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Research Article

Determining Factors of Dividend Policy in Indonesia

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Abstract

The purpose of this study was to find out financial ratios that could be the determinant factors of dividend policy in manufacturing companies listed on the Indonesia Stock Exchange during the period 2015 to 2017. Purposive sampling was used in sampling techniques with the acquisition of 118 companies as research samples. The data analysis technique used in this study is the discriminant test with the Mahalanobis Stepwise method. The results of this study indicate that ROA, NPM, Firm Size, and Current Ratio can distinguish significantly between companies that distribute dividends with companies that do not distribute dividends. Those four ratios are ranked according to their discriminative power. ROA came out as strongest factor, followed by NPM, Firm Size. While Current Ratio is the weakest factor. The higher those four financial ratios, the more likely a company is distributing dividends. The classification results also show that 41 companies tend to distribute dividends, 55 companies tend not to distribute dividends, 22 other tendencies are not determined. This study provides evidence that manufacturing companies in Indonesia are more following what is hypothesized by signaling theory and life cycle theory.

Keywords

Dividend Policy, Financial Ratios, Signaling Theory, Life Cycle Theory.

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Introduction

For five consecutive years starting in 2014 through 2018, Indonesia is able to maintain its position in the top fifteen countries with the highest Manufacturing Value Added (MVA) in the world (The Global Economy, 2018). In 2016 Indonesia ranked 4th out of 15 countries whose manufacturing industries contributed significantly to GDP. Manufacturing contribution to Indonesia's GDP reaches more than 20%, of which the figure is above the average of 17%, which outperforms several countries such as Britain, Japan and Mexico. In 2019, Indonesia is considered to be the largest manufacturing production base in ASEAN. Recorded in 2018 Indonesia's MVA growth was able to reach 4.84%, higher by 0.34% than the average of the Southeast Asian country (Republika, 2018). Based on the Central Statistics Agency (2017) through the Indonesian Economic Statistics in 2017, the manufacturing sector is still the sector with the highest investment absorption compared to other sectors. The amount of investment absorbed by the business sector shows that manufacturing companies are still the main target of investors, especially domestic investors. In fact, for investors to make investment decisions is a strategic policy, so to do that, investors are faced with a variety of risks and uncertainties that are difficult to predict, one of which is payment of dividends (Utami & Robin in Zais, 2017). Thus, the high absorption of investment in the manufacturing sector indicates that returns in the form of capital gains and dividend yields in the sector are considered attractive. In this regard, Management often has difficulty in making dividend policy, whether the profits obtained by the business entity will be distributed to shareholders as dividends or held in the form of retained earnings (Lapolusi, 2013). A company's dividend policy is a complex matter and, in many cases, invites controversy among various parties within the company. The management holds cash for investment opportunities that can increase the growth of the company. Meanwhile, stockholders expect high dividends. If management limits dividend payments, this can cause shareholders' expectations of high dividend receipts to fade (Silviana et al. 2014). Dividend policies that are not in accordance with the expectations of shareholders will certainly lead to dissatisfaction among shareholders so that this can have an impact on the company's stock price which can then have an impact on the company's growth. Even so, based on data from the Indonesia Stock Exchange (2017), many manufacturing companies listed on the Stock Exchange are still existing even though for the past five years they have not distributed dividends, even some have not distributed dividends for more than five years, such as PT. Intikeramik Alamasri Industri Tbk., PT. Mulia Industrindo Tbk., PT. Alakasa Industrindo Tbk., Etc. The amount is equivalent to 37% of the total manufacturing companies listed on the IDX in 2017. Even though legally, the Indonesian government itself through UUD No. 40 Tahun 2007 encourages companies to distribute dividends to their shareholders. The government suggested that net income after being reduced by reserves should be distributed entirely as dividends.

On the other hand, there are still many other manufacturing companies that distribute dividends even though it is not routine to their shareholders (Saudi, 2018). The number tends to increase every year, but unfortunately the number of companies does not reach half of the total companies registered each year. According to the Indonesia Stock Exchange (2017) data, in 2014 there were 39 manufacturing companies that distributed dividends. In the following year there were an additional 17 companies registered to contribute dividends. This is the highest increase because in 2016 the number of manufacturing companies that distributed dividends increased by 6 companies and in 2017 there were only 4 additional companies. However, it must be admitted every year the number of companies that distribute dividends is under 50% of the average 144 manufacturing companies registered each year. This means that dividend policy in the manufacturing industry in general has not been well developed. Meanwhile, the number of companies that distribute dividends on a regular basis from 2015 to 2017 is only 26% and if calculated from 2014, the number decreases to 16%, and if calculated again from 2013, the number decreases to only 14% of the total registered companies in 2017. This indicates that the longer the time span, the fewer the number of companies that routinely distribute dividends.

Meanwhile, according to Yani and Dana (2017), the dividend policy is reflected in the dividend payout ratio, which is the percentage of profits distributed in the form of cash dividends. Based on data, the annual growth of the DPR in manufacturing companies is uncertain. This indicates that there are differences in the number of presentation of earnings that are distributed as dividends each year. The difference in the percentage of DPR is of course influenced by the business progress reflected in the growth of profits. This is based on Zais's statement (2017) that corporate profits are the basis of dividend distribution because dividend policy is a financial

decision made by the company after the company operates and earns profits. According to the Indonesia Stock Exchange (2017) data, since 2014, dd. 2017 DPR's average growth rate and manufacturing company's earnings growth fluctuate. In 2014, the average manufacturing company experienced a decrease in the DPR by -5%, but the average profit increased by 20% from the previous year. This indicates that the average manufacturing company that year provided dividends because of increased profits. The same thing also happened in 2017 which recorded dividend growth of 1% and profit growth of 8%. Conversely, in 2015 and 2016 the average growth of the DPR was far above profit growth. In 2015, the average growth of the DPR was 20% while the average profit growth was 6%. In 2016, the average growth of the DPR was 27% while the average profit growth was 13%. In fact, profit growth should be above the growth of the DPR, so that the dividend policy made does not exclude the company's cash reserves for internal financing or reinvestment plans. The extent of these differences indicates that the average company shares more dividends even though the profits obtained are not many or even tend to be negative. This indicates that in the following two years, the average manufacturing company tends to use debt or other sources of funding besides profit for its internal needs. This shows that there is an imbalance in the allocation of earnings decisions because ideally in determining dividend policy, the company does not rule out internal funding. In addition, the annual growth of the DPR does not indicate that the average manufacturing company does not routinely distribute dividends, and the amount of dividends distributed is not stable. According to Sjahrial in Nurwani (2017), companies that implement a policy of paying dividends stably year after year will be valued better by shareholders. Therefore, the company's dividend decision is considered by investors. Gumanti (2013) emphasized that investors prefer dividends rather than capital gains because dividends promise something more certain than relying on uncertain stock price changes.

The fluctuation of dividend payout ratio is influenced by various factors. Consequently, the policy determinants of cash dividends are so complex and put management as well as shareholders in a dilemma position. From so many factors, it is very difficult to conclude which is the most dominant influence on the company's cash dividend policy (Yani & Dana, 2017). Maskiyah and Wahjudi (2013) said that several factors that influence a company's dividend policy include profitability, ownership and size of the company. Silviana et al. (2014) states that internal factors such as profit rates, ability to borrow, liquidity, and company cash are factors that influence more dividend policy. Idawati and Sudhiarta (2011), Silviana et al. (2014), Lapolusi (2013), Yani and Dana (2017), and Lestari et al. (2016) empirically shows that there is an influence between profitability and liquidity on dividend policy while other studies reveal that the two financial ratios do not affect dividend policy (Nurwani, 2017; Swastyastu et al. 2014; Dewi, 2016). According to Naufina and Rafik (2017), the company's life cycle also affects dividend policy. According to both, the size of the company determines the company's ability to distribute dividends. Aristanto and Prasetiono (2015), Akmal et al. (2016), Maskiyah and Wahjudi (2013), Sanjaya and Wirasedana (2018) in their study found that there was indeed an influence between company size and dividend policy while the results of other studies revealed no influence on company size on dividend policy (Idawati & Sudhiarta, 2014; Swastyastu et al. 2014; Ressy & Chariri, 2013; Hanif & Bustamam, 2017). Besides the size of the company, another factor that can influence dividend policy is the growth of the company (Dewi, 2016). Growing companies will need more funds (Brigham & Houston, 2011). According to Riyanto in Sari and Sudjarni (2015) another factor that affects dividends is the need for funds to pay debts. A high debt ratio makes the company's capital will be used to cover the company's debt so that there will only be a small amount of income distributed as dividends (Mardani, 2018). Previous researchers proved the influence between company growth and debt to dividend policy (Rice & Sulia, 2014; Akmal et al., 2016; Sari & Sudjarni, 2015) while several other researchers proved that there was no influence between company growth and debt to dividend policy. (Swastyastu et al. 2014, Safrida, 2014; Naufina & Rafik, 2017; Sanjaya & Wirasedana, 2018; Ressy & Chariri, 2013).

The existence of theoretical differences regarding the factors that influence dividend policy, as well as differences in research results (empirical gap) regarding dividend policy, the researchers deemed it necessary to conduct further research on the factors that influence dividend policy in order to produce relevant information regarding (1) financial ratios that can be used as a determining indicator in classifying companies with a tendency to pay dividends and companies with a tendency not to pay dividends (2) a form of a dividend policy model that can be used to differentiate companies that have a tendency to distribute dividends and do not distribute dividends (3) the number of companies classified as tending to distribute dividends and tend not

to distribute dividends

Theoretical Framework and Hypothesis

According to Janavi (2017) Current ratio is a ratio to measure a company's ability to pay short-term liabilities when billed as a whole. According to Pamungkas et al. (2017), current assets include cash, securities, account receivables, and inventories while current liabilities include account payables, short-term notes receivable, long-term current debt, taxes, and accrued salaries. Therefore, Sarmento and Dana (2016) say if liquidity in this case the current ratio is considered by management in the amount of cash dividend payments because the high current ratio indicates the company has the ability to pay short-term liabilities with assets that can be searched for less than one year. Thus, the high current ratio also shows investor confidence in the company's ability to pay the promised dividends (Astiti et al., 2017). The results of the research that have been done also show that the Current Ratio has a positive effect on the Dividend Payment Ratio (Sari & Sudjarni 2015; Yani & Dana, 2017; Sarmento & Dana, 2016). Therefore, the first hypothesis in this study is formulated as follows:

H1: Current Ratio has a positive effect on dividend policy.

According to Zais (2017) a cash ratio describes the availability of cash and cash equivalents (demand deposits or other deposits in the bank that can be withdrawn at any time). Thus, this ratio is most accurate in measuring a company's ability to fulfill short-term obligations because it only takes into account the most liquid current assets. The higher this ratio, the better the short-term financial condition of the company, and vice versa (Sudana, 2015). According to Marietta and Sampurno (2013), the cash position or liquidity of a company is an important factor that must be considered before making a decision to determine the amount of dividends to be shared with shareholders. According to Idawati and Sudhiarta (2014) dividends are cash outflow and this affects the company's cash position. Sartono (2014) asserts that the greater the company's cash position, the greater the ability of a company to pay dividends. Empirically, previous research produced the same conclusions (Monika & Sudjarni, 2018; Idawati & Sudhiarta, 2014). Therefore, the second hypothesis of this study is formulated as follows:

H2: Cash Ratio has a positive effect on dividend policy.

Pongmari (2017) states that the amount of cash flow from operating activities is an indicator that determines whether the company's operations can generate sufficient cash flow to pay off loans, maintain the company's operating capability, pay dividends and make new investments without relying on external funding sources. In relation to dividend policy, cash flow is seen as a reinforcing factor in a company's ability to pay dividends (Ressy & Chariri, 2013). Sanjaya and Wirasedana (2018) and Natalia and Santoso (2017) in their research showed that the higher the operating cash flow, the higher dividends paid by the company. Therefore, the third hypothesis of this study is formulated as follows:

H3: Operating Cashflow Ratio has a positive effect on dividend policy.

Jensen and Meckling in 1976 introduced agency theory that discussed the relationship of conflict between agents (managers) and shareholders. Devi and Suardikha (2014) say that the conflict between managers and shareholders can be reduced by a monitoring tool for management to equalize these interests, one of which is by paying dividends. According to Naufina and Rafik (2017), in the agency theory literature it is proven by leverage, one of which is DAR. Sudana (2015) the high DAR can close the company's opportunity to get debt back from the bank so that the company will tend to hold net income for financing. Creditors prefer a low debt ratio because the lower the ratio, the greater the protection against creditors' losses in the event of liquidation (Brigham & Houston, 2011). Dewi (2016) argues that the higher the DAR will result in the greater income used to pay the debt and interest expense so that the company's ability to pay dividends will be smaller because of the debt that must be prioritized. The results of previous studies show that there is a negative influence between the debt to total asset ratio to the DPR (Sunarya, 2013; Rice & Sulia, 2014). Therefore, the fourth hypothesis of this study is formulated as follows:

H4: Debt to Total Asset Ratio has a negative effect on dividend policy

According to Dewi (2008) Agency conflict occurs because managers tend to try to prioritize personal interests in the form of maximizing awards from the management of the company while shareholders will try more to maximize their wealth so that they do not like the manager's personal interests because it will add costs to the company and will reduce profits to be received by shareholders. According to Mohamed in Naufina and Rafik (2017), the existence of dividend payments can reduce the amount of funds available to managers so that managers no longer allow to do things that are in conflict with the interests of shareholders such as investing in less optimal investment income. According to them, this theory can be proven by leverage, one of which is DER. Hanif and Bustamam (2017) explain that the greater the DER can have an impact on financial distress and bankruptcy because the company must pay high interest on debt so that the company's profits decline and further reduce its ability to distribute dividends. In addition, Darsono and Ashari in Akmal et al. (2016) states that this ratio assesses the limits of companies in borrowing money. The higher this ratio means that companies are increasingly limited to borrowing money from creditors. The low opportunity tends to encourage the company to hold back its net profit so that there is no dividend distribution because the external funding source is limited. Previous research has shown that DER has a negative effect (Silviana et al., 2014, Monika & Sudjarni, 2018; Sabri et al., 2017; Aristanto & Prasetiono, 2015; Sari & Sudjarni 2015; Parera, 2016). Therefore, the fifth hypothesis of this study is formulated as follows:

H5: Debt to Total Equity Ratio has a negative effect on dividend policy

According to Ambarwati in Devi and Suardikha (2014), signaling theory explains the reasons for providing financial and non-financial report information to external parties, one of which is shareholders. The reason is to reduce information asymmetry. According to Bhattacharya in Naufina and Rafik (2017) Signaling theory states that investors consider changes in dividends as a sign for management's estimates of profits. According to him dividends are a tool for managers to signal to shareholders about the expected future performance and profitability of the company. According to Maskiyah and Wahjudi (2013) company profitability as measured by ROA can increase a company's ability to pay dividends. Natalia and Santoso (2017) say that ROA determines the amount of dividends because dividends are part of the net profit generated by the company, therefore dividends will be distributed if the company earns a profit. The results of the research that have been conducted show a positive effect of ROA on the DPR (Akmal et al., 2016; Zais, 2017; Silviana et al., 2014; Yani & Dana, 2017; Devi & Suardikha, 2014; Hanif & Bustamam, 2017; Sunarya , 2013; Mardani, 2018; Purwanti & Sawitri, 2011; Aristanto & Prasetiono, 2015; Naufina & Rafik, 2017). Therefore, the sixth hypothesis of this study is as follows:

H6: Return on Asset has a positive effect on dividend policy.

According to Safrida (2014) the signaling model is consistent with the observation that dividend payout is related to profitability where companies that have large free cash flows will pay a large amount of dividends. Announcements stating that a company has decided to increase shareholders' dividends may be interpreted by investors as good news, because higher dividends per share indicate that companies believe that future cash flows will be large enough to bear high dividend rates (Weston & Copeland in Lapolusi, 2013). Proof of this theory in this study was also measured by ROE. The higher this ratio describes the symptoms that are not good (Sartono, 2014). The higher the ratio means that the less own capital is used compared to the debt or obligations of Asnaini et al., (2013). Purwanti and Sawitri (2011) said that the high dependence of corporate capital on external parties in this case creditors caused the company's burden to be heavier. Therefore, companies will find it difficult to find external funding sources, especially debt. Consequently, it is likely that the company will retain its net income rather than share it as dividends. Previous research has proven that the high DER reduces dividend payments (Akmal et al., 2016; Silviana et al., 2014; Monika & Sudjarni, 2018; Sabri et al., 2017; Aristanto & Prasetiono, 2015; Sari & Sudjarni, 2015; Parera, 2016). Therefore, the seventh hypothesis of this study is as follows:

H7: Return on Equity has a positive effect on dividend policy.

NPM is used to measure a company's ability to generate net income from sales made by the company (Sudana, 2015). According to him this ratio reflects the efficiency of all parts, namely production, personnel, marketing, and finance within the company. According to Brigham & Houston (2011) if there is a profit margin that is smaller than the industry average, then this happens because the costs are too high. High costs themselves generally occur due to inefficient operations. These inefficiencies can occur in the production, personnel and marketing sectors. According to Gitman and Chad (2012) the value of profitability of the company is reflected in the increase in NPM so that it increases the company's ability to pay dividends and will attract investors to invest their capital. Sabri et al. (2017) said that the higher the value of NPM means the better the company in generating profits so that the higher dividends that can be paid by the company. Research results by Wijaya (2017) and Sabri et al. (2017) shows that NPM has a positive effect on dividend policy. therefore, the eighth hypothesis of this study is as follows:

H8: Net Profit Margin has a positive effect on dividend policy.

Life cycle theory explains that a company will develop and move from one stage of development to another. In addition, the company will follow a pattern that can be predicted and characterized by various stages of development. According to Arko et al. in Naufina and Rafik (2017) life cycle theory affects dividend policy. Companies that grow with high cash flows and projects are more likely to pay dividends while small companies must save those cashes to invest and withhold expenses. According to Naufina and Rafik (2017), in many literature, some researchers prove life cycle theory by using proxy size companies. The bigger a company, the higher the dividend payment. This indicates that large companies are able to distribute dividends higher than small companies because small companies must save their money to invest. Companies that are at an early stage with profitable investments, but the equity they have is limited to maintaining it. Thus, Vogt in Dewi (2008) said that large companies are companies that are more likely to distribute dividends because they have high profits and less attractive investments. Therefore, the ninth hypothesis of this research is as follows:

H9: Firm Size has a positive effect on dividend policy.

According to Harahap in Ressy and Chariri (2013) Company growth illustrates the percentage growth of company posts from year to year. One of the posts used as an indicator of growth is sales (Akmal et al., 2016). Brigham and Houston (2011) said that the company's growth will influence dividend policy where with a good level of growth the company will certainly allocate the funds obtained to invest so that it will reduce dividend distribution to shareholders. Silviana et al. (2014) suggest that the greater the growth of the company, the company will prefer using the profits earned to finance expansion rather than using it to pay dividends. Thus, in this case, the growth of the company negatively affects the DPR where the greater the growth of the company, the smaller the dividends paid by the company. The findings in the study also reveal that growth causes a decrease in dividends (Janavi, 2017; Rice & Sulia, 2014; Akmal et al., 2016; Lapolusi, 2013; Silviana et al., 2014; Sari & Sudjarni 2015; Yani & Dana, 2017) Therefore, the tenth hypothesis of this research is as follows:

H10: Growth has a negative effect on dividend policy

Research Method

Population and Sampling

The population in this study were companies belonging to the manufacturing industry that were listed on the Indonesia Stock Exchange in 2015. 2017. The sampling technique used was purposive sampling with the criteria that the company was consistently listed on the IDX (not IPO, not delisted, not moving sectors) and the company presented a complete financial report that ended on December 31.

Tabel 1
Sample Proportion

Sector	Population	Sample	Proportion to Sector Population	Proportion to Total Sample
Basic and Chemicals Industry	70	53	76%	45%
Miscellaneous Industry	44	31	70%	26%
Consumers Goods Industry	43	34	79%	29%
Total	157	118	75%	100%

Source: Data Processed.

Operationalization Variable

The variables in this study are divided into two, namely the independent variable and the dependent variable. The dependent variable in this study is dividend policy in the form of non-metric or categorical in which companies that distribute dividends are given a value of 1 while companies that do not distribute dividends are given a value of 0.
The independent variable in this study consists of ten financial ratios which are included in the liquidity ratio, solvency / leverage, profitability, company growth, and company size as follows.
Liquidity. Current Ratio is the ratio between current total assets and total current liabilities. Cash Ratio is a ratio calculated by comparing cash and cash equivalents with current liabilities. The operating cash flow ratio is one of the cash flow ratios which is a comparison between net cash flow from operating activities with total current liabilities.
Solvency / leverage. Debt to Total Asset Ratio is calculated by dividing the total liabilities of the company by the total assets of the company. Debt to Total Equity Ratio is the ratio between the total liabilities of a company and the total amount of the company's equity.
Profitability. The ratio of return to assets is the profitability ratio calculated by comparing the company's net income with the total assets it has. Return on Equity ratio is a ratio calculated by dividing the company's net profit by its total equity. the ratio used to measure the level of profitability of the company generated from the sales made so that this ratio is the result of the division between the company's net profit and total sales.
Firm size (Firm Size) in this study is determined from the total value of all assets owned by the company by measuring using the natural logarithm of total assets.
Company growth (Growth) in this study is represented by the company's sales growth which is calculated by dividing the difference between the current sales and the previous year with the total sales of the previous year.

Data Analysis Technique

Descriptive Statistical Analysis

Descriptive statistics are used to identify data by describing or describing data that has been collected both as a whole and separately in each group.

Test Discriminant Assumptions

Discriminant analysis has some assumptions that the data comes from multivariate normal distribution and the covariance matrix of the two groups of companies is the same. To test whether the data are normally distributed or not, the method of the significance of skewness and the value of kurtosis is used. if the value of Zskew and Zkurt is smaller than the critical value, then the residual decentralized is normally distributed (Ghozali, 2011). While to test whether the data has the same covariance matrix or not, M Test Boxes is used with a significance level of 95%. This assumption is fulfilled if the test results show a significance value greater than 0.05
The data analysis technique used in this study is the discriminant test. The discriminant test is used because this study uses categorical variables. The test was conducted to find out the

independent variables that could explain the differences between the two groups or sample categories significantly.

Discriminant Analysis

Discriminant analysis in this study tries to produce the best linear combination of ten independent variables in the form of financial ratios that will separate the group of companies on the basis of their tendency to make dividend policy. The combination produces a discriminant function as stated in the following equation (Ghozali, 2011):

$Z = a + \beta 1X1 + \beta 2X2 + \beta 3X3 + \ldots\ldots\ldots + \beta nXn$

The procedure used in executing discriminant analysis in this study is stepwise or done by entering predictors in stages depending on their ability to distinguish groups. The method used in variable maintenance is Mahalanobis.

Test the accuracy of the Prediction Model

The level of accuracy of model predictions can be done through the cutting score mechanism, namely by calculating the midpoint of the two centeroids of each group. The midpoint value then becomes the boundary value used to classify sample cases. If the sample has a discretionary score value that is smaller than the limit value, then the sample is classified into a company that tends not to distribute dividends, and vice versa. The number of cases in the sample that are correctly classified are then compared with the total number of samples to produce the accuracy of the model. The value of the midpoint or cut off is calculated as follows (Ghozali, 2011):

Cutoff value = (n1 Z1 + n2 Z2) / (n1 + n2)

Results And Discussion

Overall Descriptive Statistics

The following table shows descriptive statistics of the research variables of all samples, both companies that distribute dividends and those who do not distribute dividends.

Tabel 2
Overall Statistic Descriptive Result

	N	Minimum	Maximum	Mean	Std. Deviation
Current_Ratio	354	,1843	9,6773	2,097969	1,4977040
Cash_Ratio	354	,0037	6,0516	,510985	,8561007
Operating_CF_Ratio	354	-,8193	2,4498	0,329790	,4683644
Debt_to_Asset_Ratio	354	,0900	3,0300	,509237	,3519581
Debt_to_Equity_Ratio	354	-5,1200	8,9100	1,029124	1,3349366
Return_on_Asset	354	-,2991	,5267	,042529	,0882550
Return_on_Equity	354	-,8207	1,3585	,083946	,2020473
Net_Profit_Margin	354	-,5284	0,4459	,034763	1,043887
Firm_Size	354	11,4001	19,5047	14,743302	1,5826557
Growth	354	-,9539	,7868	,036287	,1850394
Valid N (listwise)	354				

Sumber: Data Diolah

Source: Data processed

According to table 1 above, it can be seen that the average manufacturing company has a fairly good level of liquidity. However, the level of profitability and growth of these companies is so low. Meanwhile, the use of debt in the operations of the company is also quite high because half of the assets are financed with debt and the company's capital is also dominated by debt.

Group Descriptive Statistics

The following table shows descriptive statistics of the research variables presented comparatively between the two groups of manufacturing companies that distribute dividends and those who do not distribute dividends.

Table 2
Results of Group Descriptive Statistics

Dividend_Policy		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
0	Current_Ratio	1,720328	1,1872287	188	188,000
	Cash_Ratio	,310189	,6100546	188	188,000
	Operating_CF_Ratio	,180071	,3539224	188	188,000
	Debt_to_Asset_Ratio	,595479	,4354533	188	188,000
	Debt_to_Equity_Ratio	1,137713	1,6798136	188	188,000
	Return_on_Asset	,000385	,0675390	188	188,000
	Return_on_Equity	,012752	,1578898	188	188,000
	Net_Profit_Margin	-,013826	,1037378	188	188,000
	Firm_Size	14,23772	1,3323594	188	188,000
	Growth	,014065	,2143500	188	188,000
1	Current_Ratio	2,525659	1,6896583	166	166,000
	Cash_Ratio	,738394	1,0238278	166	166,000
	Operating_CF_Ratio	,499351	,5223795	166	166,000
	Debt_to_Asset_Ratio	,411566	,1790039	166	166,000
	Debt_to_Equity_Ratio	,906145	,7654135	166	166,000
	Return_on_Asset	,090259	,0847246	166	166,000
	Return_on_Equity	,164575	,2162595	166	166,000
	Net_Profit_Margin	,089791	,0733494	166	166,000
	Firm_Size	15,31589	1,6509972	166	166,000
	Growth	,061454	,1413510	166	166,000

Source: Data processed.

Referring to table 2, it can be said that groups of manufacturing companies that distribute dividends tend to have better financial ratio values. The level of liquidity of manufacturing companies that distribute dividends is higher than those who do not distribute dividends. The use of debt by companies that distribute dividends is also less than companies that do not distribute dividends. In addition, groups of companies that distribute dividends also have a better profit rate. And when viewed from the size of the company, companies that distribute dividends tend to be bigger than companies that do not distribute dividends.

Normality test

Table 3
Skewness and Kurtosis

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Unstandardized Residual	354	,141	,130	-1,017	,259
Valid N (listwise)	354				

Source: Data processed.

ZSkewness = 0.141 / √ (6/354) = 1.083 ZKurtosis = (- 1.1017) / √ (24/354) = -4,237
Table 3 shows descriptive statistics obtained from unstandardized residuals. The provision is that a data is said to have a normal distribution if it has a calculated Z value smaller than Z table. With a significance level of 0.05, Z table is 1.96. The Zskewness value in this study was smaller than the Z table value (1.083 <1.96) and the same as Zkurtosis (-4.237 <1.96). Thus, it can be said that Unstandardized Residuals are normally distributed.

Test the Similarity of the Covariance Matrix

Table 4
Determinant Log Test Results

Dividend_Policy	Rank	Log Determinant
0	4	-10,266
1	4	-8,996
Pooled within-groups	4	-9,332

Source: Data processed.

Table 4.4 shows the log determinant values of each covariance matrix in the sample group of companies. Based on the table, it can be seen that there are differences in log determinant values of the two groups of companies which produce a difference of 1,270. The greater the difference in log determinant, the higher the difference in group covariance. To prove the significance or not of this, a Box's M test is carried out as follows.
Table 5 Box's M Test Results

Box's M		119,222
F	Approx.	11,776
	df1	10
	df2	572034,878
	Sig.	0,000

Source: Data processed.

The results show that the difference in covariance matrix at 0,000 and this probability is below 0.05, it can be concluded that the covariance matrix between groups is indeed different and this violates discriminant assumptions. However, according to Ghozali (2011), the discriminant function analysis remains robust even though the assumption of homogeneity of variance is not fulfilled provided that the data does not have an outlier.

Hypothesis Testing Results Using Discriminant Analysis

Table 6
Group Average Quality Test

	Wilks' Lambda	F	df1	df2	Sig.
Current_Ratio	,928	27,395	1	352	,000
Cash_Ratio	,938	23,459	1	352	,000
Operating_CF_Ratio	,884	46,215	1	352	,000
Debt_to_Asset_Ratio	,932	25,760	1	352	,000
Debt_to_Equity_Ratio	,992	2,665	1	352	,103
Return_on_Asset	,741	123,025	1	352	,000
Return_on_Equity	,859	57,784	1	352	,000
Net_Profit_Margin	,754	114,882	1	352	,000
Firm_Size	,884	46,146	1	352	,000
Growth	,984	5,862	1	352	,016

Source: Data processed.

The table above shows whether there are differences in univariate dividend policy approaches if viewed from the average value of each of the independent variables which amount to ten. This decision can be seen from the level of significance of the value of Wilk's Lambda. If Wilk's Lambda's significance value ≤ 0.05 means that there are differences between groups. Thus, it can be concluded that univariate all independent variables except the variable Debt to Equity Ratio can distinguish groups of companies and can be used to form discriminant variables.

Table 7 Entered / Removed Variables

S	Entered	Min. D Squared					
		Statistic	Between Groups	Exact F Statistic	df1	df2	Sig.
1	Return_on_Asset	1,396	0 and 1	123,025	1	352	1,000E-013
2	Firm_Size	1,968	0 and 1	86,513	2	351	1,000E-013
3	Current_Ratio	2,243	0 and 1	65,550	3	350	1,000E-013
4	Net.Profit_Margin	2,335	0 and 1	51,021	4	349	1,000E-013

Source: Data processed.

Table 7 shows the process of selecting variables with the Stepwise Model and using the Mahalanobis Distance method. The result is that there are four variables, namely Return on Assets, Firm_Size, and Current Ratio, and Net Profit Margin, which are selected as the best predictor variables entered into the discriminant model. The process of selecting this variable has also gone through a multivariate test of significance in each step and the four variables are indeed significantly able to distinguish dividend distribution decisions.

Table 8
Canonical Discriminant Function Coefficients

Unstandardized Coefficients	Function 1	Rank
Return_on_Asset	6,559	1
Net_Profit_Margin	3,212	2
Firm_Size	,388	3
Current_Ratio	,232	4
(Constant)	-6,602	

Source: Data processed.

From the data in the table above, it can be seen first of all that the four financial ratios that determine the dividend policy have a positive effect on the possibility of the company paying its dividends. Meanwhile, the other six financial ratios are not included in the model so that they are considered not to have a significant influence on dividend policy. The discriminant power of these four determinants of dividend policy also varies. if sorted by discriminant power as measured by the canonical discriminant function coefficient, ROA is the most decisive predictor of whether a company will pay dividends or not. Then followed by NPM and after that FS and finally CR. This indicates that the main consideration of the company in distributing dividends is the level of profits earned during the year operating as indicated by ROA. However, what level of profit is taken into account considering that each company can only make a profit every year, then later with the existence of NPM shows that the intended level of profit is the level of profit when the company is able to realize the input efficiency it does. But then, the profits from the company did not immediately make the company distribute dividends, but the company considered the size of the company again. If the company views that the size of the company that is now relatively small and they are thinking of continuing to enlarge the company, then chances are that the profits will be held back. However, if the company considers that the company is large enough, the last factor to consider is the level of liquidity indicated by CR. Dividends are only one of several current liabilities of the company so that dividend payments are made without waiving the repayment of other short-term obligations. The results of this study also point out that manufacturing companies in Indonesia are more likely to follow signaling theory and life cycle theory. These results include

the results of previous studies such as Akmal et al. (2016), Zais (2017), Marietta and Sampurno (2013), Yani and Dana (2017), Natalia and Santoso (2017), Devi and Suardikha (2014), Hanif and Bustamam (2017), Mardani (2018), Purwanti and Sawitri (2011), Aristanto and Prasetiono (2015), Naufina and Rafik (2017), Wijaya (2017), Dewi, (2008), Sanjaya and Wirasedana, (2018), Maskiyah and Wahjudi, (2013), Sari and Sudjarni (2015), Sarmento and Dana (2016).
Furthermore, from table 9 the discriminant function equation can be formed as follows:

Z = -6.602 + 0.232 CR + 6.559 ROA + 3.212 NPM + 0.388 FS

This function has been tested through multivariate test of significance and proved significant so that it can be used to determine the classification of sample groups. In the Eigenevalues results, this function has a canonical correlation of 0.607. If the value is squared (0.607) 2, then the number 0.368 can be obtained which can be concluded that 36.8% of the dependent variable variation (dividend policy) can be explained by four independent variables (ROA, NPM, CR, and Frim Size) while the remainder is 63, 2% is explained by variables outside of this discriminant function

Accuracy of the Prediction Model

Table 9
Functions at Group Centeroids

Dividend_Policy	Function 1
0	-,717
1	,811

Source: Data processed

the cut-off value can be determined by multiplying the centroid value of group 0 with the number of samples in group 1 then adding it to the product of the centroid value of group 1 with the number of samples in group 0. The results are divided by the total sample size. Based on table 9, mathematically these calculations are described as follows:

Cut off score = ((-0,717 × 166) + (0.811 × 188)) / (166 + 188) = 0.094480226

The cut-off value is used to predict sample classification. If the sample has a z discriminant score greater than the cut-off value, then the sample is predicted to enter the group of manufacturing companies with a tendency to distribute dividends, and vice versa.
The accuracy of the prediction model illustrates the level of sample error that is predicted to be different and different from the predetermined classification. The following is a table of classification accuracy levels.

Table 10
Classification Results

Dividend_Policy			Predicted Group Membership		Total
			0	1	
Original	Count	0	159	29	188
		1	42	124	166
	%	0	84,6	15,4	100,0
		1	25,3	74,7	100,0

Source: Data processed.

Based on the table above, there are 29 samples predicted to be misclassified in groups of companies that do not distribute dividends. Based on the discriminant z score of 29 cases of this

company, they should be included in the sample of companies that distribute dividends. Therefore, misclassification in this group is 15.4%. Meanwhile, in the sample group of companies that distributed dividends there were 42 cases that were predicted not to distribute dividends. Therefore, misclassification in this group is 25.3%. Thus, overall 71 samples were misclassified and 283 samples were correctly classified. Thus, the classification level given by this discriminant model is 79.9% (283/354). In other words, the prediction model formed in this study is quite accurate because the level of accuracy of the classification is above 50%.

With the model that has been formed and the results of the classification of observational samples that have been known, then the company can be classified based on the tendency of dividend policy. This study uses panel data for three years, which means that the observation sample is a collection of measurements of financial ratios repeatedly for three times from the same manufacturing company. Therefore, a company will be said to tend to distribute dividends if it is classified as three years in a row classified as a company that tends to distribute dividends, and a company will be said to tend not to distribute dividends if it is classified as a company for three consecutive years. tend not to distribute dividends. Meanwhile, companies that have two different predictive classifications in the three years are not predetermined. After sorting the predictive results of the observation samples based on the conditions mentioned previously, then from 118 samples of manufacturing companies, 41 companies were stated to tend to distribute dividends, 55 companies tended not to distribute dividends, and 22 companies could not be determined.

Conclusions

The conclusions that can be drawn from this study are (1) the return on asset ratio, net profit margin, firm size, and current ratio able to distinguish significantly from the group of companies that distribute dividends and companies that do not distribute dividends. The four variables have a positive distinguishing value which means the higher the value of the four ratios, the more likely a company distributes dividends (2) The dividend policy model formed is able to correctly group cases 79.9% of which 74.7% of cases share dividends have been classified correctly and cases that do not distribute dividends have been classified 84.6% correctly (3) The classification of companies shows that 41 companies are said to tend to distribute dividends, 55 companies tend not to distribute dividends, and 22 tendencies cannot be determined.

For Researchers, it is further recommended to add other variables that have opportunities to influence dividend policies, such as investment opportunities, managerial ownership, institutional ownership, taxes, and stock prices. In addition, it is also recommended to increase sample members and / or use different analytical tools.

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