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Analysis of the Influence of Life Cycle, Investment Opportunity Set, Profitability, Leverage, and Free Cash Flow Equity on Dividend Policy in Property, Real Estate, and Building Construction Companies on the Indonesia Stock Exchange

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A B S T R A C T
The purpose of this study is to examine how dividend policy is affected by life cycle, investment opportunity set, profitability, leverage, and free cash flow equity in companies that are listed on the Indonesia Stock Exchange and are involved in property, real estate, and building construction. In this study, the Panel Data Regression Model with Random Effect Model is used. The findings indicate that life cycle has a significant and beneficial impact on dividend policy, whereas leverage has a significant and negative impact at a significance level of 0.05. At a significance level of 0.1, profitability, on the other hand, exhibits a positive and significant influence. However, there is a slight but favorable impact on dividend policy from free cash flow equity and investment opportunity set.

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INTRODUCTION

The construction industry is one of Indonesia's most essential industries supporting economic progress. The significant investment in infrastructure development proves that Indonesia is experiencing increased economic growth. Badan Pusat Statistik published that the value of construction in Indonesia increased by 17.52% from 2018 to 2019. The same thing was also shown in 2021, which increased by 7.1% from 2020. Then it also increased by 7.64% in 2022.

The increasing development projects encourage business people, especially in the construction industry, to survive and demonstrate their ability to compete to achieve company goals, one of which is to maximize shareholder wealth through dividend payments. Dividend payments impact shareholder wealth and show the company's ability to take advantage of expansion opportunities in the future (Baker & Kolb, 2009).

Announcements about dividend payments are something that investors are always waiting for. However, dividend payment data in this sector during 2020-2023 shows that not all companies pay dividends consistently every year. Thus, it can be concluded that what investors expect does not match reality.

Various factors can influence the company's inconsistency in paying dividends each year, some of which are the company's life cycle (Mueller, 1972); (DeAngelo et al., 2006), investment opportunity set (Adam & Vidhan K Goyal, 2008), profitability (Brealey et al., 2007), leverage (Van & Jhon M. Wachowicz, 2017), and free cash flow equity (F. E. Brigham & Michael C. Ehrhardt, 2017).

The life cycle will be associated with various decisions that will be taken by the company, one of which is dividend policy (Mueller, 1972); (DeAngelo et al., 2006). The probability of a company paying dividends is due to the mixture of retained earnings and total equity (DeAngelo et al., 2006). Companies with a high ratio of retained earnings to total equity are considered to have large accumulated profits, so the company tends to pay dividends. (Aryani & Dina Patrisia, 2021) found that the ratio of retained earnings to total equity positively and significantly affects dividend policy. (Hazmi et al., 2023) found that the ratio of retained earnings to total equity negatively and substantially affects dividend policy. (Bhattacharya et al., 2020) found that the proportion of this ratio cannot explain the main characteristics of dividend payments.

An investment opportunity set is considered to be able to influence the amount of dividends paid. Investment opportunity set refers to how a company can take advantage of investment opportunities properly so that it will benefit the company in the future. (Andaswari et al., 2017) stated that investment opportunity sets have a positive and significant effect on dividend policy; investments made by the company provide a good level of profit so that the company can pay dividends. However, (Myers, 1977) stated that the size of the investment opportunity set will reduce the company's chances of paying dividends. Meanwhile, (Gupta et al., 2024) and (Khan et al., 2022) found that the investment opportunity set has a positive and insignificant effect on dividend policy.

Profitability is a way for companies to measure performance by focusing on profit (Brealey et al., 2007). Companies that have high profits tend to have the ability to pay dividends. (Bunyamin et al., 2023) and (Chau, 2023) stated that increasing profitability will increase dividend payments. (Khan et al., 2022) found that profitability has a positive and significant effect on dividend policy in Korea but a negative and significant impact on Japan.

Leverage describes how a company uses debt in its capital structure. Using sources of funds that have fixed costs to increase profits is called leverage (Van & Jhon M. Wachowicz, 2017). Debt can improve a company's profitability by providing benefits such as a tax deduction. However, if the debt is too large, the company's financial burden will increase, reducing profitability (Fachrudin & Fachrudin, 2022). Companies that have a high leverage ratio will limit dividend payments.(Liong et al., 2023) stated that leverage negatively and significantly affects dividend policy. Meanwhile, (Khan et al., 2022) found that leverage had a negative and insignificant effect on dividend policy in Japan but a positive and insignificant effect in Korea.

The cash flow that can be distributed to shareholders is known as free cash flow equity (F. E. Brigham & Michael C. Ehrhardt, 2017). According to (Gupta et al., 2024), (Chau, 2023), and (Dwiyanti & Dadan Rahadian, 2017), free cash flow significantly and favorably influences dividend policy. In the meanwhile, free cash flow has a negative and substantial impact on dividend policy, according to (Momany et al., 2024). According to a study by Rosydah et al. (2023), dividend policy is positively and marginally impacted by free cash flow.

The study's problem statement asks whether the life cycle has an impact on the dividend policy of building construction, real estate, and property companies listed on the Indonesia Stock Exchange for 2020-2023. Does the dividend policy of real estate, building construction, and property firms listed on the Indonesia Stock Exchange for 2020–2023 depend on the Investment Opportunity Set? Does the dividend policy of building construction, real estate, and property companies listed on the Indonesia Stock Exchange for 2020–2023 depend on profitability? Does leverage have an impact on dividend policies for building construction, real estate, and property businesses listed on the Indonesia Stock Exchange for 2020-2023? Does the dividend policy of real estate, building construction, and property businesses listed on the Indonesia Stock Exchange depend on free cash flow equity for 2020-2023?

This study is to examine the life cycle influence on dividend policy in real estate, building construction, and property businesses listed on the Indonesia Stock Exchange for the 2020–2023 period, based on the problem formulation that was previously mentioned. To examine how the dividend policy of real estate, building construction, and property firms listed on the Indonesia Stock Exchange is affected by the investment opportunity established for 2020–2023. To examine how profitability affects dividend policies in property, real estate, and building construction companies listed on the Indonesia Stock Exchange for the 2020-2023. To examine how leverage affects dividend policies in building construction, real estate, and property companies listed on the Indonesia Stock Exchange for 2020-2023. To examine how free cash flow equity affects dividend policies in building

construction, real estate, and property companies listed on the Indonesia Stock Exchange for 2020-2023.

LITERATURE REVIEW

Dividend Policy

Dividend policy is a constant conundrum. According to Modigliani and Miller, in a perfect market, a company's worth is based on its ability to make money and the risk of investing, not on the dividends it pays out. Nonetheless, investors choose dividends over gains that are more unclear and risky in the future, according to Gordon and Lintner. Additionally, according to the signal hypothesis, businesses will give out indications about their state. These indicators may indicate good or terrible news. The amount of current profit that will be distributed as dividends as opposed to being kept to be reinvested in the business is determined by the dividend policy (E. F. Brigham & Joel F. Houston, 2001).

Life Cycle

According to signal theory, dividend payments can be utilized to let investors know that the company's financial situation is improving. A company's likelihood of paying dividends will be impacted by its high life cycle ratio, which indicates that it has accumulated a sizable amount of earnings. According to research by Aryani and Dina Patrisia (2021), Chau (2023), and Dwiyanti and Dadan Rahadian (2017), the life cycle significantly and favorably influences dividend policy. Consequently, there is a strong and favorable correlation between dividend policy and life cycle.

H1: For 2020–2023, life cycle has a major favorable impact on dividend policy for property, real estate, and building construction companies listed on the Indonesia Stock Exchange.

Investment Opportunity Set

A business might have a high growth rate if it has a large range of investment opportunities (Giriati, 2016). According to signal theory, a business that is expanding quickly is sending out a positive signal since it has made a lot of money, which will raise the amount of money that can be distributed as dividends. Investment opportunity set has a favorable and large impact on dividend policy, according to research by Andaswari et al. (2017) and Liong et al. (2023). As a result, there is a strong and favorable correlation between dividend policy and investment opportunity set.

H2: The dividend policy of property, real estate, and building construction companies listed on the Indonesia Stock Exchange for 2020–2023 is substantially positively impacted by the investment opportunity provided.

Profitability

The manager's choice about the total amount of dividends to be paid has a direct impact on profitability (Lintner, 1956). Investors are alerted to the company's strong financial performance by dividend payments. Businesses that consistently turn a profit typically distribute dividends. There is a positive and significant relationship between dividend policy and profitability, according to research by Gupta et al. (2024), Narindro & Hasan Basri (2019), Chau (2023), and Momany et al. (2024). Profitability and dividend policy are therefore positively and significantly correlated.

H3: For the years 2020–2023, the Indonesia Stock Exchange-listed property, real estate, and building construction companies' dividend policies are substantially impacted favorably by profitability.

Leverage

According to Modigliani and Miller, debt interest can reduce taxes. The risk and return to shareholders increase with the amount of leverage (Syahyunan, 2013). Dividend payments will decrease as the amount of debt used to build the business increases since more interest will be paid (Silalahi et al., 2021). Additionally, businesses with a lot of debt will decide to pay off their debt instead of dividends. According to (Liong et al., 2023), (Momany et al., 2024), (Narindro & Hasan Basri, 2019), and (Puspitaningtyas Z, 2019), leverage significantly and negatively affects dividend policy. Leverage and dividend policy are hence negatively and fundamentally related.

H4: Leverage significantly negatively affects dividend policy in property, real estate, and building construction companies listed on the Indonesia Stock Exchange for 2020-2023.

Free Cash Flow Equity

Cash flow available for distribution to shareholders is known as free cash flow equity (F. E. Brigham & Michael C. Ehrhardt, 2017). This accessible cash enables the company to pay dividends and is a good indication that it is in sound financial standing. According to (Gupta et al., 2024), (Chau, 2023), and (Dwiyanti & Dadan Rahadian, 2017), free cash flow significantly and favorably influences dividend policy. Consequently, there is a strong and favorable correlation between dividend policy and free cash flow equity.

H5: In 2020–2023, free cash flow equity has a major favorable impact on dividend policy for property, real estate, and building construction companies listed on the Indonesia Stock Exchange.

The conceptual framework proposed in this research can be described as follows:

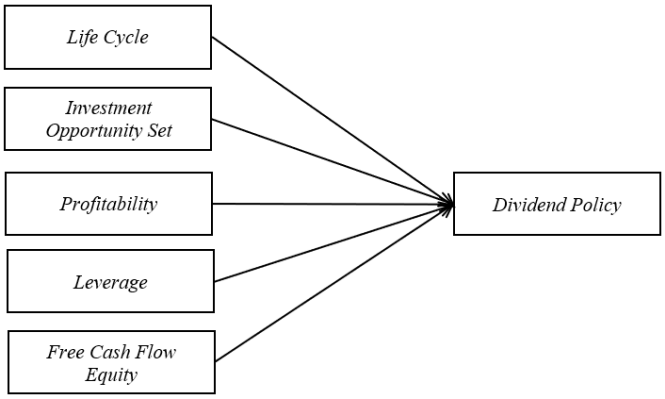

Figure 1. Conceptual Framework

METHODOLOGY

Panel Data Regression Analysis is used in this work. Property, real estate, and building construction businesses listed on the Indonesia Stock Exchange for the 2020-2023 were the subjects of this study. Purposive sampling techniques were used to choose 12 companies as samples from a population of 98 companies. EViews software is used to process data analysis procedures.

RESEARCH RESULT

Panel Data Regression

The Common Effect Model, Fixed Effect Model, and Random Effect Model are the three models used in panel data regression. To choose a model, the Lagrange Multiplier Test, Hausman Test, and Chow Test are performed.

Chow Test

To choose between the Common Effect Model and the Fixed Effect Model for estimation, the Chow Test is used. Table 1 indicates that the Fixed Effect Model is the chosen estimate model because the Chi-square probability value is 0.032 < 0.05.

Table 1. Chow Test Result

Redundant Fixed Effects Tests
Equation: Untitled
Test period fixed effects

Effects Test	Statistic	d.f.	Prob.
Period F	2.339493	(3,19)	0.1058
Period Chi-square	8.802305	3	0.0320

Source: Data Processed with EViews

Hausman Test

The Hausman Test was used to identify the estimate model between the Fixed Effect Model and the Random Effect Model after the Fixed Effect Model was chosen in the Chow Test. The Random Effect Model is the chosen estimation model since Table 2 indicates that the probability value is 0.8804 > 0.05.

Table 2. Hausman Test Result

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.766282	5	0.8804

Source: Data Processed with EViews

Classical Assumption Test

The Random Effect Model has been chosen as the estimating model based on the Chow and Hausman Test. Gujarati and Porter (2015) state that if the Random Effect Model is selected as the estimation model, the General Least Square (GLS) estimation model's nature already satisfies the requirements of the classical assumption test, negating the need to perform the test.

Table 3. Random Effect Model Test Result

Dependent Variable: DPS_Y
Method: Panel EGLS (Cross-section random effects)
Date: 04/22/25 Time: 21:24
Sample: 2020 2023
Periods included: 4
Cross-sections included: 7
Total panel (balanced) observations: 28
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LC_X1	189.1191	54.55863	3.466345	0.0022
IOS_X2	67.07414	191.6311	0.350017	0.7297
PROF_X3	700.3217	399.7989	1.751685	0.0938
LEV_X4	-51.87596	24.99021	-2.075852	0.0498
FCFE_X5	0.036086	0.033134	1.089116	0.2879
C	-29.77499	54.40725	-0.547261	0.5897

Effects Specification	S.D.	Rho
Cross-section random	0.000000	0.0000
Idiosyncratic random	69.99727	1.0000

Weighted Statistics			
R-squared	0.600788	Mean dependent var	68.64936
Adjusted R-squared	0.510058	S.D. dependent var	90.18281
S.E. of regression	63.12423	Sum squared resid	87662.71
F-statistic	6.621712	Durbin-Watson stat	1.783846
Prob(F-statistic)	0.000669		

Source: Data Processed with EViews

F Statistic Test

Given Table 3's Prob. (F-statistic) value of 0.00 < 0.05, it may be inferred that dividend policy is influenced concurrently by life cycle, investment opportunity set, profitability, leverage, and free cash flow equity.

Determination Coefficient (Adjusted R^2)

It is also evident from Table 3 that the adjusted R2 value, or determination coefficient, is 0.51. According to this figure, 51% of dividend policy can be influenced by life cycle, investment opportunity set, profitability, leverage, and free cash flow equity, with the remaining 49% being influenced by factors not included in this study.

Hypothesis Testing

To ascertain if the independent factors in this study have a direct impact on the dependent variable, hypothesis testing is done. The Random Effect Model estimation is used for the t-test based on the findings of the Hausman and Chow tests. Five companies had deviant or outlier data, according to data processing results; therefore, the five samples are eliminated. Seven businesses are thus the number of samples used in this test. Table 3 displays the findings of the t-test.

DISCUSSION

The Influence of Life Cycle on Dividend Policy

According to the findings of the t-test, the life cycle variable's coefficient value is 189.119 > 0 and its probability value is 0.002 < 0.05. It indicates that, for the 2020–2023 period, the life cycle has a favorable and noteworthy impact on the dividend policy of companies engaged in real estate, building construction, and property on the Indonesia Stock Exchange. The study's findings support signal theory and demonstrate a favorable link. The fact that the corporation pays dividends shows that its finances are doing well. According to the life cycle, a business that has a high life cycle ratio has a sizable amount of cumulative profit. The business is able to pay dividends as a result. The study's findings are consistent with those of studies by Aryani and Dina Patrisia (2021), Chau (2023), and Dwiyanti and Dadan Rahadian (2017), which discovered that the life cycle significantly and favorably influences dividend policy.

The Influence of Investment Opportunity Set on Dividend Policy

According to the t-test results, the investment opportunity set variable's coefficient value is 67.07 > 0 and its probability value is 0.729 > 0.05. It indicates that, for the years 2020–2023, the investment opportunity set has a favorable and negligible impact on the dividend policy of real estate, building construction, and property businesses listed on the Indonesia Stock Exchange. According to signal theory, the study's findings indicate a favorable trend. Businesses that invest have the potential to increase their profits in the future, which means they have bright futures and the capacity to pay dividends. Nevertheless, this variable has no discernible influence. It could be that businesses in this industry need large sums of money to make them withhold profits because they need long-term investment.

These businesses are also at risk from frequent changes in regulations. The business will keep enough cash on hand to cover this risk under these circumstances. Therefore, even though this variable theoretically exhibits a positive link, the corporation exercises caution when determining whether to pay dividends. The study's findings contradict those of Andaswari et al. (2017) and Liong et al. (2023), who claimed that the investment opportunity set significantly and favorably influences dividend policy. Nonetheless, it is consistent with the findings of Gupta et al. (2024) and Khan et al. (2022), who discovered that the investment opportunity set had a mildly beneficial impact on dividend policy.

The Influence of Profitability on Dividend Policy

According to the t-test results, the profitability variable's regression coefficient value is 700.321 > 0 with a probability of 0.093 < 0.1. This indicates that dividend policy in real estate, building construction, and property companies listed on the Indonesia Stock Exchange for 2020–2023 is favorably and strongly impacted by profitability. Signal theory explains this favorable association. A company's dividend payments will rise in proportion to its profits. The study's findings are consistent with those of Gupta et al. (2024), Narindro & Hasan Basri (2019), Chau (2023), and Momany et al. (2024), who discovered that dividend policy is positively and significantly impacted by profitability. Therefore, the

study's findings support the empirical finding that one of the primary determinants of dividends is profitability.

The Influence of Leverage on Dividend Policy

According to the findings of the t-test, the leverage variable's regression coefficient value is -51.875 < 0 with a probability value of 0.049 < 0.05. The dividend policy of real estate, building construction, and property businesses listed on the Indonesia Stock Exchange for 2020–2023 is therefore adversely and considerably impacted by leverage. Modigliani Miller's capital structure theory with taxes, which holds that employing debt can result in tax benefits through loan interest, is supported by this negative link. Despite these advantages, a high debt load will increase the company's burden and lower after-tax profits. Businesses with a lot of debt will put paying off debt ahead of dividends since it is a commitment to creditors. According to Liong et al. (2023), Momany et al. (2024), Narindro & Hasan Basri (2019), and Puspitaningtyas Z (2019), leverage has a negative and significant impact on dividend policy. These findings are consistent with those of other studies.

The Influence of Free Cash Flow Equity on Dividend Policy

The free cash flow equity variable's regression coefficient value, according to the t-test results, is 0.036 > 0 with a Prob value of 0.287 > 0.05. It indicates that, for the years 2020–2023, free cash flow equity has a favorable and negligible impact on dividend policy in companies engaged in real estate, building construction, and property on the Indonesia Stock Exchange. The signal theory, which holds that businesses that pay dividends indicate that they have money available to distribute to shareholders, is supported by the positive correlation seen in this variable. Nevertheless, the study's findings indicated a negligible impact. The business can require a sizable amount of working capital in order to devote free cash flow to long-term initiatives. Businesses in this industry frequently require large sums of money for project development, heavy equipment purchases, site acquisition, and project loan repayment. It demonstrates that the corporation does not base its dividend payment decisions primarily on free cash flow equity. The findings of this study contradict those of Gupta et al. (2024), Chau (2023), and Dwiyanti & Dadan Rahadian (2017), who claimed that free cash flow significantly and favorably influences dividend policy. However, free cash flow equity has a positive and negligible impact on dividend policy, according to research by Rosydah et al. (2023).

CONCLUSION

According to this study, dividend policy is significantly impacted negatively by leverage, but positively by life cycle and profitability. In the meantime, the dividend policy of property, real estate, and building construction companies listed on the Indonesia Stock Exchange for 2020–2023 is positively but marginally impacted by free cash flow equity and investment opportunity set. Businesses with high life cycle and profitability ratios should be the focus of investors who anticipate dividends as a return. Additionally, investors should be wary of businesses that use a lot of leverage because this can make it less likely that dividends will be paid out.

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