies—such as those by Lotto (2020); Rohov et al. (2020); Fahmi & Sulhan (2020); Adiwibowo et al. (2021); Hartono et al. (2021); Sajiwo & Arifin (2023); AlGhazali et al. (2024); and Yudha et al. (2024)—confirming that investment opportunity has a negative effect on dividend policy. However, other studies (Abadiyah & Kusumaningrum, 2024; Putra & Manuari, 2024; Yunita & Subardjo, 2024; Tripathy et al., 2021) found a negative but insignificant effect, while Aini & Sawitri (2020) reported a positive influence and Rahmadani & Trisnawati (2023) found a positive but insignificant relationship.

Dividend policy can also be influenced by business risk (Jovković et al., 2021). Business risk refers to uncertainty that may lead to declining performance due to operational challenges and financial instability (Mnune & Purbawangsa, 2019, as cited in Salsabila & Isbanah, 2020). These conditions may result in business failure or losses (Jao et al., 2022).

In early 2020, the world was confronted with a novel virus known as SARS-CoV-2 or COVID-19 (Robiyanto & Yunitaria, 2022). The rapid spread of the virus led to a global emergency (WHO, 2020). In Indonesia, the emergency status was formalized through Presidential Decree No. 11 of 2020, which introduced measures such as Large-Scale Social Restrictions (PSBB) and Public Activity Restrictions (PPKM) to curb the spread of COVID-19 (Robiyanto & Yunitaria, 2022). These measures had ripple effects across all aspects of life, particularly the economy (Hossain, 2021; Ibn-Mohammed et al., 2021). The pandemic also disrupted global markets, economic prospects, and international trade (Baig & Chen, 2022), while severely affecting corporate financial performance (Rahmani, 2020; Jao et al., 2022).

Firms with high business risk tend to strengthen their capital structure by increasing the proportion of retained earnings (Salsabila & Isbanah, 2020), making them more reluctant to distribute dividends (Jao et al., 2022). This behavior aligns with the pecking order theory, where internal funds are prioritized for operational and investment purposes (Myers & Majluf, 1984).

Empirical studies by Salsabila & Isbanah (2020); Hartono et al. (2021); and Jao et al. (2022) have demonstrated that business risk negatively affects dividend policy. However, contrasting findings have been reported by Sharma (2020) and Putri et al. (2022), who found a positive relationship. Other research, including Azizah & Paramita (2024) and Vantovi et al. (2024), indicated a positive but insignificant effect of business risk on dividend policy.

Institutional ownership refers to the proportion of shares held by institutions or entities not directly involved in the company's daily operations, such as banks, insurance funds, pension funds, and other financial institutions (Bataineh, 2021; Fahmi & Sulhan, 2020). Institutional shareholders typically hold the majority of a company's shares (Fahmi & Sulhan, 2020). According to data from the Indonesian Central Securities Depository (KSEI) as of November 2024, institutional ownership accounted for 83.77% of the total shareholding structure. This included 6,338 corporate shareholders, 2,757 mutual fund holders, 1,277 other institutional investors, 594 pension fund holders, 515 from financial institutions, 277 securities companies, 194 insurance firms, and 168 foundations. In comparison, individual investors represented only 16.23% of total ownership. Given this substantial shareholding, institutional investors possess significant capacity to perform monitoring functions (Fahmi & Sulhan, 2020; Aini & Sawitri, 2020; Moin et al., 2020; Bataineh, 2021) and can influence key decisions during the General Meeting of Shareholders (GMS).

As majority shareholders, institutional investors hold considerable leverage to shape dividend policy according to their preferences (Salawudeen et al., 2020). This aligns with the clientele effect theory, which posits that dividend policy may vary depending on the preferences of the majority shareholders (Miller & Modigliani, 1961). Since shareholders vary in their financial characteristics and expectations, they also differ in their desired levels of dividend returns (Golubov et al., 2020), leading to divergent dividend preferences among investor groups.

Empirical studies by Rohov et al. (2020); Aini & Sawitri (2020); and Bataineh (2021) have shown that institutional ownership has a positive effect on dividend policy. Additionally, Fahmi & Sulhan (2020) found that institutional ownership, when acting as a moderating variable, had a negative but statistically insignificant impact on dividend policy.

This research focuses on manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2021 to 2023, including firms in the healthcare, basic materials, consumer non-cyclicals, industrials, and consumer cyclicals sectors. Manufacturing firms were selected because their diverse subsectors reflect the broader reaction of the capital market (Rochmah & Ardianto, 2020). Furthermore, manufacturing companies tend to be large-scale entities whose shares are more resilient during economic crises (Rochmah & Ardianto, 2020).

This study aims to examine the moderating effect of institutional ownership in influencing corporate dividend policy decisions. The research is motivated by a contextual gap, particularly during the 2021–2023 period, which

was marked by the COVID-19 pandemic, creating heightened business risk. Paradoxically, this period also saw an increase in realized investments (i.e., greater investment opportunities) and a rise in the number of companies distributing dividends, which may have been influenced by institutional ownership as the dominant shareholder.

Literature Review and Hypothesis Development

Pecking Order Theory outlines a hierarchy of financing preferences for corporate investment projects (Myers, 1984). Firms prioritize internal funds, followed by debt, and lastly, equity (Novendra et al., 2023; Harahap et al., 2021). Companies generally prefer to finance investments using retained earnings due to their lower cost compared to external financing (Myers & Majluf, 1984; Lotto, 2020). Firms with lucrative investment opportunities are less likely to prioritize dividend payments (Lotto, 2020). Previous studies by Lotto (2020); Rohov et al. (2020); Fahmi & Sulhan (2020); Adiwibowo et al. (2021); and Hartono et al. (2021) found a negative relationship between investment opportunities and dividend policy. This suggests that firms with high investment opportunities tend to reduce or withhold dividend distributions. Conversely, when investment opportunities are low, firms are more likely to pay higher dividends.

H1: Investment opportunity has a negative effect on dividend policy.

Business risk refers to uncertainty that may impair corporate performance, create operational difficulties, and lead to financial instability, which can ultimately result in losses or business failure (Jao et al., 2022). One such business risk is operational risk triggered by government regulations. In 2020, the global population faced the emergence of a novel virus, COVID-19 (Robiyanto & Yunitaria, 2022), which spread rapidly and was declared a pandemic (WHO, 2020). The Indonesian government declared a state of emergency (Presidential Decree No. 11 of 2020), implementing policies such as Large-Scale Social Restrictions (PSBB) and Community Activity Restrictions (PPKM) to control the spread of the virus (Robiyanto & Yunitaria, 2022). These measures significantly impacted economic outlooks (Baig & Chen, 2022) and corporate financial performance (Rahmani, 2020; Jao, Daromes, & Samparaya, 2022). Companies facing high business risk tend to strengthen their capital structure by increasing retained earnings (Salsabila & Isbanah, 2020). As a result, they are less inclined to pay dividends when risk levels are elevated (Jao et al., 2022). This is consistent with Pecking Order Theory, which suggests that internal financing through retained earnings is preferred due to its lower risk (Myers & Majluf, 1984; Lotto, 2020; Aini & Sawitri, 2020; Tinungki et al., 2021). Empirical studies by Salsabila & Isbanah (2020); Hartono et al. (2021); and Jao et al. (2022) support the negative relationship between business risk and dividend policy.

H2: Business risk has a negative effect on dividend policy.

Pecking Order Theory posits that firms prioritize internal funds, followed by debt and equity, when financing business projects (Myers, 1984; Novendra et al., 2023). Due to its lower cost, retained earnings are the preferred funding source for investment (Aini & Sawitri, 2020; Lotto, 2020). Firms with attractive investment opportunities are less likely to distribute dividends (Lotto, 2020; Rohov et al., 2020; Fahmi & Sulhan, 2020; Adiwibowo et al., 2021; Hartono et al., 2021). Institutional ownership refers to shares held by entities such as insurance companies, banks, and other financial institutions (Bataineh, 2021; Fahmi & Sulhan, 2020). Institutional investors often hold a majority stake and play a key monitoring role. As majority shareholders, they typically prefer capital gains over dividends and emphasize long-term control over immediate dividend income (Chatterjee et al., 2024). According to the Clientele Effect Theory, dividend policy may vary depending on shareholder preferences (Miller & Modigliani, 1961). In this case, institutional investors tend to favor lower or no dividend payments (Salawudeen et al., 2022). Thus, higher investment opportunities combined with substantial institutional ownership are likely to reduce dividend payouts.

H3: Institutional ownership strengthens the negative effect of investment opportunity on dividend policy.

Business risk involves uncertainties that hinder operational performance and financial stability (Mnune & Purbawangsa, 2019, as cited in Salsabila & Isbanah, 2020), potentially leading to losses or failure (Jao et al., 2022). Firms experiencing high business risk tend to retain earnings to reinforce their capital structure (Salsabila & Isbanah, 2020) and are thus reluctant to distribute dividends (Jao et al., 2022). This behavior aligns with Pecking Order Theory, where retained earnings are the preferred and least risky funding source (Tinungki et al., 2021). Institutional ownership, comprising entities such as banks, pension funds, insurance companies, and mutual funds (Bataineh, 2021; Fahmi & Sulhan, 2020), enables effective monitoring due to majority shareholding. Institutional investors tend to prioritize capital gains and long-term corporate control rather than dividend income (Chatterjee et al., 2024), consistent with the Clientele Effect Theory (Miller & Modigliani, 1961). They generally prefer lower or no dividend

payouts (Salawudeen et al., 2022). Accordingly, firms with high business risk and dominant institutional ownership are more likely to reduce or forgo dividend distributions.

H4: Institutional ownership strengthens the negative effect of business risk on dividend policy.

Methods

The dependent variable in this study is dividend policy (Y). The independent variables are investment opportunity (X1) and business risk (X2). In addition, institutional ownership (M) serves as a moderating variable in the relationship between the independent and dependent variables. The population of this study comprises manufacturing companies in the healthcare, basic materials, consumer non-cyclicals, industrials, and consumer cyclicals sectors listed on the Indonesia Stock Exchange (IDX). The research was conducted over the period 2021 to 2023, with 311 firm-year observations analyzed using SPSS software.

Result and Discussion

Moderated Regression Analysis (MRA)

This study aims to examine the effects of investment opportunity and business risk on dividend policy, with institutional ownership acting as a moderating variable. The results of the MRA test are presented in Table 1.

Table 1
MRA

H.	Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.	Result
	(Constant)	3.945	0.856		4.610	0.000	
H1	MBVE	-0.133	0.046	-0.170	-2.920	0.004	Accepted
H2	BRISK	-0.227	0.059	-0.575	-3.877	0.000	Accepted
	IOWN	0.545	0.194	0.152	2.817	0.005	
H3	MBVE * IOWN	0.005	0.004	0.152	1.252	0.211	Rejected
H4	BRISK * IOWN	-0.062	0.012	-0.664	-5.352	0.000	Accepted

Primary Data, 2025

Model Summary:

- $R^2 = 0.133$
- Adjusted $R^2 = 0.119$
- F-statistic = 9.386
- Significance (p-value) = 0.000

Source: Processed Data, 2025 (Appendix 8)

Notes:

- DPR = Dividend Policy
- MBVE = Investment Opportunity
- BRISK = Business Risk
- IOWN = Institutional Ownership
- MBVE * IOWN = Interaction between investment opportunity and institutional ownership
- BRISK * IOWN = Interaction between business risk and institutional ownership

Regression Equation

Based on the results in Table 1, the regression equation can be formulated as follows:

$$Y = 3.945 - 0.133 \text{ MBVE} - 0.227 \text{ BRISK} + 0.545 \text{ IOWN} - 0.062 (\text{BRISK} \times \text{IOWN})$$

This equation can be interpreted as follows:

- The constant of 3.945 indicates that when all independent and moderating variables are equal to zero, the predicted value of the dividend policy is 3.945.
- The regression coefficient for investment opportunity (MBVE) is -0.133, indicating that a one-unit increase in investment opportunity is associated with a 0.133-unit decrease in dividend policy, holding other variables constant.
- The coefficient for business risk (BRISK) is -0.227, indicating that an increase of one unit in business risk will decrease dividend policy by 0.227 units, ceteris paribus.
- The coefficient for institutional ownership (IOWN) is 0.545, implying that a one-unit increase in institutional ownership increases the dividend policy by 0.545 units, holding other factors constant.
- The interaction term $BRISK \times IOWN$ has a coefficient of -0.062, suggesting that institutional ownership strengthens the negative effect of business risk on dividend policy by 0.062 units.

Model Feasibility Test (F-Test)

The F-test assesses whether the overall regression model is statistically significant. A regression model is considered fit if the p-value of the F-statistic is ≤ 0.05 . Table 1 shows an F-statistic value of 9.386 with a significance level of 0.000 (< 0.05), indicating that the regression model is feasible and that the independent and moderating variables jointly explain the variation in dividend policy.

Coefficient of Determination (R^2)

The coefficient of determination (R^2) explains the proportion of variance in the dependent variable that can be explained by the independent variables. In this study, the adjusted R^2 is 0.119, which means that 11.9% of the variation in dividend policy can be explained by investment opportunity, business risk, institutional ownership, and the interaction terms. The remaining 88.1% is explained by other variables not included in this model.

Individual Significance Tests (t-Test)

Effect of Investment Opportunity on Dividend Policy

Hypothesis H1 proposed that investment opportunity negatively affects dividend policy. Table 1 shows a p-value of 0.004 (< 0.05) and a regression coefficient of -0.133. Therefore, H1 is accepted.

Effect of Business Risk on Dividend Policy

Hypothesis H2 proposed that business risk negatively affects dividend policy. The t-test yields a p-value of 0.000 (< 0.05) with a coefficient of -0.227. Thus, H2 is accepted.

Moderating Effect of Institutional Ownership on the Relationship Between Investment Opportunity and Dividend Policy

Hypothesis H3 stated that institutional ownership strengthens the negative effect of investment opportunity on dividend policy. Table 1 shows a p-value of 0.211 (> 0.05) with a coefficient of 0.005. Therefore, H3 is rejected.

Moderating Effect of Institutional Ownership on the Relationship Between Business Risk and Dividend Policy

Hypothesis H4 posited that institutional ownership strengthens the negative effect of business risk on dividend policy. The interaction term $BRISK * IOWN$ has a p-value of 0.000 (< 0.05) and a coefficient of -0.062, confirming that H4 is accepted.

Conclusion

- 1) An investment opportunity has a negative effect on dividend policy. This indicates that the higher a company's investment opportunity, the lower the dividends it is likely to distribute.
- 2) Business risk has a negative effect on dividend policy. This means that as a company's business risk increases, the number of dividends distributed tends to decrease.
- 3) Institutional ownership does not moderate the effect of investment opportunity on dividend policy. In this study, institutional ownership acts as a predictor moderator (independent). Thus, institutional ownership may increase or decrease dividend distribution regardless of whether the company's investment opportunity is rising or declining.

- 4) Institutional ownership strengthens the negative effect of business risk on dividend policy. This implies that the higher the company's business risk, the lower the dividends it tends to distribute, especially when institutional ownership is high. This is due to the preference of institutional shareholders, who prioritize preserving capital and maintaining control of the company over short-term dividend gains.

Managerial Implication

The findings of this study confirm the pecking order theory, which explains the hierarchy of financing preferences for corporate investment projects (Myers, 1984). Companies prioritize internal financing sources (Novendra et al., 2023), as internal capital is considered the least costly compared to external financing (Myers & Majluf, 1984; Lotto, 2020). Therefore, when firms have high investment opportunities, they tend to retain earnings to finance these investments. Similarly, during periods of high business risk, firms also reinforce their capital structure by retaining earnings. Consequently, when both investment opportunities and business risk are high, dividend distributions are likely to be reduced.

This study also supports the clientele effect theory, which suggests that dividend policy may vary based on shareholder preferences (Miller & Modigliani, 1961). In this context, institutional shareholders tend to prefer that firms pay dividends. Therefore, when institutional ownership is high, dividend distributions are generally higher. However, when business risk is elevated, institutional shareholders may be willing to forgo part of their dividend income and reinvest it in the company to strengthen the capital structure. As a result, even under high institutional ownership, dividend distributions may decrease in times of high business risk.

The findings of this study reveal that institutional ownership has a significant positive effect on dividend policy. This means that the greater the proportion of institutional ownership, the higher the dividends distributed. Accordingly, firms are advised to engage with the majority shareholders (institutional investors) to persuade them to reinvest a portion of their dividends into the company (retained earnings) to strengthen the capital structure during periods of high business risk. Companies should also encourage institutional shareholders not to obstruct productive investment decisions. Moreover, for investors seeking to maximize returns, it is recommended that they consider not only the company's profit levels but also its dividend policy preferences and the influencing factors, such as investment opportunities, business risk, and the structure of institutional ownership.

References

- Abadiyah, S., & Kusumaningrum, T. M. (2024). Pengaruh profitabilitas, leverage, kesempatan investasi, tax avoidance, dan Kepemilikan manajerial terhadap kebijakan dividen dengan likuiditas sebagai variabel moderasi pada perusahaan sektor property dan real estate yang terdaftar di Bursa Efek Indonesia. *Jurnal Ilmu Manajemen*, 11(3), 654-670.
- Adiwibowo, A. S., Larasati, O., & Nurmala, P. (2021). Pengaruh free cash flow dan investment opportunity set terhadap kebijakan dividen. *Jurnal Riset Keuangan Dan Akuntansi*, 7(1).
- Aini, S. N., & Sawitri, A. P. (2020). Dampak Sales Growth, Posisi Kas, Investment Opportunity Set, Kepemilikan Institusional terhadap Kebijakan Dividen pada Indeks Kompas 100. *Majalah Ekonomi*, 25(1), 26-42.
- AlGhazali, A., Al-Yahyaee, K. H., Fairchild, R., & Guney, Y. (2024). What do dividend changes reveal? Theory and evidence from a unique environment. *Review of Quantitative Finance and Accounting*, 62, 499-552.
- Azizah, T. I., & Paramita, R. A. (2024). Pengaruh profitabilitas, likuiditas, leverage, kepemilikan manajerial dan risiko bisnis terhadap kebijakan dividen dengan firm size sebagai variabel moderasi pada perusahaan sektor consumer cyclicals. *Jurnal Ilmu Manajemen*, 12(3), 569-584.
- Baig, A., & Chen, M. (2022). Did the COVID-19 pandemic (really) positively impact the IPO Market? An Analysis of Information Uncertainty. *Finance Research Letters*, 46, 1-11.
- Bataineh, H. (2021). The impact of ownership structure on dividend policy of listed firms in Jordan. *Cogent Business & Management*, 8(1), 1-18.
- Chatterjee, C., Dutta, P., & Basu, S. (2024). Evidence-based Stock Price Behaviour Around Cash Dividend Announcements in an Emerging Market Set-up. *Global Business Review*, 25(2S), 265S-282S.
- Fahmi, M. M., & Sulhan, M. (2020). Pengaruh Free Cash Flow Dan Investment Opportunity Set Terhadap Kebijakan Dividen Dengan Kepemilikan Institusional Sebagai Variabel Pemoderasi. *Jurnal Ilmiah Manajemen*, 8(2), 43-63.
- Gaver, J. J., & Gaver, K. M. (1993). Additional Evidence on the Association between the Investment Opportunity Set and Corporate Financing, Dividend, and Compensation Policies. *Journal of Accounting and Economics*, 16(1), 125-160.

- Golubov, A., Lasfer, M., & Vitkova, V. (2020). Active catering to dividend clientele: Evidence from takeovers. *Journal of Financial Economics*, 137(3), 815-836. <https://doi.org/10.1016/j.jfineco.2020.04.002>
- Harahap, R. M., Mustaruddin, M., & Rustam, R. (2021). The effect of efficiency, market power, debt, and risk on company performance and their impact on dividend policy on the manufacturing sector in the Indonesia stock exchange. *International Journal of Business, Economics and Management*, 4(4), 477-486. <https://doi.org/10.21744/ijbem.v4n4.1804>
- Hartono, P. G., Sari, W. R., Tinungki, G. M., Jakaria, & Hartono, A. B. (2021). The Determinants of Dividend Policy: An Empirical Study of Inconsistent Distribution of Dividends Using Balanced Panel Data Analysis. *Media Ekonomi dan Manajemen*, 89-106.
- Hossain, M. (2021). The effect of the Covid-19 on sharing economy activities. *Journal of Cleaner Production*, 280, 124782. <https://doi.org/10.1016/j.jclepro.2020.124782>
- Ibn-Mohammed, T., Mustapha, K. B., Godsell, J., Adamu, Z., Babatunde, K. A., Akintade, D. D., ... & Koh, S. C. L. (2021). A critical analysis of the impacts of COVID-19 on the global economy and ecosystems and opportunities for circular economy strategies. *Resources, Conservation and Recycling*, 164, 105169. <https://doi.org/10.1016/j.resconrec.2020.105169>
- Jao, R., Daromes, F. E., & Samparaya, R. (2022). Pengaruh Ukuran Perusahaan, Leverage, Profitabilitas, dan Risiko Bisnis Terhadap Kebijakan Dividen. *Jurnal Akuntansi Kompetif*, 5(2), 102-111.
- Jovković, B., Vasić, A. S., & Bogićević, J. (2021). Determinants of Dividend Policy: A Case of Serbia's Banking Sector. *Naše gospodarstvo/Our Economy*, 67(1), 13-22.
- Lotto, J. (2020). On an ongoing corporate dividend dialogue: Do external influences also matter in dividend decision? *Cogent Business & Management*, 7(1), 1-13.
- Miller, M., & Modigliani, F. (1961). Dividend policy, growth and the valuation of shares. *J Bus*, 34, 411-433.
- Mnune, T. D., & Purbawangsa, I. B. (2019). Pengaruh Profitabilitas, Leverage, Ukuran Perusahaan dan Risiko Bisnis terhadap Kebijakan Dividen pada Perusahaan Manufaktur. *E-Jurnal Manajemen*, 8(5), 2862-2890.
- Moin, A., Guney, Y., & Kalak, I. E. (2020). The effects of ownership structure, sub-optimal cash holdings and investment inefficiency on dividend policy: evidence from Indonesia. *Review of Quantitative Finance and Accounting*, 55, 857-900.
- Myers, C. S. (1984). The Capital Structure Puzzle. *The Journal of Finance*, 39, 575-592.
- Myers, C. S., & Majluf, N. (1984). Corporate Financing and Investment Decision When Firms have Information that Investors do not have. *Journal of Financial Economics*, 13, 187-221.
- Novendra, R. B., Sampurno, R. D., & Januardi, N. V. (2023). Analisis Pengaruh Profitabilitas, Struktur Modal, Pertumbuhan Perusahaan, dan Kepemilikan Saham Manajerial terhadap Kebijakan Dividen dengan Tarif Pajak sebagai Variabel Moderasi. *Diponegoro Journal of Management*, 12(5), 1-14.
- Putra, I. G., & Manuari, I. A. (2024). The Investment Opportunity and Company Size Affecting Financial Performance and Dividend Policy. *Journal Riset Akuntansi Kontemporer*, 16(1), 35-42.
- Putri, E., Ardiningrum, B. N., & Nursiam, N. (2022). The Influence of Liquidity Leverage, Profitability and Business Risk on the Dividend Policy of Manufacturing Companies Listed on the IDX. *Jurnal Riset Akuntansi dan Keuangan Indonesia*, 7(2), 244-250.
- Rahmadani, D. W., & Trisnawati, R. (2023). The Effects of Leverage, Liquidity, and Investment Opportunities on Dividend Policy With Profitability As a Moderated Variable. *The International Journal of Business Management and Technology*, 7(1), 709-720.
- Rahmani, A. (2020). Dampak Covid-19 Terhadap Harga Saham dan Kinerja Keuangan Perusahaan. *Kajian Akuntansi*, 21(2), 252-269.
- Robiyanto, R., & Yunitaria, F. (2022). Dividend announcement effect analysis before and during the COVID-19 pandemic in the Indonesia Stock Exchange. *Springer Nature Business & Economics Journal*, 2-20.
- Rochmah, H. N., & Ardianto, A. (2020). Catering dividend: Dividend premium and free cash flow on dividend policy. *Cogent Business & Management*, 7(1), 1-16.
- Rohov, H., Kolodiziev, O., Shulga, N., Krupka, M., & Riabovolyk, T. (2020). Factors affecting the dividend policy of non-financial joint-stock companies in Ukraine. *Investment Management and Financial Innovations*, 17(3), 40-53.
- Sajiwo, B., & Arifin, Z. (2023). The Effect of Liquidity, Investment Opportunity Set, Free Cash Flow, and State-Owned Enterprise on the Dividend Policy of Bank Listed in the Indonesia Stock Exchange. *International Journal of Multidisciplinary Research and Analysis*, 6(4), 1398-1405.
- Salawudeen, A., Isa, M. A., & Dandago, K. I. (2022). Shareholder's Dividend Preference in the Nigerian Capital Market. *International Journal of Management Studies*, 29(2), 45-70.

- Salawudeen, A., Isa, M. A., & Salaudeen, M. Y. (2020). Shareholders' preference and dividend policy: An empirical analysis of listed industrial goods companies in Nigeria. *Research Journal of Finance and Accounting*, 11(24), 70-80.
- Salsabila, N. F., & Isbanah, Y. (2020). Pengaruh Profitabilitas dan Risiko Bisnis terhadap Dividend Payout Ratio Melalui Likuiditas sebagai Variabel Moderasi. *Jurnal Ilmu Manajemen*, 8(4), 1301-1311.
- Septiani, M., Ariyani, N., & Ispriyahadi, H. (2020). The effect of stock prices, return on assets, and firm size on dividend payout ratio: evidence from Indonesian financial service companies. *Diponegoro International Journal of Business*, 3(1), 17-27.
- Sharma, R. K. (2020). Factors influencing dividend decisions of Indian construction, housing and real estate companies: An empirical panel data analysis. *Int J Fin Econ.*, 1-18.
- Tinungki, G., Rohiyanto, R., & Hartono, P. (2021). The Effect of COVID-19 Pandemic on Corporate Dividend Policy in Indonesia: The Static and Dynamic Panel Data Approaches. *Economics*, 10(11), 1-18.
- Tripathy, N., Wu, D., & Zheng, Y. (2021). Dividends and financial health: Evidence from US bank holding companies. *Journal of Corporate Finance*, 66, 101808. <https://doi.org/10.1016/j.jcorpfin.2020.101808>
- Vantovi, C. L., Subaida, I., & Pramitasari, T. D. (2024). Pengaruh Struktur Modal, Ukuran Perusahaan dan Risiko Bisnis terhadap Kebijakan Dividen dengan Profitabilitas sebagai Variabel Intervening pada Perusahaan Manufaktur Sektor Industri Dasar dan Kimia yang Terdaftar di BEI. *Jurnal Mahasiswa Entrepreneur (JME)*, 1599- 1613.
- WHO, W. H. (2020). WHO Timeline—Covid-19. Retrieved from <https://www.who.int/news/item/27-04-2020-who-timeline---covid-19>
- Wu, M., Ni, Y., & Huang, P. (2020). Dividend payouts and family-controlled firms—The effect of culture on business. *The Quarterly Review of Economics and Finance*, 75, 221-228. <https://doi.org/10.1016/j.qref.2019.03.004>
- Wulandari, D. U., & Suardana, K. A. (2017). Pengaruh Profitabilitas, Kesempatan Investasi, Free Cash Flow, dan Debt Policy pada Kebijakan Dividen Perusahaan Manufaktur. *E-Jurnal Akuntansi Universitas Udayana*, 20(1), 202-230.
- Yudha, I. P., Arizona, I. P., & Pradnyawati, S. O. (2024). Pengaruh Profitabilitas, Leverage, Likuiditas, Kesempatan Investasi dan Ukuran Perusahaan terhadap Kebijakan Dividen. *Kumpulan Hasil Riset Mahasiswa Akuntansi (KHARISMA)*, 336-352.
- Yunita, E. V., & Subardjo, A. (2024). Pengaruh Profitabilitas, Free Cash Flow, Likuiditas, dan Investment Opportunity Set terhadap Kebijakan Dividen. *Jurnal Ilmiah Akuntansi dan Keuangan*, 2(1), 80-96.