

Factors Affecting Free-Cash-Flow (FCF) with Dividend Policy as a Mediating Variable

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ABSTRACT

The purpose of research was to obtain empirical evidence about the impact of board structure, board independence, and leverage on Free-Cash-Flow (FCF) with dividend policy as a mediating variable among manufacturing companies during the period of 2016-2018. This study used 29 manufacturing companies selected using purposive sampling method. The statistical method used to test the research hypotheses was the path analysis model. The results of this research were that board structure had positive and significant effect on FCF, board independence and leverage did not have significant effect on FCF, dividend policy had negative and significant effect on FCF, and dividend policy was able to mediate the effect of board structure on FCF. Meanwhile, dividend policy was unable to mediate the effect of board independence and leverage on FCF. For further research, it is recommended to extend the period of the study as well as adding other independent variables.

Keywords: *Free cash flow, dividend policy, board structure, board independence, leverage*

1. INTRODUCTION

Investors nowadays are getting more interested in investing their funds in manufacturing companies. Before investing the funds, usually they see several things such as the performance, profitability, and also Free-Cash-Flow (FCF) of the company. This is because they want to get satisfactory results and also high dividends. In distributing dividends, usually companies use FCF or the cash flow available to be distributed to the shareholders or owners, after they have invested in fixed asset and working capital necessary for the sustainability of their business.

FCF is related to the issuance or payment of dividends related to two parties, namely the management or parties within the company, and the shareholders or investors. This is related to the agency theory which explains the relationship between the principal (owner) and the agent (management), which is called the agency relationship. [1] Agency relationships occur when one or more people (principal) employ another person (agent) to provide a service and then delegate the decision making authority to the agent. Management tends to use this FCF to make investments to increase the company's financial strength, while shareholders want this cash to be distributed as dividends.

[2] There are several things that affect FCF, which turns out that the board structure, board independence, and leverage will affect the company's policy on dividend distribution. This occurs because the board structure and board independence will affect the decision of dividend distribution. If in one board structure period, the independent board causes the dividend pay-out rate to decline, then this will indirectly make FCF at the end of the period to be high. Likewise, with leverage, the high-debt

policy within a period will make the dividend held by the company, and indirectly will make FCF at the end of the period to be high as well.

2. LITERATURE REVIEW

[1] Agency Theory is the objective difference between the owner, or in this case it is called as principal, with management or agent. The relationship between the agency theory and the excess of FCF will increase managerial motivation and provide the managers incentives to pursue their own interests. This is what makes the managers reluctant to share dividends or company profits with the shareholders.

FCF is company's cash or fund that can be distributed to creditors or shareholders that are not used as working capital or investment in fixed assets [3]. [4] FCF can be used by managers to pay dividends or debt / loan interest to creditors or lenders, and sometimes can be used to buy new assets, to buy back the company shares, as well as to invest. [5] Dividend policy is an activity or practice carried out by the management to make decisions about dividend payments in the current year, which in this case it concerns on the amount to be paid and how the distribution will be done to shareholders. [6] Dividend policy is a policy conducted by the management of the company to decide whether the company will pay a portion of the profit earned in the period of running to the shareholders, or management will hold it as a profit on the stand that will be used to get the capital gains of the investments that have been made.

The Board of Directors is a number of people included in the organ of the company whereas this board can determine the strategies and policies that will be used by the company. [7] The size of the Board of Directors will affect the operational processes of the company. From the statements

above, it can be said that the Board of Directors is an important part of the company, because this board is a representative of the company, both inside and outside, and this board will set policies that will be carried out by the company, and will be responsible for all company's activities in the corresponding period.

According to the Indonesian Constitution Number 40 Year 2007 about the Limited-Liability Company, the Board of Commissioners is the company's organ in charge of supervision in general and / or specifically in accordance with the Articles of Association and give advice to the Board of Directors. [2] The independent Board of Commissioners manages to significantly reduce the FCF by conducting the dividend distribution. [8] There was a positive influence of the independent Board of Commissioners on the dividend payments in Australia. To reduce the possibility of the opportunist managers' interests, shareholders in this case appoint the board of commissioners as a form of representation in overseeing the activities of managers in managing the company. The conclusion of these statements is that the Board of Commissioners is appointed by the shareholders to be their representative in overseeing the management and to provide better business advice to the managers.

Leverage can be used to see how much a company has been held by outside parties, or called as debts, combined with the ability of the company itself that can be seen from its capital [9]. Leverage can be used by outside parties of the company to find out how much the company is able to finance its operations when being compared to the debt that can be seen from capital. Besides, leverage is also used to find out how much the company's ability to pay the debt it receives by using some part of its own capital.

This research model is illustrated as follow:

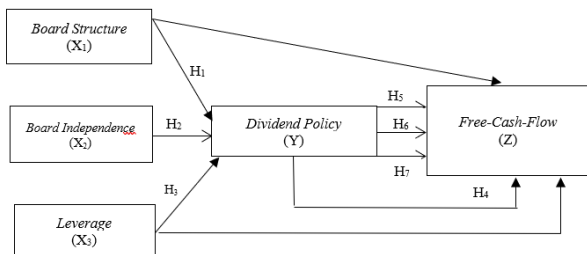


Fig 1. Research Model

The large number of Boards of Directors can determine the size of the company. The greater number of Board of Directors means that the number of company projects carried out will increase the company's revenue. With large income, the profit generated becomes more optimal. If this happens, the company will tend to distribute more dividends. Thus, the first hypothesis can be developed as follow:

H₁ : Board Structure has a positive and significant effect on Dividend Policy.

The Board of Commissioners helps shareholders indirectly to get dividends, because this Board will reduce the agency costs such as cash holdings and force the managers to spend

the cash wisely. With less cash, managers will be more inclined to distribute dividends. Thus, the second hypothesis can be developed as follow:

H₂ : Board Independence has a positive and significant effect on Dividend Policy.

Leverage is used to calculate the company's FCF by reducing the interests that must be paid to the company's creditors. So, the higher the value of leverage means the greater the value of the company's debt, thus it will show the amount of interest that must be paid by the company, which in turn will reduce the value of FCF that will finally affect the dividend. The size of dividend is determined by the amount of FCF. Because the leverage is high, the FCF is low, which means that the dividend will be low as well. Thus, the third hypothesis can be developed as follow:

H₃ : Leverage has a negative and significant effect on Dividend Policy.

Shareholders or investors in this case believe that the more dividends distributed by the company, the more positive the signal will be given to them. If the distribution of dividends is done in the current period, then the company's funds for FCF will be less. The more the dividend distributed to investors, the more strongly they will believe that the company has funds or income that exceeds the expenses. The greater the dividends, the smaller the company's FCF will be. Thus, the fourth hypothesis can be developed as follow:

H₄ : Dividend Policy has a negative and significant effect on Free-Cash-Flow.

In the case of dividend distribution, it is believed that the greater the funds spent in form of dividends, the greater the income that the investors believe the company has. This can result in lower cash flow in the investor's perspective, who believe that this is a good thing, because the managers must act according to their needs and be more careful in using the FCF. Thus, the fifth hypothesis can be developed as follow:

H₅ : Dividend Policy mediates the effect of Board Structure on Free-Cash-Flow.

The independent Board of Commissioners oversees the running of company's operations and has the right to provide the advice and opinions to managers in this matter for the good of the company. Because managers are overseen by the representatives of investors, in this case is the independent Board of Commissioners, the managers will tend to use FCF or cash more wisely than they did previously. This will make FCF funds become larger and the managers will be able to pay or distribute dividends to the shareholders. Thus, the sixth hypothesis can be developed as follow:

H₆ : Dividend Policy mediates the effect of Board Independence on Free-Cash-Flow.

With the distribution of dividends, investors believe that the company's performance will be better in the future. As already explained previously, investors believe that the

more dividends paid, the more the income from the company will be compared to the expenses. In other word, it indicates that the expenses incurred by the company are lower than the income. So, with lower expenditures, investors are more likely to feel that the corporate debt will also be lower due to low spending. Thus, it can be concluded that the leverage represented by debt ratio can be considered small, when a company can distribute dividends, which means the FCF by large companies. Thus, the seventh hypothesis can be developed as follow:
 H_7 : Dividend Policy mediates the effect of Leverage on Free-Cash-Flow.

3. METHODOLOGY

This research focused on all manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the period of 2016-2018. The sample selection was done by using the purposive sampling method. The amount of data qualified was as many as 87 companies. The operational variables in this study consist of FCF as the dependent variable. Dividend Policy becomes a mediating variable. Meanwhile, Board Structure, Board Independence, and Leverage serve as the independent variables. The proxy from FCF, Dividend Policy, Board Structure, Board independence, and Leverage can be seen in Table 1 as follows:

Table 1. Variable Operationalizations

Variables	Proxy	Scale
Independent Variables		
Board Structure	Size of Board Structure	Nominal
Board Independence	Board Independence = Size of Independent Commissioners Size of Independence Directors	Ratio
Leverage	Leverage = Total Debts Total Assets	Ratio
Mediating Variabels		
Dividend Policy	Dividend Policy = $\frac{\text{Dividend Paid}}{\text{Net Income}}$ Dependent Variable	Ratio
Free-Cash-Flow	FCF = EBITDA- Interest Income – Dividend Tobin’s Qt -1	Ratio

This study conducted a descriptive statistical test after it did the common test of effect model, which were test of fixed-effect model, and test of random-effect model. Subsequent tests were conducted in order to determine the estimated model of the regression panel data used in this study. The tests carried out were Chow-Test, Hausman-Test, and Lagrange Multiplier-Test (LM). For hypothesis tests, we used F-Test, Coefficient of Determination (CD) Test, t-Test, and Sobel-Test.

4. RESULTS AND DISCUSSIONS

4.1 First-Line Regression Analysis

Based on the tests that had been done, it can be concluded that the most appropriate test in this research was the test of random-effect model. This test was conducted in order to find out how much the direct effect of Board Structure, Board Independence, and Leverage on Dividend Policy.

Table 2. First-Line Regression Test

Dependent Variable: DP
 Date: 06/13/19 Time: 12:47
 Sample: 2016 2018
 Periods included: 3.
 Cross-sections included: 29
 Total panel (balanced observations): 87
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.225267	0.383086	-0.58803	0.5581
LEV	-0.046334	0.107551	-0.430809	0.6677
BI	2.224550	4.403417	0.505187	0.6148
BS	0.103779	0.041440	2.504293	0.0142

Effects Specification

	S.D.	Rho
Cross-section random	0.264034	0.2826
Idiosyncratic random	0.420658	0.7174

Weighted Statistics			
R-Squared	0.098512	Mean dependent var	0.328690
Adjusted R-Squared	0.065928	S.D. dependent var	0.439521
S.E. of regression	0.424785	Sum squared resid	14.97673
F-statistic	3.023337	Durbin-Watson stat	1.108967
Prob(F-statistic)	0.034186		
Unweighted Statistics			
R-squared	0.154387	Mean dependent var	0.485517
Sum squared resid	20.50302	Durbin-Watson stat	0.810061

Source: Data Analysis Results

Based on the results in Table 2, the p-value of F-Test was 0.034186 (less than 0.05). So, it can be concluded that the regression analysis of first-line in this study satisfied the feasibility model of a data-regression panel and simultaneously affected the dividend policy. The result of CD Test showed a value of 0.065928, which means that the variations of Board Structure, Boards Independence, and Leverage could only explain the variation of Dividend Policy as much as 6.59%.

The result of the first hypothesis test indicated that the beta-coefficient was 0.103779 with the significance value of 0.0142 (less than 0.05). Thus, the first hypothesis was accepted. From this result, it can be known that board structure had positive and significant effect on dividend policy. The large number of Board of Directors shows that the company size is large, so the company's revenue will be greater than that of smaller size. The bigger the company, the bigger the Board of Directors will be. It means that the more projects can be carried out, thus the profits obtained will be greater, and finally the dividend distribution to investors will be greater as well.

The result of the second hypothesis test indicated that the beta-coefficient was 2.224550 with the significance value of 0.6148 (greater than 0.05). Thus, the second hypothesis was rejected. From this result, it can be known that board independence had positive but not significant effect on dividend policy. The independent Board of Commissioners would prefer capital gain to dividend distribution to investors. This may happen because the independent Board

of Commissioners will advise the managers to invest funds in the company in order to get investment opportunities, thus can benefit the minority shareholders in the future.

The result of the third hypothesis test indicated that the beta-coefficient was -0.046334 with the significance value of 0.6677 (greater than 0.05). Thus, the third hypothesis was rejected. From this result, it can be known that the leverage had negative but not significant effect on dividend policy. Companies with high or low debt levels do not affect the size of their dividend distributions, because basically dividends are heavily depended on cash flow. Certain debt levels have been set from the beginning of the period by the companies, so those with high debt levels can still continue to distribute their dividends. And it is possible for those with low debt levels to not distribute the dividends, if they do not have sufficient earnings for that purpose.

4.2 Second-Line Regression Analysis

This test was conducted in order to find out the role of dividend policy in mediating the effect of Board Structure, Board Independence, and Leverage on FCF. We also conducted the Sobel-Test to find out the value of Z-score as well as the direct effect of Dividend Policy on FCF. The results of the remaining hypotheses tests can be seen in Table 3 as follows.

Table 3. Second-Line Regression Test

Method: Panel EGLS (Cross-section random effects)
 Date: 06/13/19 Time: 12:48
 Sample: 2016 2018
 Periods included: 3.
 Cross-sections included: 29
 Total panel (balanced observations): 87
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	23.67446	1.473247	16.06958	0.0000
DP	-0.669236	0.097560	-6.859707	0.0000
LEV	-0.006344	0.090869	-0.069816	0.9445
BI	8.993469	7.310913	1.230143	0.2222
BS	0.499083	0.208932	2.388740	0.0192

Effects Specification

	S.D.	Rho
Cross-section random	2.457300	0.9845
Idiosyncratic random	0.308310	0.0155

Weighted Statistics			
R-Squared	0.399153	Mean dependent var	1.936920
Adjusted R-Squared	0.369843	S.D. dependent var	0.392797
S.E. of regression	0.311812	Sum squared resid	7.972596
F-statistic	13.61850	Durbin-Watson stat	1.226175
Prob(F-statistic)	0.000000		
Unweighted Statistics			
R-squared	0.077850	Mean dependent var	26.80893
Sum squared resid	529.4166	Durbin-Watson stat	0.018465

Source: Data Analysis Result

The result of the fourth hypothesis test indicated that the beta-coefficient was -0.669236 with the significance value of 0.0000 (less than 0.05). Thus, the fourth hypothesis was accepted. From this result, it can be known that dividend policy had a negative and significant effect on FCF. This can happen, because when a company wants to attract investors, it will distribute dividends to them as a reciprocation for the trust in investing in the company. The number of dividends distributed is taken from FCF. So, it can be concluded that when the dividend is distributed by the company, the amount of FCF will be reduced.

Board structure had positive, direct, and significant effect on FCF, with the beta-coefficient of 0.499083 and the significance value of 0.0192 (less than 0.05). Board structure also had positive and significant effect on dividend policy with the beta-coefficient of 0.103779 and the significance value of 0.0142 (less than 0.05). Meanwhile, dividend policy had a negative and significant effect on FCF with the beta-coefficient of -0.669236 and the significance value of 0.0000. Thus, the total effect of board structure on FCF was: $0.499083 + (0.103779 \times -0.668236) = 0.42963036$. Therefore, the fifth hypothesis was accepted. From this result, it can be known that dividend policy was able to weaken the effect of board structure on FCF. The number of board structure will affect the amount of dividend that will be distributed, and finally will have an impact on the amount of FCF. Bigger board structure will cause higher dividend policy. More dividends that can be distributed to shareholders implies the less funds that can be retained, which means that the company's FCF will remain a little. Board independence had positive, direct, but not significant effect on FCF, with the beta-coefficient of 8.993469 and the significance value of 0.2222 (greater than 0.05). Board independence also had positive but not significant effect on dividend policy with the beta-coefficient of 2.224550 and the significance value of 0.6148 (greater than 0.05). Because those two paths as predecessors did not have significant effects as required, thus the sixth hypothesis was rejected. From this result, it can be known that dividend policy was not able to mediate the effect of board independence on FCF. This may happen, because the existence of independent Board of Commissioners does not mean that they conduct strict supervision. So, it does not guarantee that managers are

smarter or wiser in managing FCF, thus managers tend not to distribute the dividends.

Leverage had negative, direct, but not significant effect on FCF, with the beta-coefficient of -0.006344 and the significance value of 0.9445 (greater than 0.05). Leverage also had negative but not significant effect on dividend policy with the beta-coefficient of -0.046334 and the significance value of 0.6677 (greater than 0.05). Because those two paths as predecessors did not have significant effects as required, thus the seventh hypothesis was rejected. From this result, it can be known that dividend policy was not able to mediate the effect of leverage on FCF. This may happen because the low level of leverage does not affect the amount of FCF even though it is already mediated by dividend policy.

5. CONCLUSIONS AND LIMITATIONS

The conclusions of this research are: 1) board structure has a positive and significant effect on dividend policy; 2) dividend policy has a negative and significant effect on FCF; 3) board independence and leverage do not have significant effects on dividend policy; 4) dividend policy can mediate (weaken) the effect of board structure on FCF; 5) dividend policy is not able to mediate the effects of board independence and leverage on FCF.

The limitations in this study are: (1) This research basically only had three independent variables consisting of board structure, board independence, and leverage. (2) This research focused only on the companies in manufacturing sector listed on the IDX. (3) The period used in this research was only three years, which was from 2016 to 2018. The suggestions for further research that can be provided are extending the research period and adding other relevant variables such as company value, financial performance, managerial ownership, size, and agency cost.

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