

# The Effect of Leverage, Liquidity, Profitability, and Growth on Dividend Policy with Firm Size as a Moderating Variable at Consumer Goods Industry Manufacturing Companies Listed on the Indonesia Stock Exchange 2015-2020

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## ABSTRACT

This study examines and analyses the effect of Leverage, Liquidity, profitability, and growth on dividend policy with firm size as a moderating variable in consumer goods industrial manufacturing companies listed on the Indonesia Stock Exchange from 2015 to 2020. This study uses the purposive sampling method to use secondary data with the sample of 39 manufacturing companies in the consumer goods industry sector. The data analysis technique used moderation regression analysis using the SPSS 21 application program.

The regression results from this study showed that leverage partially did not affect dividend policy. Meanwhile, Liquidity, Profitability, and Growth partially have a significant positive effect on dividend policy. Furthermore, Leverage, Liquidity, Profitability and Growth significantly affect companies' dividend policy in the consumer goods sector listed on the IDX in 2015-2020. Firm size can moderate leverage's negative influence on dividend policy. Firm size can also moderate the positive effect of Liquidity, Profitability, and Growth on the dividend policy of consumer goods sector companies listed on the IDX in 2015-2020.

**Keywords:** Leverage, Liquidity, Profitability, Growth, dividend policy, Firm Size

## INTRODUCTION

The Indonesia Stock Exchange (IDX) is a capital market in Indonesia that has an

essential role in the Indonesian economy. One of the functions of the capital market is as a means for companies to obtain funds from investors. Investors hope to get a return on their investment. So to fulfil this desire, the company must be able to provide welfare to investors by giving investors profits in the form of dividends or capital gains (Sari & Masdupi, 2020).

The dividend policy is one of the most critical decisions for the company. Dividend policy is related to companies' decisions, including food and beverage manufacturing companies, to determine how much profit will reinvest in the company in the form of retained earnings. The following table shows the percentage of dividend payout ratio in manufacturing companies on the IDX that distributed dividends consecutively in the 2014-2018 period.

**Table 1. Percentage Of Manufacturing Companies on The IDX Which Distributed Dividends in A Row in The 2014-2018 Period**

No	Issuer Code	2014	2015	2016	2017	2018
1	ASGR	39,91	47,31	14,27	75,24	29,27
2	INDF	49,72	49,70	49,79	49,92	20,24
3	TOTO	28,66	43,42	79,59	48,10	44,75
4	ICBP	49,71	49,75	24,94	49,76	19,41
5	SIDO	86,71	85,72	81,16	81,49	46,86
Average		50,94	55,18	49,95	60,90	32,10

Source: Annual Financial Statements of Manufacturing Companies on the IDX for the 2014-2018 period

The table above showed that the dividend payout ratio phenomenon that occurred in Manufacturing Companies on the Indonesia Stock Exchange for the 2014-2018 period, which distributed dividends consecutively in that period, fluctuated yearly. It will have an impact on the reactions and attitudes of investors. Investors will judge negatively if the company does not distribute or cut dividends. The distribution of dividends also has a significant influence on creditors. Creditors will give a positive assessment if the company pays dividends to investors. Creditors will think if the company has enough cash for dividend payments so that the company can pay the principal and interest on the loan.

A dividend is the share of operating profits obtained by the company and given to its shareholders in return for their willingness to invest their assets in the company (Rudianto, 2012). A dividend is a distribution of profit and a business that give to shareholders where the profit can be in the form of cash dividends or stock dividends that can maximize the company's value in addition to investment decisions and capital structure.

Measuring the dividends paid by the company can be measured using one of the commonly known measures. According to Ary (2013), the size of the dividend policy is as follows:

1. Dividend yield relates the number of dividends to the company's stock price.
2. Dividend payout: The dividend payout ratio is measured by dividing the dividend per share by net income per share.

Distributing dividends to shareholders can minimize agency costs so that the company does not have excess funds and will not misuse by various irresponsible internal parties. Thus, apart from being a means for the company to convince investors to reinvest in the company, it can use dividend payments to control shareholders over its management.

Certain factors determined by the company can cause the percentage of dividend payout ratio that fluctuates every year. Dividend policy can influence by several factors, namely Leverage, liquidity, profitability and growth (Akhmadi et al., (2020), Wulansari (2014), Pattiruhu & Paais (2020), Kharisma & Rachman (2017)).

Leverage is the ratio of the company's debt. Leverage reflects the company's ability to meet all obligations, indicated by how much of its capital uses to pay debts. The greater the leverage value, the greater the liabilities and the lower leverage, the higher the company's ability to meet obligations.

The use of too high debt will endanger the company because the company will fall into the category of extreme leverage (extreme debt), which is trapped in high debt levels and is difficult to release the debt burden (Shalini, 2020). Therefore, the company should balance how much debt is worth taking and from which sources can use to pay debts (Fahmi, 2012). Companies that do not have leverage mean using their capital 100%.

There are two kinds of leverage, namely operating leverage and Financial Leverage. In operating leverage, using assets with fixed costs expects the revenue to be able to cover fixed costs and variable costs. While in financial leverage, the use of funds with fixed expenses expects to increase earnings per share.

A low leverage ratio indicates that the company does not use a lot of debt to fund the company operations. The smaller the debt in a company, the investors will be happy to provide funding because the company's profits will be used more as dividends and will increase the company's value. Leverage is the amount of debt used to finance or purchase company assets. Companies with debt greater than equity are said to have a high level of Leverage (Rossidi & Erna, 2018).

A high level of debt indicates a company is experiencing problems in its operations. Besides that, a company with a high level of debt will focus more on paying short-term and long-term debt so that it cannot pay dividends. Therefore, financial managers must manage leverage ratios properly to balance high returns with the level of risk they face. Puspitaningtyas (2019) revealed that leverage negatively and significantly affects dividend policy. Nurchaqiqi & Suryarini (2018) show that leverage has a significant positive impact on cash dividend policy.

According to Sitanggang (2014), liquidity is a measure of the company's performance in terms of the company's ability to meet financial obligations that must repay immediately, namely financial obligations that mature up to 1 year. The maturity of the company's debt is a previous management commitment and must be fulfilled according to the time and amount stated in the agreement. Management must prepare assets ready to be cashed at the right time and amount to fulfil these obligations,

Liquidity is the company's ability to pay its obligations that have to meet immediately. A company have to fulfil its obligations are short-term debt. Therefore this ratio can be used to measure the level of security of short-term creditors, as well as to measure whether the company's operations will not disrupt if these short-term obligations are immediately collected (Hery, 2019).

The company can have a high debt ratio, possibly due to the agent's or management's error, which is indicated to be done intentionally under its interests and ignores the principal's interests. Signalling theory is related to the Current Ratio or liquidity ratio. The signal reaching investors will be good if the company can pay its short-term obligations on time. It shows that the company can solve its debt problems. The higher the value of the liquidity ratio, the

more opportunities the company has to pay and solve debt-related issues.

A high level of liquidity allows the company to distribute dividends. It happens because the company can finance all operations within the company without any debt burden. The company's ability to pay dividends is considerable if the company's liquidity position is large. This is because the higher liquidity in a company indicates the company's ability to pay its short-term obligations using current assets in the form of cash, receivables, short-term investments, inventories, and prepaid expenses.

Research by Mamaro & Tjano (2019) and Nurchaqiqi & Suryarini (2018) finds that liquidity affects dividend policy. Koussis et al. (2017) revealed that a high level of liquidity increases debt capacity but has a negative effect on equity value due to the possibility of losing accumulated cash balances in the event of default unless offset by high external financing costs. It affects the dividend policy of a company because of the increased debt. The dividends distributed will be smaller.

It affects a company's dividend policy because, with increasing debt, the dividends distributed will be smaller. Riyadi (2015) defines profitability as the net result of some rules, policies, and decisions chosen by management in an organization. Bagaskara et al. (2021) reveal that profitability measures a company's ability to create profits based on total assets, capital or total purchases. Profitability illustrates how effectively the company operates to provide gains for the company. Without profit, it isn't easy to attract investors.

This study uses profitability measurement with Return on Assets (ROA). ROA is one of the ratios used to measure the company's profitability by dividing net income by the average total assets. The average total assets obtained from the total assets at the beginning of the year plus the total assets at

the end of the year are then divided by two. ROA calculates the extent to which the invested investment can provide a return under what expects.

Profitability ratios also have a purpose, not only for business owners or management but also for parties outside the company, especially those with a relationship or interest with the company. The objectives are as follows (Fahmi et al., 2016c):

1. To measure or calculate the profit earned by the company in a certain period.
2. To assess the company's previous and current year's profit position.
3. To assess profit development over time.
4. To assess the amount of net profit after tax with own capital.
5. To measure the productivity of all company funds used both loan capital and own capital

ROA is information about the company's profit calculated based on the rate of return on company assets. If the ROA shows a high number, it will be a good signal for investors. Because the ROA number indicating a high number interprets that the company's financial performance is good, investors will be interested in investing their funds or investing in the company. High profitability will be a good signal or news for investors to invest their shares in the company so that the investment value will increase.

Companies that earn profits tend to pay a larger portion of their earnings as dividends. The management will pay dividends to signal the company's success in profit bookkeeping. The signal concludes that the company's ability to pay dividends is a function of company profits. The greater the yield obtained, the greater the company's ability to pay dividends. Bima (2019), Eli (2014), Sri and Purnawati (2019), Ardyatama (2018), and Rizka (2018) found that profitability had a positive effect on dividend policy. Puspitaningtyas (2019)

revealed that profitability does not affect dividend policy. It is based on the greater the profits obtained by the company, causing the greater the amount of cash held, the greater the number of dividends that can be distributed to shareholders.

Asset Growth or Total assets show asset growth where assets use for company operational activities (Yunan, 2011). This ratio shows the percentage increase in sales this year compared to last year. Large companies with high growth rates have not maximized dividend income for their shareholders. The company can use the available funds to increase the total assets for operational purposes (Prastika and Pinem, 2015).

Mointi and Rina (2019) revealed that the faster the growth rate of a company, the greater the need for funds needed to finance this growth. The greater the need for funds in the future, the happier the company is to hold its profits than to pay dividends to shareholders. A growing company is a company that experiences increased growth in its business development from year to year. The higher the company's sales growth, the higher the company's performance. Higher sales reflect the company's products are widely spread in the community and large numbers.

The company's increasing growth certainly illustrates the increasing profit so that managers will think to maximize their profits in any way. Likewise, with leverage, the leverage policy used by managers to obtain external funding for operational continuity will increase interest but reduce tax burden due to greater tax protection. Managers consider these two things in deciding policies to maximize profits.

The company's faster growth rate results in a greater need for funds in the future to finance its growth. Companies with fast growth will prefer to invest rather than distribute dividends, so the profits earned by the company will be allocated as retained

earnings to finance investments that are useful for the company in the future. It will affect the amount of profit distributed as dividends will be less because the company finances the company's growth. Bima (2019), Sri and Purnawati (2019), and Luthfia (2018) reveal that company growth has a negative effect on dividend policy. So the faster the company's growth, the less likely it is to distribute dividends to shareholders.

Firm size also determines the firm value, of Pantow et al. (2015). The bigger the size of a company, the easier it is to get a source of funding for its operations. The better and the more sources of funds obtained will support the company's operations to the maximum, increasing the share price and the company. Therefore, the size of the company considers being able to affect its value.

Large companies have greater control over market conditions, so they can face economic competition, making them less vulnerable to economic fluctuations. In addition, large companies have more resources to increase their value because they have better access to external information sources than small companies (Emawati and Widyawati, 2015).

Companies with significant total assets reflect the company has reached the maturity stage. The company's cash flow is positive, has good prospects in the long term, and shows that the company is more stable and able to generate profits than companies with small total assets.

Firm size describes the size of a company. It affects the assessment of investors in making investment decisions. The larger the firm size, the better the management of investment funds. It follows the signalling theory, where investment decisions can provide a positive signal for investors. If a large company has significant total assets, the management is more flexible in using the assets in the company. This freedom that management outweighed by the concern

that owners have over their investments. A large number of assets will reduce the company's value if it is assessed from the side of the owner. However, if viewed from the management side, the ease with which it controls the company will increase the dividend policy that the company will give to investors.

Based on the explanation above, the researcher is interested in conducting a research entitled "The Effect of Leverage, Liquidity, Profitability, and Growth on Dividend Policy with Firm size as a Moderating Variable in Manufacturing Companies in the Consumer Goods Industry Sector Listed on the Indonesia Stock Exchange in 2015-2020".

### Framework

Following the description of the problem background, literature review, and previous research, the conceptual framework for this research is as follows:

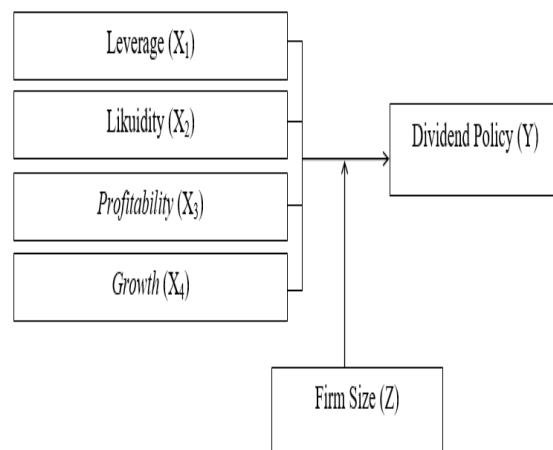


Figure 1. Conceptual Framework

H1: Leverage has a negative and significant effect on Dividend Policy

H2: Liquidity has a positive and significant impact on Dividend Policy

H3: Profitability has a positive and significant impact on Dividend Policy

H4: Growth has a positive and significant effect on Dividend Policy

H5: Firm size can moderate the effect of Leverage on Dividend Policy

H6: Firm size can moderate the effect of liquidity on dividend policy

H7: Firm size can moderate the effect of Profitability on Dividend Policy

H8: Firm size can moderate the effect of Growth on Dividend Policy

## RESEARCH METHODS

This study uses a causal research design, where causal research is research by identifying causal relationships between various variables (Sugiyono, 2018). This study uses causal research to see the effect of Leverage, Liquidity, profitability, and growth on dividend policy with firm size as a moderating variable in manufacturing companies in the Consumer Goods Industrial Sector listed on the Indonesia Stock Exchange for the 2015-2020 period.

This research uses secondary data from financial statements and company stock prices obtained from the Indonesia Stock Exchange, accessed through [www.idx.co.id](http://www.idx.co.id). The population in this study are Manufacturing Companies listed on the BEI in the Consumer Goods Industrial Sector, which consists of 5 sub-sectors, namely:

1. Food and beverage industry sub-sector
2. Cigarette sub-sector
3. Pharmaceutical sub-sector
4. Cosmetics and household goods sub-sector
5. Household appliances sub-sector

The sample in this study was selected using purposive sampling, namely the technique of determining the sample with specific considerations (Sugiyono, 2012). The sample criteria in this study are as follows:

1. All Manufacturing Companies in the Consumer Goods Industry Sector listed on the Indonesia Stock Exchange for the period 2015 – 2020
2. All Manufacturing Companies in the Consumer Goods Industry Sector that publish financial reports consecutively from 2015 to 2020
3. All Manufacturing Companies with positive profits in the Consumer Goods Industry Sector.

The research data use panel or pooling data by combining time-series data for six years from 2015 to 2020 and cross-sections with a sample of 39 companies. So the amount of data in this study is 234 data. This study used multiple linear regression analysis models with SPSS 21 software.

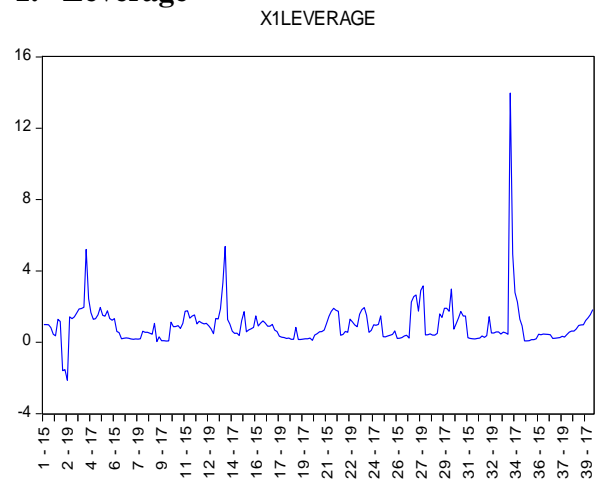
## RESULT AND DISCUSSION

### Descriptive Statistical Analysis

#### Descriptive Statistics of Research Variables

This study highlights the effect of Leverage, Liquidity, Profitability, Growth and Firm size measurement components on the Dividend Policy of companies in the consumer goods sector.

### 1. Leverage



Source: IDX, Processed Data

Figure 2.

### Leverage Chart for Consumer Goods Sector 2015-2020

The picture above showed that the leverage of consumer goods sector companies tends to increase in 2015. It indicates that consumer goods sector companies experience an increase in debt which causes interest costs to increase debtors, which is due to various reasons, one of which is an increase in the dollar exchange rate. It generates interest rates to increase. The increase in the dollar exchange rate, which impacts increasing production costs, also affects the liquidity level of companies in the consumer goods sector.

## 2. Liquidity

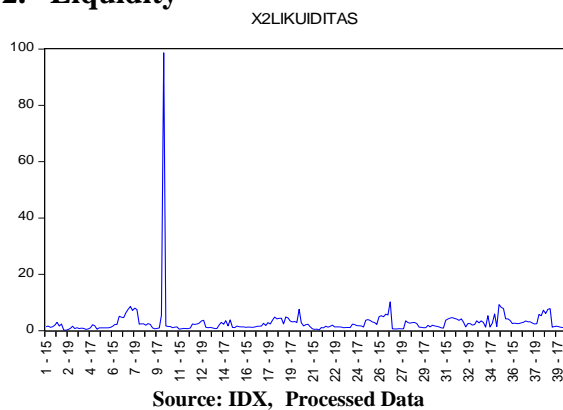


Figure 3. Liquidity Chart for Consumer Goods Sector 2015-2020

The picture above showed an increase in the amount of liquidity of consumption sector companies due to an increase in current assets and a decrease in current debt held in 2019 to 2020 so that the number of costs for debt interest rates for consumer goods sector companies decreased. One of the consumer goods sector companies that experienced an increase in the liquidity of more than 50% in Pt. Inti Agri Resources with a 2020 Liquidity value of 98.63. It shows PT. Inti Agri Resources reduced debt, especially the current deficit, so the company's liquidity increased. The value of existing debt decreases, decreasing interest costs on debt so that the company's profit or profitability increases. The value of current debt decreases, decreasing interest costs on debt so that the company's profit or profitability increases.

## 3. Profitability

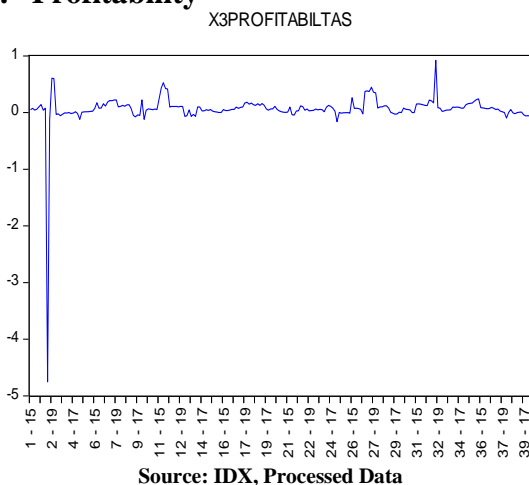


Figure 4. Profitability Chart for Consumer Goods Sector 2015-2020

The picture above shows that the profitability of the consumer goods sector objects tends to be stable from 2019 to 2020. Due to the stagnating sales growth trend, the company's performance is considered not to experience development. Stagnant profitability was due to the level of sales which tended to show declining conditions in line with the outbreak of the covid pandemic, which caused the economic level of companies that needed consumer goods to experience a decline in purchases. The sales growth rate during 2019-2020, especially in the consumer goods sector, experienced a decrease and then stabilized with low fluctuations.

## 4. Growth

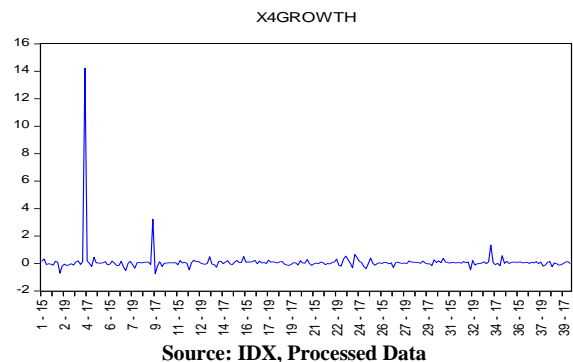


Figure 5. Growth Chart for Consumer Goods Sector 2015-2020

The sales growth rate on the graph fluctuated, which tends to decrease during 2019-2020, especially for companies in the consumer goods sector, the food and beverage sub-sector and the pharmaceutical sub-sector. It is because, during the COVID-19 pandemic, various economic restrictions were put in place so that transactions for purchasing consumer goods decreased due to a decline in national and global economic conditions due to the COVID-19 pandemic. Companies in the consumer goods sector generally have quite large total assets. The assets then describe the size of the company. Firm size is one of the considerations in assessing the company's management.

## 5. Firm Size

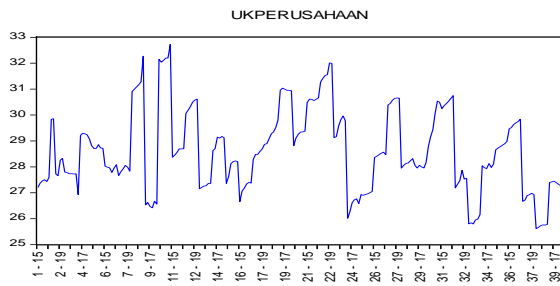


Figure 6. Firm Size Chart for Consumer Goods Sector 2015-2020

The picture above showed fluctuations in the increase or decrease in the company's total assets in 2015-2020. It is due to several companies experiencing losses due to a reduction in sales, followed by an increase in leverage which forced the company to release assets to pay interest expenses due to the rise in the dollar exchange rate against the dollar—rupiah currency. The size of the company provides an overview of the company in managing company management, especially concerning assets owned. The company's management has an impact on various policies taken by the company, especially those related to dividend policy.

## 6. Dividend Policy

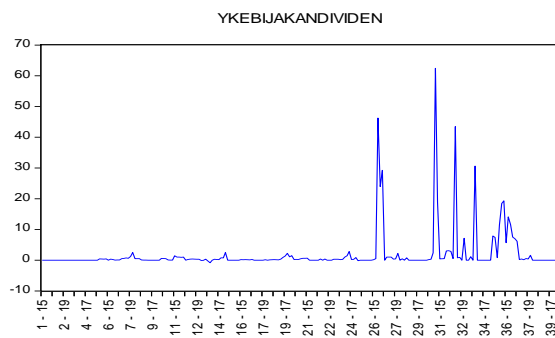


Figure 7. Dividend Policy Chart for Consumer Goods Sector 2015-2020

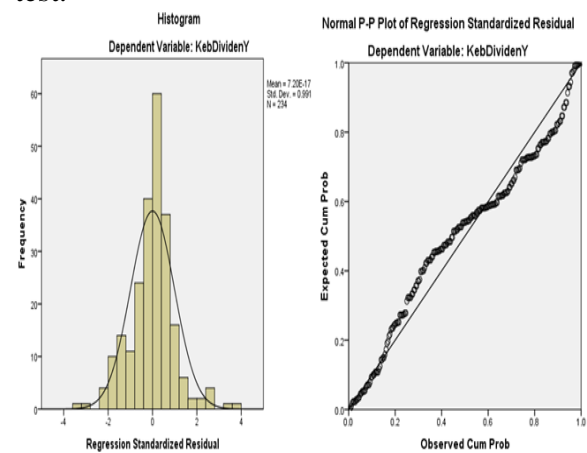
Based on Figure 7 it showed that several companies in the consumer goods sector implemented a dividend policy in 2015-2016. But over time, entering the 2019-2020 period, dividend distribution or dividend policy implementation was almost not carried out by the company's management because of a decline in profits and sales

levels, so it impacted stock prices and the number of shares outstanding in the market. It is due to a decrease in investor confidence in the company based on the value of dividends or dividend profits. So management strategies must be pursued so that investors believe in consumer goods sector companies to buy shares and invest funds. A dividend policy is essential to maintain investor stability.

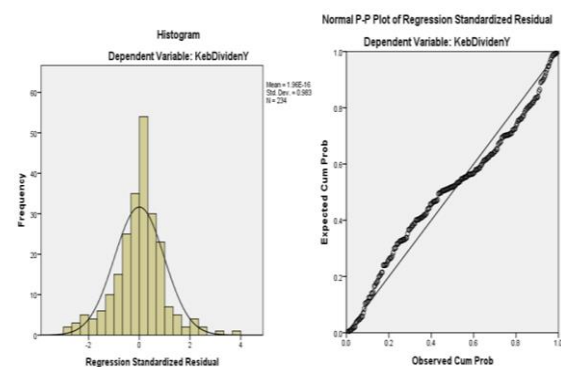
## Classic Assumption Test

### 1. Normality Test

As one of the BLUE requirements, the normality test tests whether the regression equation is normally distributed. Normality test in this study using P-P plot and Kolmogorov Smirnov. Here are the results of the normality test.



Source: SPSS 21 Output, Processed Data  
Figure 8. Histogram and P-P Plot Normality Test Result Before Moderation



Source: SPSS 21 Output, Processed Data  
Figure 9. Histogram and P-P Plot Normality Test Result After Moderation



The results of the normality test shown in both Figure 8 and Figure 9 show the same character. When viewed in the histogram graphic images contained in Figure 8 and Figure 9, it shows that the data has been normally distributed. The data is on the normal line of the histogram, and the P-P Plot image of the data points is not away from the normal distribution line of the P-P Plot. More definitive results using the Kolmogorov Smirnov normality test.

**Table 1. Kolmogorov Smirnov Test Result Before Moderation**  
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		234
Normal Parameters <sup>a,b</sup>	Mean	.032964
	Std. Deviation	.4806726
Most Extreme Differences	Absolute	.053
	Positif	.053
	Negatif	-.042
Test Statistic		.053
Asymp. Sig. (2-tailed)		.200 <sup>d</sup>

Source: SPSS 21 Output, Processed Data

**Table 2. Kolmogorov Smirnov Test Result Before Moderation**  
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		234
Normal Parameters <sup>a,b</sup>	Mean	.042957
	Std. Deviation	.4383059
Most Extreme Differences	Absolute	.056
	Positif	.056
	Negatif	-.038
Test Statistic		.056
Asymp. Sig. (2-tailed)		.071 <sup>c</sup>

Source: SPSS 21 Output, Processed Data

In the Kolmogorov Smirnov test results, both in table 1 and table 2, the Asymp Sig (2 tailed) is more than 0.05, namely 0.200 in the model before moderation and 0.071 in the model after moderation, indicating that the data distribution is normal.

## 2. Multicollinearity Test

The multicollinearity test intends to ascertain whether, in a regression model, there is a correlation between independent variables so that it can meet the BLUE requirements. The following are the results of the multicollinearity test.

**Table 3. Multicollinearity Test Result Before Moderation**  
Coefficients<sup>a</sup>

Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)					
	Leverage X1	.206	-.038	-.033	.639	1.564
	Liquidity X2	.248	.221	.196	.950	1.052
	Profitability X3	.294	.147	.129	.869	1.151
	Growth X4	.430	.338	.311	.606	1.650

a. Dependent Variable: Dividend Policy Y  
Source: SPSS 21 Output, Processed Data

**Table 4. Multicollinearity Test Result After Moderation**  
Coefficients<sup>a</sup>

Model		Correlations			Collinearity Statistics	
		Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)					
	Leverage X1	.206	-.092	-.067	.614	1.628
	Liquidity X2	.248	.177	.130	.921	1.085
	Profitability X3	.294	-.018	-.013	.774	1.291
	Growth X4	.430	.228	.170	.526	1.902
	Lev X FS	-.187	-.174	-.128	.784	1.275
	Lik X FS	.278	.191	.140	.788	1.270
	Prof X FS	.608	.407	.322	.579	1.727
	Growth X FS	.310	.143	.105	.839	1.192

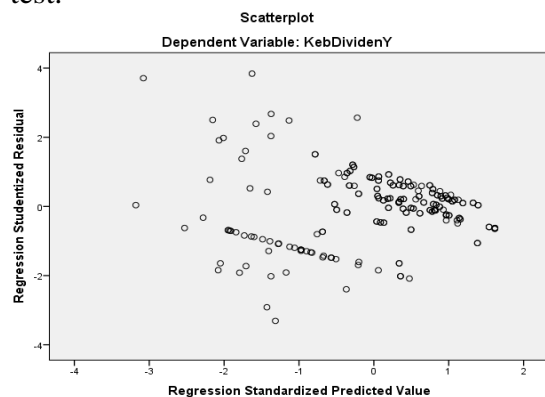
a. Dependent Variable: Dividend Policy Y

The results of the multicollinearity test in Tables 3 and 4 showed both regression models show a tolerance value > 0.10 and a VIF value < 10.00. The conclusion is the two regression models have no symptoms of multicollinearity.

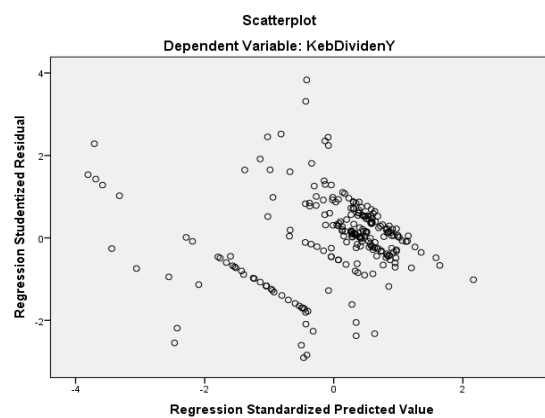
## 3. Heteroscedasticity Test

The heteroscedasticity test is used in the regression model to determine the inequality of variance values from one observation to another. The heteroscedasticity test can be done by looking at the graph plot between the predicted value of the dependent variable, namely ZPRED and the residual SRESID by looking at a certain pattern on the scatterplot graph where the Y-axis is the predicted one while the X-axis is the residual. The heteroscedasticity test can be seen through the Glejser test with the provision that the significant value is above 0.05. Then the model is declared to have passed the heteroscedasticity test. The following are the results of the heteroscedasticity

test.



Source: SPSS 21 Output, Processed Data  
Figure 10. Scatter Plot On Model Before Moderation



Source: SPSS 21 Output, Processed Data  
Figure 11. Scatter Plot On Model After Moderation

Table 5. Glacier Test Result Before Moderation  
Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.411	.043		9.610	.000
	Leverage X1	-.047	.065	-.058	-.720	.472
	Liquidity X2	-.036	.070	-.034	-.507	.613
	Profitability X3	-.026	.014	-.132	-1.913	.057
	Growth X4	-.043	.040	-.089	-1.079	.282

Source: SPSS 21 Output, Processed Data

Table 6. Glacier Test Result After Moderation  
Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.387	.083		4.657	.000
	Leverage X1	-.100	.064	-.131	-1.580	.116
	Liquidity X2	-.092	.068	-.091	-1.346	.180
	Profitability X3	.016	.014	.088	1.181	.239
	Growth X4	-.014	.041	-.031	-.348	.728
	Lev X FS	.022	.028	.059	.795	.427
	Liq X FS	.016	.048	.024	.332	.740
	Prof X FS	-.017	.024	-.060	-.705	.482
	Growth X FS	-.001	.032	-.003	-.045	.964

a. Dependent Variable: ABRES2

Source: SPSS 21 Output, Processed Data

The Glejser test results, both in table 5 and table 6, show a significant value of all independent variables, more than 0.05 in the model before moderation and in the model after moderation, showing that both regression models pass the heteroscedasticity test.

#### 4. Autocorrelation

After testing the assumption of heteroskedasticity, the autocorrelation assumption test carries out. The test criteria if the value of the Wooldridge test is level significant ( $\alpha = 5\%$ ) to find out the existence of autocorrelation with the Wooldridge test, then it stated that there is no autocorrelation. The following are the results of the autocorrelation test using the Wooldridge test:

Table 7. Autocorrelation Test Before Moderation  
Model Summary<sup>b</sup>

Model	Change Statistics		
	df2	Sig. F Change	Durbin Watson
1	229	.000	1.175

a. Predictors: (Constant), GrowthX4, LiqX2, ProfX3, LevX1

b. Dependent Variable: DividendPolicyY

Source: SPSS 21 Output, Processed Data

Table 8. Autocorrelation Test After Moderation

Model	Change Statistics		
	df2	Sig. F Change	Durbin Watson
1	225	.000	1.723

a. Predictors: (Constant), GrowthXFS, ProfX3, LiqX2, LevXFS, LevX1, LiqXFS, ProfXFS, GrowthX4

b. Dependent Variable: DividendPolicyY

Source: SPSS 21 Output, Processed Data

The results of the autocorrelation test using the Durbin Watson test show that the DW value lies between -2 and +2 ( $-2 < DW < +2$ ). It can be concluded that there are no autocorrelation symptoms in both the pre-moderation model and the post-moderation model.

#### Model Feasibility Test

The model feasibility test is a test that carries out whether the model used to perform the regression is correct or not.

There are several model feasibility tests, namely the coefficient of determination test, simultaneous Test and partial Test.

**a. Coefficient of Determination Test**

The coefficient of determination test is a test to see whether or not the regression model carries out using the adjusted R2 value as the coefficient of determination value. The coefficient of determination is to see how much the independent variable explains the dependent variable. If the adjusted R2 value gets closer to 1, the independent variable will increasingly provide the information needed about the dependent variable. It explains that the greater the value of adjusted R2, the more independent the independent variable can define the dependent variable well.

**Table 9. Coefficient of Determination Before Moderation**

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.503 <sup>a</sup>	.253	.240	.3523850

Source: SPSS 21 Output, Processed Data

**Table 10. Coefficient of Determination After Moderation**

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.690 <sup>a</sup>	.476	.458	.2977573

Source: SPSS 21 Output, Processed Data

Table 9 shows that the value of R2 or the coefficient of determination before moderation is 0.253. It indicates that the independent variables jointly affect the dependent variable by 25.3%, and other variables outside the study explain the rest. Thus the explanation in table 10 shows that the value of R2 has increased to 0.476. It shows that the independent variables jointly affect the dependent variable by 47.6%, and the firm size as a moderating variable strengthens the regression model by 22.3%.

**b. Simultaneous Test (F Test)**

Simultaneous Test is used to determine the suitability of the linear regression model between the dependent variable, dividend

policy, the independent variable is Leverage, Liquidity, profitability and growth, and the moderating variable is firm size. The results of the F test on the model before moderation and the model after moderation are as follows:

**Table 11. F Model Test Before Moderation**  
ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.646	4	2.412	19.420	.000 <sup>b</sup>
	Residual	28.436	229	.124		
Total		38.082	233			

a. Dependent Variable: DividendPolicyY

b. Predictors: (Constant), GrowthX4, LiqX2, ProfX3, LevX1

Source: SPSS 21 Output, Processed Data

**Table 12. F Model Test After Moderation**  
ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18.134	8	2.267	25.567	.000 <sup>b</sup>
	Residual	19.948	225	.089		
Total		38.082	233			

a. Dependent Variable: DividendPolicyY

b. Predictors: (Constant), GrowthXFS, ProfX3, LiqX2, LevXFS, LevX1, LiqXFS, ProfXFS, GrowthX4

Source: SPSS 21 Output, Processed Data

The regression model used, without and with moderation, showed a significant value for the F test of less than 5% (P < 0.05). The regression model was declared feasible to test the hypothesis because it had a significance of less than 0.05. The regression model is possible to use, so the value of the coefficient of determination (R2) can be trusted.

**c. Partial Test (t-Test)**

The significance of the t-test can determine the significance of the effect on the results of research in a test. If the t-test is smaller than 0.05, the partially tested independent variables significantly affect dividend policy. If the t-test significance results are more significant than 0.05, the independent variable partly does not affect dividend policy.

**Table 13. T-Test Model Before Moderation**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.463	.053		8.749	.000
	Leverage X1	-.047	.081	-.041	-.577	.564
	Liquidity X2	.298	.087	.201	3.424	.001
	Profitability X3	.038	.017	.138	2.254	.025
	Growth X4	.270	.050	.399	5.438	.000

a. Dependent Variable: DividendPolicyY

Source: SPSS 21 Output, Processed Data

**Table 14. T-Test Model After Moderation**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.128	.091		1.403	.162
	LeverageX1	-.097	.069	-.086	-1.389	.166
	LiquidityX2	.202	.075	.136	2.701	.007
	ProfitabilityX3	-.004	.015	-.014	-.264	.792
	GrowthX4	.158	.045	.234	3.518	.001
	LevXFS	-.080	.030	-.144	-2.644	.009
	LiqXFS	.154	.053	.158	2.912	.004
	ProfXFS	.174	.026	.424	6.680	.000
	GrowthXFS	.077	.035	.114	2.173	.031

Source: SPSS 21 Output, Processed Data

## CONCLUSION

Based on the results of research and discussion, the conclusions are as follows:

1. Leverage does not affect the dividend policy of consumer goods sector companies listed on the IDX in 2015-2020.
2. Liquidity significantly positively affects the dividend policy of consumer goods sector companies listed on the IDX in 2015-2020.
3. Profitability significantly affects the dividend policy of consumer goods sector companies listed on the IDX in 2015-2020.
4. Growth has a significant positive effect on the dividend policy of consumer goods sector companies listed on the IDX in 2015-2020.

5. Leverage, Liquidity, Profitability and Growth simultaneously significantly affect the dividend policy of companies in the consumer goods sector listed on the IDX in 2015-2020.
6. Firm size can moderate the negative influence of leverage on the dividend policy of companies in the consumer goods sector listed on the IDX in 2015-2020.
7. Firm size can moderate the positive influence of liquidity on the dividend policy of consumer goods sector companies listed on the IDX in 2015-2020.
8. Firm size can moderate the positive effect of Profitability on the dividend policy of companies in the consumer goods sector listed on the IDX in 2015-2020.
9. Firm size can moderate the positive influence of Growth on the dividend policy of consumer goods sector companies listed on the IDX in 2015-2020

## SUGGESTION

Based on the results of the research, discussion and conclusions obtained, the suggestions from this research are as follows:

1. For further research, is expected to add other independent variables. Other factors not included in this study may affect dividend policy. It is necessary to review the leverage variable, which is inconsistent with other studies because it was proven to have no effect in this study on dividend policy.
2. Further research can expand the addition of sample data. In this study, the types of companies used as samples were only manufacturing companies in the consumer goods industry sector, so they were less representative of all issuers on the Indonesia Stock Exchange.

3. Future research should take more than six years to reflect the company's condition in the long term.

4. For investors, this research is expected to provide input to be used in making investment decisions by considering the variables of liquidity, profitability and growth because, in this study, it is proven that these variables have a positive and significant influence on dividend policy.

### LIMITATIONS

This study has limitations that can be considered for further research to obtain better results. The following are the limitations of this study:

1. This study only uses four independent variables, namely Leverage, Liquidity, profitability, and growth, so other variables affect dividend policy, which is not included in this study.

2. The limitation in taking the type of company used as a sample in this study is the consumer goods industry sector, so it is less representative of all issuers on the Indonesia Stock Exchange.

3. Limitations in taking the research observation period, only taking the 2015-2020 period (six years of observation), so the results obtained may not be consistent with the results of previous studies.

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### REFERENCES

1. Akhmadi, A., Mahmudi, B., Muksin, M., Suhendra, I., & F, R. (2020). Firm Size As A Moderation Factor: Testing The Relationship of Capital Structure With Dividend Policy. *AFEBI Management and Business Review*, 5(2), 41. <https://doi.org/10.47312/ambr.v5i2.313>
2. Ardyatama. (2018). Pengaruh Profitabilitas, Ukuran Perusahaan, Leverage dan Arus Kas Bebas Terhadap Kebijakan Dividen. Skripsi. Bandar Lampung: Universitas Lampung.
3. Ary, Tatang Gumanti. (2013). Kebijakan Dividen Teori, Empiris, dan Implikasi. Yogyakarta: UPP STIM YKPN
4. Astuti, Eli. (2014). Pengaruh Kepemilikan Institusional, Profitabilitas, Ukuran Perusahaan Terhadap Kebijakan Hutang Perusahaan Di Indonesia. *Jurnal Akuntansi dan Pajak*. Volume 15. Nomor 02.
5. Bagaskara, R. S., Titisari, K. H., & Dewi, R. R. (2021). Pengaruh profitabilitas, leverage, ukuran perusahaan dan kepemilikan manajerial terhadap nilai perusahaan. *Forum Ekonomi*, 23(1), 29– 38
6. Bima. (2019). *Jurnal. Pengaruh profitabilitas, likuiditas, leverage dan pertumbuhan perusahaan terhadap kebijakan deviden. (studi pada perusahaan manufaktur di bursa efek Indonesia tahun 2013-2017)*
7. Emawati, Dewi dan Widyawati, Dini. (2015). “Pengaruh Profitabilitas, Leverage, dan Ukuran Perusahaan Terhadap Nilai Perusahaan”. *Jurnal Ilmu dan Riset Akuntansi*. Vol. 04. No. 02. Surabaya.
8. Fahmi, R. ., Sjahrudin, H., Astuti, N. ., & Syakhrun, M. (2016). Pengaruh Kecukupan Modal dan Penyaluran Kredit Terhadap Profitabilitas Perbankan. *Jurnal Ilmiah BONGAYA (Manajamen & Akuntansi)* ISSN : 1907 – 5480, 1(11), 27–43.
9. Hery. (2019). *Auditing : Dasar-Dasar Pemeriksaan Akuntansi*. Jakarta: PT Gramedia
10. Kharisma, A., & Rachman, W. (2017). Factors That Influence on Dividend Policy Between Indonesia and China Banking. *Jurnal Ilmiah Ekonomi Bisnis*, 22(3), 228977. <https://doi.org/10.35760/eb.228977>
11. Koussis, N., Martzoukos, S. H., & Trigeorgis, L. (2017). Corporate Liquidity and dividend policy under uncertainty. *Journal of Banking and Finance*, 81, 221– 235. <https://doi.org/10.1016/j.jbankfin.2017.01.021>
12. Luthfia. (2018). Skripsi. Pengaruh Likuiditas, Profitabilitas, Struktur Modal, Pertumbuhan Perusahaan, Dan Ukuran Perusahaan Terhadap Kebijakan Dividen.
13. Mamaro, L. P., & Tjano, R. T. (2019). The relationship between dividend payout and financial performance. *Journal of Accounting and Management*, 9(2), 5–20. <http://zbw.eu/econis-archiv/bitstream/handle/11159/4323/1694176037.pdf?sequence=1&isAllowed=y>

14. Mointi, R., & Rina, R. (2019). Pengaruh Profitabilitas, Leverage Dan Growth Terhadap Kebijakan Dividen Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. *Economy Deposit Journal (E-DJ)*, 1(2), 33-40
15. Nurhaqiqi, R., & Suryarini, T. (2018). Accounting Analysis Journal The Effect of Leverage and Liquidity on Cash Dividend Policy with Profitability as Moderator Moderating. *Accounting Analysis Journal*, 7(1), 10–16. <https://doi.org/10.15294/aaj.v5i3.18631>
16. Pattiruhu, J. R., & Paais, M. (2020). Effect of Liquidity, Profitability, Leverage, and Firm Size on Dividend Policy. *Journal of Asian Finance, Economics and Business*, 7(10), 35–42. <https://doi.org/10.13106/jafeb.2020.vol7.no.10.035>
17. Prastika, Tyas., & Pinem, Dahlia.(2015). Pengaruh Return On Equity, Leverage Dan Sales Growth Terhadap Kebijakan Dividen Pada Bei. *Jurnal Ekonomi Dan Bisnis*, 2(2), 155–166.
18. Puspitaningtyas, Z. (2019). Assessment of financial performance and the effect on dividend policy of the banking companies listed on the Indonesia Stock Exchange. *Banks and Bank Systems*, 14(2), 24–39. [https://doi.org/10.21511/bbs.14\(2\).2019.03](https://doi.org/10.21511/bbs.14(2).2019.03)
19. Ratnasari, Putu Sri Puspytha dan Purnawati, Ni Ketut. (2019). Pengaruh Profitabilitas, likuiditas, tingkat pertumbuhan perusahaan dan leverage terhadap kebijakan dividen. *e-jurnal Manajemen universitas udayana* , 8 (10), 6179-6198.
20. Riyadi, S. (2015). *Banking Assets And Liability Management*. Fakultas Ekonomi Universitas Indonesia.
21. Rizka. (2018). Skripsi. Pengaruh Kesempatan Investasi, Profitabilitas, dan Likuiditas terhadap Kebijakan Dividen pada Perusahaan Manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) 2014-2016.
22. Rossidi, Utama Dedi. Erna, Lisa. (2018). Pengaruh Leverage dan Profitabilitas Terhadap Nilai Perusahaan (Studi Pada Perusahaan Sektor Manufaktur Food and Beverage yang Terdaftar di Bursa Efek Indonesia)
23. Sari, I. P. dan E. Masdupi. (2020). “Profil Kebijakan Dividen Perusahaan Manufaktur dan Determinannya.” *Jurnal Kajian Manajemen dan Wirausaha*, Vol, 01, No. 02, h. 44-49.
24. Shalini, Witya. 2020. Pengaruh Struktur Kepemilikan Dan Kinerja Keuangan Terhadap Nilai Perusahaan Dengan Kebijakan Dividen Sebagai Variabel Moderating Pada Perusahaan Properti dan Real Estate Yang Terdaftar di BEI Periode 2010-2018. Thesis. Universitas Sumatera Utara.
25. Shalini, Witya; Christianty, Restia; Pattinaja, Elna M. 2022. Pengaruh Manajemen Modal Kerja, Likuiditas, dan Leverage Terhadap Profitabilitas Pada Perusahaan Consumer Goods di BEI Periode 2017-2020. *Jurnal Owner*. 6(2). DOI: 10.33395/owner.v6i2.823
26. Sitanggang, J.P. 2014. *Manajemen Keuangan Perusahaan Ed.2*. Jakarta: Mitra Wacana Medis.
27. Sugiyono. (2012). *Metode Penelitian Kualitatif dan R&D*. Alfabeta.
28. Sugiyono. (2018). *Metode Penelitian Kombinasi (Mixed Methods)*. Bandung: CV Alfabeta.
29. Rudianto, 2012, *Pengantar Akuntansi*, Jakarta, Penerbit Erlangga Adaptasi IFRS
30. Wulansari. (2014). Effect Of Leverage, Liquidity, Profitability, Size And Growth Of Dividend Policy (Studies on Manufacturing company listed on the Stock Exchange listing Indonesia Year 2010-2014). Universitas Pandanaran Semarang, 1–14.
31. Yunan, Faiza Amalia. (2011). “Pengaruh Risiko Bisnis Dan Profitabilitas Terhadap Nilai Perusahaan Dengan Struktur Modal Sebagai Variabel Intervening”. STIE Perbanas Surabaya.

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