



Article history:

Received: 2018-11-17

Revised: 2019-01-21

Accepted: 2019-03-19

Keywords:

Corporate governance; Dividend policy; Free cash flow; Firm performance; Investment opportunity set

JEL Classification: D13, I31, J22

Kata kunci:

Tata kelola; Kebijakan dividen; Arus kas bebas; Kinerja perusahaan; Set kesempatan investasi

✉ Corresponding Author:

Choiri Chosiah:

Tel.+62 857 1959 6820

E-mail: choirichosiah.85@gmail.com



This is an open access article under the CC-BY-SA license

Dividend policy, investment opportunity set, free cash flow, and company performance: Indonesian's agricultural sector

Choiri Chosiah¹, Budi Purwanto², Wita Juwita Ermawati¹

¹Department of Management, Faculty of Economics and Management, IPB University
Jl. Raya Dramaga, Bogor, 16680, Indonesia

²Department of Management, Faculty of Economics, Graduate School of IPB University
Jl. Raya Dramaga, Bogor, 16680, Indonesia

Abstract

Dividends are a tool that can be an essential source of information for investors or other stakeholders as it contains information that can provide a signal about the company's prospects (dividend signaling theory). This study aims to examine the effect of dividend policy on company performance through moderation of investment opportunity set (IOS) and free cash flow (FCF) and examine the effect of the application of corporate governance on dividend policy and company performance. Based on purposive sampling technique obtained a sample of 71 companies that meet the criteria. The study was conducted using panel data regression method. The results showed that dividend policy had a significant negative effect on company performance in the following year. IOS has a positive and insignificant effect on company performance, while FCF has a positive and significant effect on company performance. IOS variable is able to moderate the relationship of dividend policy on company performance in the following year, while FCF is not able to moderate the influence of dividend policy on company performance in the following year. In addition, the corporate governance mechanism has an insignificant effect on dividend policy which shows that the corporate governance mechanism is still not effective in increasing the number of dividends paid to shareholders.

Abstrak

Dividen adalah alat yang dapat menjadi sumber informasi penting bagi investor atau pemangku kepentingan lain karena berisi informasi yang dapat memberikan sinyal tentang prospek perusahaan (teori pensinyalan dividen). Penelitian ini bertujuan untuk menguji pengaruh kebijakan dividen terhadap kinerja perusahaan melalui moderasi set kesempatan investasi (IOS) dan arus kas bebas (FCF) dan menguji pengaruh penerapan tata kelola perusahaan terhadap kebijakan dividen dan kinerja perusahaan. Berdasarkan teknik purposive sampling diperoleh sampel sebanyak 71 perusahaan yang memenuhi kriteria. Penelitian dilakukan dengan menggunakan metode regresi data panel. Hasil penelitian menunjukkan bahwa kebijakan dividen memiliki pengaruh negatif yang signifikan terhadap kinerja perusahaan pada tahun berikutnya. IOS memiliki efek positif dan tidak signifikan pada kinerja perusahaan, sedangkan FCF memiliki efek positif dan signifikan terhadap kinerja perusahaan. Variabel IOS mampu memoderasi hubungan kebijakan dividen dengan kinerja perusahaan di tahun berikutnya, sedangkan FCF tidak mampu memoderasi pengaruh kebijakan dividen terhadap kinerja perusahaan di tahun berikutnya. Selain itu, mekanisme tata kelola perusahaan memiliki pengaruh yang tidak signifikan terhadap kebijakan dividen yang menunjukkan bahwa mekanisme tata kelola perusahaan masih belum efektif dalam meningkatkan jumlah dividen yang dibayarkan kepada pemegang saham.

How to Cite: Chosiah, C., Purwanto, B., & Ermawati, W. J. (2019). Dividend policy, investment opportunity set, free cash flow, and firm performance: Indonesian's agricultural sector. *Jurnal Keuangan dan Perbankan*, 23(3), 403-417.
<https://doi.org/10.26905/jkdp.v23i3.2517>

1. Introduction

The agricultural sector plays an essential role in supplying the people's food needs, absorbing labor, improving the national economy, and generating foreign exchange. It is also one of the priority sectors for investment in the Investment Coordinating Board (BKPM), encouraging investment in capital to support food security. It also supports the processing industry of agricultural products to increase export value-added (Strategic Plan for the Investment Coordinating Board for the year 2015-2019). The role and support given to the agricultural sector should attract more investor interest in carrying out investment activities in the agricultural sector. However, this condition is not supported by the declining condition of the company's performance, and the fluctuating level of dividend payments that tend to be avoided by investors. Dividend payment rates were even observed to continue to decline in the 2012-2015 issuers in the agricultural sector (Table 1).

Table 1. Developments in the value of assets, dividends and the performance of agricultural companies in 2012-2016

Year	Assets (in Million Rupiah)	Dividend Payout Ratio (%)	Company Performance (%)
2012	114,844,021	44.80	3.11
2013	142,884,131	13.50	1.94
2014	169,427,123	28.29	3.61
2015	188,609,731	13.88	0.43
2016	196,150,074	45.32	-1.18

Source: Indonesia Stock Exchange (2018)

Based on Table 1, dividend policy reflected through the value of the Dividend Payout Ratio (DPR) shows an unstable and fluctuating value and tends to be avoided by investors who want certainty in return on investment. The company needs to maintain its dividend policy on an ongoing basis so that investors can interpret the situation as a signal on the company's performance (Shamsabadi & Chung, 2016). The total assets of the agricultural sec-

tor had experienced an increase, indicated a rise in investment in agricultural sector issuers. However, the reality is different. An increase in company performance does not support the increase in investment. The company's performance proxied through the value of Return on Assets (ROA) shows a declining value, indicating that the company is still inefficient in managing its assets to increase profits.

The determination of dividend policy is related to the optimal dividend policy theory. A dividend policy produces a balance between current dividends, future growth, and maximum company's stock price (Brigham & Houston 2014). The determination of the number of dividends is also related to the concept of signaling theory, which illustrates that dividends can send signals about the company's excellent performance. Those signals, in turn, make the market react positively to the dividend. Dividend signaling theory can provide investors with information about the company's prospects in the future.

Several studies have examined the impact of dividend policy on company performance. In line with the concept of signaling theory, Ehikioya (2015), Sukendro & Pujiharjanto (2012), Agyei & Yiadom (2011), Mai (2010), Yegon, Cheruiyot, & Sang (2014) found evidence that dividend policy had a positive effect on company performance. On the other hand, Kahn et al. (2016) found that dividend policy harmed company performance.

The diversity and inconsistency on the effect of dividend policy on company performance encourage researchers to investigate the influence of other variables as a moderator in the relationship of dividend policy and company performance. This step is taken so that the researcher can predict that other variables contribute to the interaction between dividends and company performance. The moderator variables added in this study were the Investment Opportunity Set (IOS) and Free Cash Flow (FCF).

The IOS shows the existence of favorable growth prospects or opportunities, reflecting that

the company can manage additional share capital in increasing productive assets having the potential to increase company growth (Pratiwi, 2016). Previous research proved that IOS influenced company performance. Baker (1993), Ardestani et al. (2013) Hsiao & Hsu (2013), and Pratiwi (2016) found evidence that IOS had a positive influence on company performance as measured through profitability. Growth opportunities proxied through the value of the Investment Opportunity Set (IOS) can lead to investor assuming that the company's profits will increase in the future, thus making them interested in buying the company's shares (Pamungkas & Puspaningsih, 2013).

Smith & Watts (1992) stated that companies with high levels of IOS would have a low level of dividend distribution compared to companies with low IOS levels. In conditions of high investment opportunities, companies will determine low dividend payments (Subramaniam, Devi, & Marimuthu, 2011). Conversely, in the absence or lack of investment opportunities, companies will pay higher dividends than devote to investment projects that cannot maximize shareholder value (Abor & Bokpin 2010). This measure is done to avoid agency problems, namely the potential conflicts that occur in the relationship between principals (owners) and agents (managers) (Jensen & Meckling, 1976).

The availability of FCF in companies is also known to influence company performance. Based on research conducted by Park & Jang (2013); Hong, Shuting, & Meng (2012); Yero & Usman (2013), FCF was negatively correlated to company performance. High FCF can worsen company performance because it is excessively channeled to projects that are not needed for the company (Park & Jang 2013). The results of this study were different from what was demonstrated by Lachheb & Slim (2017); Wang (2010). Those authors found a positive relationship between FCF and company performance and did not support the existence of the free cash flow hypothesis. The FCF produced by the company is the

result of the efficiency of management operations, improving the performance of the company (Wang, 2010).

High free cash flow is one of the causes of agency problems in companies. Chae, Kim, & Lee (2009) stated that excess FCF makes managers use the cash for their benefit. Company managers tend to use FCF as funds for investment activities on projects that are not needed by the company, and even on projects that have a low rate of return (Jensen, 1986). The FCF tends to tempt managers to continue to expand the scope of operations and size of the company. So, they can increase the control and personal compensation through investing free cash flow in projects that have 0 NPV or negative (Michael, 2014).

Giriati (2015) and Suartawan & Yasa (2016) proved that the increase in FCF has a positive effect on the level of company dividend payments. This result was following what was stated by Jensen (1986), assuming that market pressure will encourage managers to distribute their FCF to shareholders in the form of dividends. In this case, the shareholders as agents of the company want the FCF to be distributed as dividends through a form of return they receive.

The low performance of the agricultural sector issuers can undoubtedly be avoided through the existence of proper corporate governance mechanisms. Ararat, Black, & Yurtoglu (2016); Bhatt & Bhatt (2017) revealed that strengthening corporate governance can help improve company performance. Strengthening good governance can serve as a tool to monitor and control the activities of managers and force them to use the company's resources in profitable, productive ventures (Ehikioya 2015).

The application of corporate governance in the company is also known to influence the company's dividend policy. Shamsabadi & Chung (2016); Jiraporn, Kim, & Kim (2011); Elmagrhi et al. (2018); demonstrated a positive relationship between the

quality of governance and dividend payments, where good governance will make managers release more of their profits as dividends. Jiraporn & Ning (2006) showed that dividend payments are inversely proportional to shareholder power. When shareholder rights are weak, the company will instead pay higher dividends to build a good reputation, thereby increasing its capital.

This research aims to examine the effect of dividend policy on the performance of agricultural companies in the following year. The IOS and FCF variables are used as moderating variables to determine the extent to which these variables can strengthen or weaken the relationship between dividend policy and company performance. The application of corporate governance in the company is also tested to determine the extent to which these variables can play a role in increasing dividends and performance in the company.

2. Hypotheses Development

The dividend is the distribution of the remaining net income of the company to shareholders with the approval of the Annual General Meeting of Shareholders. A dividend is a tool that can be an essential source of information for investors or other stakeholders as it contains information that can provide a signal about the company's prospects (dividend signaling theory). Based on the dividend signaling theory, the announcement of dividend payment levels reflects an increase in revenue and the company's future cash flow, which is also expected to rise. Ross (1977) argued that managers as company insiders have accurate information about the company's cash flow, which will give a signal through an increase in dividends regarding the prospects of a progressing company.

According to Bhattacharya (1979), dividend signaling theory arises due to the information asymmetry owned by the insiders (managers) and outsiders (investors), where the insiders have more accurate information related to the company's cur-

rent performance and also the company's prospects. In this case, dividends can be the most efficient means in signaling to shareholders and other market participants regarding the company's performance. The increase in dividends gives a signal about the condition of the company experiencing an increase in operating profit. Meanwhile, a decline in dividends gives a signal about the poor condition of the company, making the market react negatively by moving its investment to other stocks that are considered to have better prospects.

Ehikioya (2015) has researched the relationship between dividend policy and company performance, which was proxied through ROA and ROE. The results proved that the dividend policy in the form of dividend payouts is a significant factor affecting the performance of companies in Nigeria. This result is in line with the concept of signaling theory, where dividends can serve as a signal of a company's good reputation, which will then motivate investors to invest in the company.

Research by Sukendro & Pujiharjanto (2012) showed that the company's policy of not paying dividends affects the company's performance, which is worse than the companies paying dividends. Agyei & Yiadom (2011) also managed to prove that banks in Ghana need to pay dividends in order to reduce agency costs and improve their performance. Mai (2010) also managed to prove that dividend payments affect firm value (profitability). Yegon, Cheruiyot, & Sang (2014) suggested that organizations make good and robust dividend payments because it is believed to increase their profitability.

H₁: dividend policy has a positive effect on company performance in the following year

Investment Opportunity Set (IOS) is an investment decision in the form of a combination of assets held (assets in place) and future investment options (Myers, 1977). According to Giriati (2016), IOS is the relationship between current spending and future spending with value/return/ prospect

as a result of investment decisions to produce value for the company.

Pratiwi (2016) proved that IOS has a positive influence on the company's fundamental performance as measured by the company's profitability ratio, where companies that have significant growth opportunities as measured by the value of IOS will also produce high profits. Based on the theory, growth opportunities are positively related to company performance (Baker, 1993) where high profitability and size of the company are evidence that the company has profitable growth options.

Ardestani et al. (2013) research on 62 samples of industrial companies listed on the Malaysian Stock Exchange proved that IOS has a significant and positive impact on company profitability. Similar research results were also found by Hsiao & Hsu (2013), stating that IOS has a positive effect on company performance.

H₂: IOS has a positive effect on company performance

Free cash flow is more cash flow than needed after funding a project with a positive NPV when discounted at the relevant cost of capital. The discussion of the company's free cash flow is formulated in the free cash flow hypothesis provided by Jensen (1986). Free cash flow hypothesis explains that company managers sometimes do not want to distribute available cash to shareholders, but instead use it to fulfill their interests.

Free cash flow is one of the causes of agency problems in companies (Jensen, 1986; Giriati, 2016). The agency problem is a conflict that arises in the relationship between the owner (principals) and the manager (agent). The difference in interests between managers and shareholders is the primary thing that triggers agency problems. Shareholders delegate authority to management to manage the company to improve the welfare of shareholders. However, the agent has a personal interest to prioritize improvement over his welfare.

Chae, Kim, & Lee (2009) stated that excessive free cash flow makes managers use the cash for their benefit. Company managers tend to use free cash flow as funds for investment activities on projects that are not needed by the company, and even on projects that have a low rate of return (Jensen, 1986).

Park & Jang (2013) research on the Korean restaurant industry found evidence that free cash flow can directly worsen company performance. The high FCF causes companies to invest in projects that are not needed, which then causes overinvestment problems resulting in a decline in company performance. Research by Akumu (2014) at the Nairobi Securities Exchange also proved the same thing, where the high free cash flow of the company will be negatively related to the company's performance.

H₃: free cash flow is negatively related to company performance

The residual dividend policy theory is based on the idea that dividends paid by companies are seen as the amount left after all investment opportunities have been received (Brigham & Houston 2014). The theory of residual dividend policy includes a theory that has the same view with the pecking order theory which states that the funding of a company is based on a preference for sources of funds in the order of funding that has the smallest risk (Myers & Majluf, 1984). In this case, internal funding sources are the primary choice for management to meet their capital, followed by other external funding sources to cover their shortcomings.

Based on the theory of residual dividend policy, management and investors are more likely to hold retained earnings for reinvestment than distributed in the form of dividends. Payment of residual dividends is in line with the opportunity cost principle, whereby management who decides to retain earnings must be able to ensure that shareholders will get a return on retained earnings of at least the amount of return that can be received by shareholders on alternative investments with an

equivalent risk (Brigham & Houston, 2014). When a company does not have a high investment opportunity, it is expected to be able to pay dividends rather than maintain it for investment projects that are not able to maximize shareholder value (Abor & Bokpin, 2010). However, when the investment opportunities owned by the company are high, the company is expected to increase its retained earnings in the interest of the investment.

In the asymmetrical market, the decline in the value of dividend payments is a positive signal for the company's growth opportunity (investment opportunity set) (Fairchild, 2010). Growing companies (as measured by IOS proxies) will pay lower dividends than companies that do not grow (Herdinata, 2009). If the investment opportunity can guarantee a higher return than the required return, then shareholders will prefer to hold profits, and vice versa. The increase in IOS can increase the company's revenue, thereby increasing its profit and fundamental performance (Pratiwi, 2016). Thus, the high value of the IOS owned by a company is believed to be able to moderate the relationship between dividend policy and company performance.

H₄: IOS can strengthen the positive relationship between dividend policy and financial performance

Several studies have shown that free cash flow a proxy used to measure agency problems. High dividend payments help ensure a reduction in free cash flow to be consumed by managers (Ehikioya, 2015). Chae, Kim, & Lee (2009) stated that excessive free cash flow makes managers use the cash for their own benefit. Company managers prefer to use free cash flow as an investment, while shareholders want free cash flow to be distributed as dividends. Free cash flow has a negative correlation with company performance, where companies with high FCF tend to invest in harmful projects resulting in overinvestment conditions adversely affecting the

company's performance (Park & Jang, 2013). Therefore, an increase in free cash flow within a company will weaken the effect of dividend payments as a tool to improve company performance.

H₅: free cash flow can weaken the positive relationship between dividend policy and company performance

Corporate governance is a system in which companies are directed and controlled and the board of directors is responsible for corporate governance to satisfy the interests of shareholders (Cadbury, 1992). It emerged as a mechanism to overcome agency problems occurring between principals (shareholders) and agents (managers) who often have different interests (Baker & Jabbouri 2016; Shamsabadi & Chung, 2016). The implementation of corporate governance, especially in companies go public is important because it has an impact on the company's competitive advantage in the public (Hidayati & Sunaryo, 2014).

An increase in good corporate governance mechanisms affects the increase in dividends paid (Jiraporn, Kim, & Kim, 2011). This result is because companies with good corporate governance can force managers to spend more money in the form of dividends, thereby, reducing funds available for opportunistic interests of managers. However, this is contrary to the results of research conducted by La Porta et al. (2000), stating that companies with poor governance structures would pay higher dividends to build a positive reputation with their shareholders.

H₆: corporate governance is positively related to dividend policy

3. Method, Data, and Analysis

The type of data used in this study was quantitative data in the form of secondary data collected from annual financial reports (annual report) of the

Dividend policy, investment opportunity set, free cash flow, and company performance: Indonesian's agricultural sector

Choiri Chosiah, Budi Purwanto, Wita Juwita Ermawati

issuers in the agricultural sector in 2010-2016. Data collection techniques included downloading financial statement data through the IDX website (<http://www.idx.co.id>) and other relevant literature.

The populations in this study were all agricultural companies listed in the Indonesia Stock Exchange in 2010-2016. The sample selection was made based on purposive sampling technique. Considerations or criteria included listed as an issuer in the agricultural sector on the Indonesia Stock Exchange in 2010-2016; publish financial statements in a row; pay dividends; never delisting and relisting. Based on predetermined criteria, the number of companies that can be sampled in this study was 71 samples.

The data analysis was done through the testing of classical assumptions, and panel data regression analysis using the help of Eviews 9. The dependent variable used in this study was the company's performance (in the following year), which is reflected through the Return on Assets (ROA) value. The independent variable consisted of dividend policy, which is reflected through the value of the Dividend Payout Ratio (DPR) and Corporate Governance (CG) proxied through the composition value of the board of commissioners. The moderation variable consisted of IOS (proxied through Market to Book Value of Assets) and FCF. Company size, leverage, and growth were used as control variables to avoid bias in the research. Operational measurement of variables can be seen in Table 2.

Table 2. The measurement of variables

Variable	Measurement	Reference
Dependent Variable		
Company Performance	$ROA = \frac{Net\ Profit}{Total\ Assets} \times 100\%$	- Ehikioya (2015) - Khan et al. (2016) - Bhatt & Bhatt (2018)
Independent Variable		
Dividend Policy	$DPR = \frac{Dividend}{Earning\ After\ Tax\ (EAT)}$	- Ehikioya (2015) - Giriati (2015)
Corporate Governance	$UDK = \Sigma\ board\ of\ commissioners$	- Cheng Cullinan, & Zhang (2008) - Latif et al (2013) - Bhatt & Bhatt (2018)
Moderator Variable		
IOS	$MVABVA = \frac{Assets - Equity + (outstanding\ shares \times Closing\ Price)}{Total\ Assets} \times 10$	- Herdinata (2009) - Marinda (2014)
FCF	$FCF = \frac{(Operating\ net\ income + depreciation\ expenses - corporate\ income\ tax - interest\ expenses - cash\ dividends)}{Total\ Assets}$	- Kadioglu & Yilmaz (2017)
Control Variable		
Size	$Size = Log\ of\ Total\ Assets$	- Ehikioya (2015) - Elmagrhi et al. (2017) - Bhatt & Bhatt (2018)
Leverage	$LEV = \frac{Total\ Debt}{Total\ Asset}$	- Ehikioya (2015) - Elmagrhi et al. (2017) - Bhatt & Bhatt (2018)
Growth	$Growth = \frac{Sales\ t - Sales\ t - 1}{Sales\ t - 1} \times 100\%$	- Khan et al. (2016) - Rashid (2018)

The form of the statistical equations used in this study is as follows :

Equation 1:

$$Kin_{(t+1)} = \alpha + \beta_1 Div + \beta_2 IOS + \beta_3 FCF + \beta_4 IOS * DIV + \beta_5 FCF * DIV + \beta_6 SIZE + \beta_7 LEV + \beta_8 GROWTH + \varepsilon \quad (1)$$

Equation 2:

$$Div = \alpha + \beta_1 CG + \beta_2 SIZE + \beta_3 LEV + \beta_4 GROWTH + \beta_5 UK + \varepsilon \quad (2)$$

Where: $Kin_{(t+1)}$ = company performance in the following year; Div = Dividend Policy; CG = Corporate Governance; FCF=Free Cash Flow; IOS= Investment Opportunity Set; Size = company size; Lev= leverage; Growth = sales growth; α = constant; β = coefficient of each variable; ε = error

The first statistical equation was used to test the first hypothesis until the sixth hypothesis, while the second statistical equation was used to test the seventh. Hypothesis testing was done to test the effect of independent variables on the dependent variables using the T-test with a significance level of 5%.

4. Results

The descriptive statistical analysis is conducted to determine the general characteristics of the sample in research. The information contained in descriptive statistics included the minimum value, maximum, mean (average), and standard deviation.

Descriptive statistics of agricultural companies in 2010-2016 can be seen in Table 3.

Based on Table 3, the mean performance of issuers in the agricultural sector was 8.16 percent, with a standard deviation of 5.589. The highest performance measured by ROA value was owned by PP London Sumatera Indonesia Tbk company in 2011, with a ROA value of 25.05%. The lowest performance value was found in Gozco Plantation Tbk in 2016. The average value of dividends during the study period was 29.08% with a standard deviation of 35,307. The lowest dividend distribution was found in Eagle High Plantations Tbk with a DPR value of -142.12 percent in 2013. The largest dividend distribution was conducted by Sinar Mas Agro Resources and Technology Tbk in 2012 with a dividend payout ratio of 160.19 percent.

Judging from the IOS variable, the average value of IOS issuers in the agricultural sector was 163.29 percent, with a standard deviation of 82.551. The standard deviation value indicated a smaller value compared to the average value. Thus, the smallest deviation of data occurred in the average value of the calculation. The highest IOS value was observed in PT Inti Agro-Resources Tbk in 2015, while the lowest IOS value was found in the Gozco Plantation Tbk company in 2015. The average value of free cash flow in agricultural sector issuers was 0.07 with a standard deviation of 0.038. The highest level of free cash flow availability was found in the company London Sumatra Indonesia Tbk in 2011. Meanwhile, the lowest availability of free cash flow was observed in company PT. Bumi Teknokultura Unggul Tbk in 2010.

Table 3. Descriptive statistics

Variable	Mean	Minimum	Maximum	Std. Deviation
Company Performance	8.165033	-1.780000	25.05000	5.589918
Dividend	29.08593	-142.1204	160.1946	35.30705
IOS	163.3940	61.87000	484.4600	82.55130
FCF	0.075634	-0.049000	0.171000	0.038721
Size	12.83638	12.13458	13.51239	0.363185
Lev	0.419507	0.082000	0.728000	0.196972
Growth	12.03507	-26.14000	83.27000	20.88041

In terms of company size, the average size of an agricultural company measured by the value of its assets was 12.83, with a standard deviation lower than the average value, which was 0.36. The largest company size was owned by Salim Ivomas Pratama Tbk in 2016, while the smallest company size was owned PT. Bumi Teknokultura Unggul Tbk in 2010. Based on the level of leverage, the average value of the issuers' leverage in the agricultural sector was 0.41, with a smaller standard deviation value indicating the small deviations of data that occurred. The highest leverage value was owned by Golden Plantation in 2014, while the lowest leverage value was at PT. Inti Agro-Resources Tbk, in 2010.

The average sales growth measured through growth in the agricultural sector was 12.03 percent with a standard deviation of 20.880. PT Inti Agro-Resources Tbk had the highest sales growth in 2016, while Multi Agro Gemilang Plantation had the lowest in the same year compared to other companies in the agricultural sectors.

Data processing was carried out by fulfilling the required classic assumption test. The Jarque probability test value was > 0.05 , indicating that the residual spread was normal or the assumption of normality was fulfilled. The value of VIF (Variance Inflation Factors) was less than 10, signifying that there were no multicollinearity problems. Heteroscedasticity test conducted with the white

test had a probability value of < 0.05 , meaning that there was no heteroscedasticity problem. The autocorrelation test was performed using the Breuch Godfrey test, and the value of $\text{Obs} \cdot R\text{-squared}$ had a probability > 0.05 , meaning that there was no autocorrelation problem.

Panel data regression test was performed through the Chow test, Hausman test, and the Lagrange Multiplier test. In equation one, the best model needed was the Random Effect Model (REM). Whereas in equation two, the best model was Pooled Least Square (PLS). Based on the best model chosen, the significance value of the t-test was determined to show the relationship between variables. Based on table 2, equation 1, the dividend policy variable, FCF, and IOS moderation had a significant influence on company performance. The results of equation 2 revealed that only the leverage had a significant influence on dividend policy.

5. Discussion

The effect of dividend policy on company performance in the following year

This result showed that the dividend policy had a negative and significant effect on the company's performance in the following year. It reflected that an increase in the company's dividend payments would affect the decline in company performance

Table 3. The panel data regression test results

Model	Variable	Coef	Std Error	t-Statistic	Prob	R2
Equation 1	Dividend	-0.069343	0.024919	-2.782743	0.0075	0.671988
	IOS	0.007392	0.006068	1.218313	0.2287	
	FCF	35.51701	10.71809	3.313745	0.0017	
	IOS*Div	0.000657	0.000149	4.405269	0.0001	
	FCF*Div	0.137832	0.263868	0.522352	0.6037	
	Size	-2.376111	1.394124	-1.704376	0.0944	
	Lev	-1.992224	1.802804	-1.105070	0.2743	
	Growth	0.009073	0.025371	0.357606	0.7221	
Equation 2	CG	0.784710	0.542647	1.446078	0.1529	0.533259
	Size	3.271266	3.149414	1.038691	0.3027	
	Lev	-39.03025	5.166318	-7.554752	0.0000	
	Growth	-0.014213	0.061907	-0.229586	0.8191	

in the following year, while a decrease in the value of dividend payments will affect the performance the following year. These results contradicted those of the research conducted by Agyei & Yiadom (2011), Mai (2010), Ehikioya (2015), Fauzi & Suhadak (2015), Sukendro & Pujiharjanto (2012).

The negative correlation between dividends and performance was not in line with the dividend signaling theory proposed by Lintner. The increase in dividends paid by companies was not a signal of a company's good reputation. A group of investors considers the distribution of dividends as a negative signal because investors assume that company managers are not able to see profitable investment opportunities (Artini & Puspaningsih, 2011). The funds used to pay dividends should be used to invest in profitable projects (Suganda & Sabbat, 2014), which can be utilized by companies to improve their performance. The low dividend payment is considered a sign of high investment opportunities available for the companies which can then be managed well to improve the company performance. The negative correlation between dividends and company performance was proven by Nidar (2010) and Khan et al. (2016). Those authors explained that the increase in the value of dividend payments was considered a sign of the company's inability to allocate profits in investment activities.

The effect of IOS on company performance

This result showed that IOS had a positive and not significant effect on performance. The results of this study were in line with those of the research conducted by Marinda (2014), Soejono (2010), Sudiyatno & Puspitasari (2010). The positive relationship between IOS and company performance indicated that high investment opportunities owned by the company encourage companies to invest their funds in investment activities that can improve company performance. However, the increase in IOS was not effective in increasing company performance significantly. These results were not in line

with Pratiwi (2016), which stated that IOS is a signal of high growth opportunities found in companies that can generate high profits for the company.

The effect of FCF on company performance

This result showed that free cash flow had a significant positive effect on performance. The greater the FCF, the more the company's performance will improve, the smaller the FCF will decrease the company's performance. The results of this study indicated that there was no agency problem in the company which does not provide support for the existence of the free cash flow hypothesis (Jensen (1986).

The high value of free cash flow owned by the company turned out to be influential in improving company performance. These results were consistent with those of the research conducted Chang et al. (2006), Wang (2010), Lin & Lin (2016). The positive relationship between FCF and performance showed that FCF was a result of the efficiency of management operations, where a high FCF made the company able to take advantage of more investment opportunities in producing a good performance for the company (Wang, 2010). High FCF does not make companies invest in projects that have a low NPV as stated earlier by Jensen (1986) instead, there is evidence that acquirers who have high free cash flow perform better than those who have low free cash flow.

The effect of IOS in moderating the relationship between dividend policies and company performance

This result showed that the IOS variable was able to moderate the relationship between dividend policy and performance and was significantly positive. In that case, it was concluded that the high IOS could weaken the negative effect arising from an increase in dividend policy on company performance, or it could also be interpreted that a nega-

tive relationship between dividend policy and company performance would be weaker in companies with high IOS level. The increase in IOS contained in the company will make investors believe that an increase in dividends is not a sign of poor investment opportunities owned by the company. Investors will consider increased dividends as a positive signal regarding the company's performance and investment prospects. The high role of IOS in improving performance is in line with the results of research conducted by Baker (1993), Hsiao & Hsu (2013), Ardestani et al. (2013), and Pratiwi (2016). The investment opportunity is one of the factors of the growth of the company, and companies with potential growth opportunities will have high profits (Ardestani et al., 2013). The high profitability and size of the company are evidence that the company has profitable growth options (Baker, 1993).

The effect of FCF in moderating the relationship between dividend policies on company performance

Free cash flow was not able to moderate the effect of dividend policy on company performance significantly. A positive value in the FCF moderation relationship indicates that the FCF can weaken the negative relationship of dividend policy on performance, but the effect is not significant. This result might be because the increase in free cash flow is no more considered than the increase in dividends occurring within the company.

The effect of corporate governance on dividends

Corporate governance had a positive and not significant effect on dividend policy. The results of this study were not in line with those of the research by Sawicki (2009), Bokpin (2011), Jiraporn, Kim, & Kim (2011), Shamsabadi & Chung (2016), and Elmagrhi et al. (2018), stating that corporate governance mechanisms can play an effective role in en-

couraging managers to release more of their profits as dividends, thereby reducing the possibility of the profits being taken over by opportunistic managers' actions to meet the personal interests.

A positive and insignificant relationship between corporate governance and dividends was in line with research by Arilaha (2009). The corporate governance mechanism adopted in the company is still ineffective in increasing the number of dividends the company can pay to shareholders. The number of the board of commissioners in the company was not able to carry out its function in forcing managers to distribute profits generated in the company in the form of dividends to shareholders. In other words, the board of commissioners as an element of corporate governance was not able to represent the interests of shareholders who want high dividend payments.

6. Conclusion, Limitations, and Suggestions

Conclusion

Based on the results of the data analysis, several results were able to answer the research objectives that have been predetermined. The dividend policy variable has a significant negative effect on company performance, while the free cash flow variable has a significantly positive effect on company performance. The use of moderator variables in the form of FCF and IOS shows that only IOS can moderate the effect of dividend policy on company performance. Thus, the effect of dividend policy on performance is also influenced by the size of the investment opportunity set in the company. The dividend policy set by the company must also be able to be well communicated to shareholders so that the dividend policy can be accepted and kept in line with the company's growth interests. Based on the results of the previous discussion, it is recommended for managers to be more careful in considering the dividend policy to be applied because it will have a direct impact on the company's performance. Also, the company must carefully use the

FCF and its investment opportunities, because it also has a significant influence on the ups and downs of the company's performance.

Limitations and suggestions

The present research was limited to the agricultural companies listed on the Indonesia Stock

Exchange. Thus, the results cannot be generalized. Therefore, research with related themes can be carried out by adding research samples to companies in various other sectors, such as property, banking, and mining. Further research can also be done by adding other variables or indicators related to improving company performance, with a more extended research period.

References

- Abor, J., & Bokpin, G. (2010). Investment opportunities, corporate finance, and dividend payout policy. *Studies in Economics and Finance*, 27(3), 180-194. <https://doi.org/10.1108/10867371011060018>
- Agyei, S. K., & Yiadom, E. M. (2011). Dividend policy and bank performance in Ghana. *International Journal of Economics and Finance*, 3(4), 202-207. <https://doi.org/10.5539/ijef.v3n4p202>
- Akumu, O. C. (2014). *Effect of Free Cash Flow on Profitability of Firms listed on The Nairobi Securities Exchange*. Master of Business Administration. Nairobi: University of Nairobi.
- Ararat, M., Black, B. S., & Yurtoglu, B. B. (2016). The effect of corporate governance on firm value and profitability: Time series evidence from Turkey. *Emerging Markets Review*, 30(C), 113-132. <https://doi.org/10.1016/j.ememar.2016.10.001>
- Ardestani, H. S., Rasid, S. Z. A., Basiruddin, R., & Mehri, M. (2013). Dividend payout policy, investment opportunity set and corporate financing in the industrial products sector of Malaysia. *Journal of Applied Finance and Banking*, 3(1), 123-136.
- Arilaha, M. A. (2009). Corporate governance dan karakteristik perusahaan terhadap kebijakan dividen. *Jurnal Keuangan dan Perbankan*, 13(3), 386-394.
- Artini, L. G. S., & Puspaningsih, N. L. A. (2011). Struktur kepemilikan dan struktur modal terhadap kebijakan dividen dan nilai perusahaan. *Jurnal Keuangan dan Perbankan*, 15(1), 66-75.
- Baker, H. K. (1993). Growth, corporate policies, and the investment opportunity set. *Journal of Accounting and Economics*, 16(1993), 161-165. [https://doi.org/10.1016/0165-4101\(93\)90008-4](https://doi.org/10.1016/0165-4101(93)90008-4)
- Baker, H. K., & Jabbouri, I. (2015). How Moroccan managers view dividend policy. *Managerial Finance*, 42(3), 270-288. <https://doi.org/10.1108/MF-07-2015-0211>
- Bhatt, P. R., & Bhatt, R. (2017). Corporate governance and firm performance in Malaysia. *The International Journal of Business in Society*, 17(5), 296-912. <https://doi.org/10.1108/CG-03-2016-0054>
- Bhattacharya, S. (1979). Imperfect information, dividend policy, and "the bird in the hand fallacy". *The Bell Journal of Economics*, 10(1), 259-270. <https://doi.org/10.2307/3003330>
- Bokpin, G. A. (2011). Ownership structure, corporate governance and dividend performance on the Ghana Stock Exchange. *Journal of Applied Accounting Research*, 12(1), 61-73. <https://doi.org/10.1108/09675421111130612>
- Brigham, E. F., & Houston, J. F. (2014). *Dasar-dasar Manajemen Keuangan (Essentials of Financial Management)*. Jakarta: Salemba Empat.

Dividend policy, investment opportunity set, free cash flow, and company performance: Indonesian's agricultural sector

Choiri Chosiah, Budi Purwanto, Wita Juwita Ermawati

- Cadbury, A. (1992). *The Financial Aspects of Corporate Governance*. The Committee on the Financial Aspect of Corporate governance and Gee and Co. Ltd.
- Chae, J., Kim, S., & Lee, E. J. (2009). How corporate governance affects payout policy under agency problems and external financing constraints. *Journal of Banking and Finance*, 33(2009), 2003-2101. <https://doi.org/10.1016/j.jbankfin.2009.05.003>
- Cheng, Z., Cullinan, C. P., & Zhang, J. (2014). Free cash flow, growth opportunities, and dividends: Does cross listing of shares matter?. *The Journal of Applied Business Research*, 3(2). <https://doi.org/10.19030/jabr.v30i2.8428>
- Ehikioya, B. I. (2015). An Empirical Investigation of the impact of dividend policy on the performance of firms in developing economics: Evidence from listed firms in Nigeria. *International Journal of Finance and Accounting*, 4(5), 245-252. <https://doi.org/10.5923/j.ijfa.20150405.03>
- Elmagrhi, M., Ntim, C., Crossley, R., Malagila, J., Fosu, S., & Vu, T. (2017). Corporate governance and dividend payout policy in UK listed SMEs. *International Journal of Accounting & Information Management*, 25(4), 459-483. <https://doi.org/10.1108/IJAIM-02-2017-0020>
- Fairchild, R. (2010). Dividend policy, signalling and free cash flow: An integrated approach. *Managerial Finance*, 3(5), 394-413. <https://doi.org/10.1108/03074351011039427>
- Fauzi, M. N., & Suhadak. (2015). Pengaruh kebijakan dividen dan pertumbuhan perusahaan terhadap struktur modal dan profitabilitas (Studi pada sektor mining yang terdaftar di Bursa Efek Indonesia periode 2011-2013). *Jurnal Administrasi Bisnis*, 24(1).
- Giriati. (2016). free cash flow, dividend policy, investment opportunity set, opportunistic behavior and firm's value (A study about agency theory). *Procedia-Social and Behavioral Sciences*, 219(2016), 248-254. <https://doi.org/10.1016/j.sbspro.2016.05.013>
- Herdinata, C. (2009). Kebijakan pendanaan dan dividen dengan pendekatan investment opportunity set. *Jurnal Keuangan dan Perbankan*, 13(2), 237-248.
- Hidayati, N., & Sunaryo, H. (2016). Dampak corporate governance terhadap keputusan dividen (Literature review pada negara-negara di Asia, Australia, dan Afrika). *Jurnal Keuangan dan Perbankan*, 20(1), 32-41. <https://doi.org/10.26905/jkdp.v20i1.146>
- Hong, Z., Shuting, Y., & Meng, Z. (2012). Relationship between free cash flow and financial performance evidence from the listed real estate companies in China. *International Conference on Innovation and Information Management*, 36(2012). <https://doi.org/10.4028/www.scientific.net/AMM.556-562.6445>
- Hsiao, H-F., & Hsu, C-Y. (2013). Managerial sentiment, investment opportunity set and firm performance. *Proceedings for the Northeast Region Decision Sciences Institute*, 122.
- Jensen, M. C. (1986). Agency cost of free cash flow, corporate finance and takeovers. *The American Economic Review Paper and Proceedings of the Ninety-Eight Annual Meeting of the American Association*, 76(2), 323-329.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(1976), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Jiraporn, P., & Ning Y. (2006). Dividend policy, shareholder rights, and corporate governance. <https://doi.org/10.2139/ssrn.931290>
- Jiraporn, P., Kim, J., & Kim, Y. S. (2011). Dividend payouts and corporate governance quality: an Empirical investigation. *The Financial Review*, 46(2011), 251-279. <https://doi.org/10.1111/j.1540-6288.2011.00299.x>
- Khan, M. N., Nadeem, B., Islam, F., Salman, M., & Gill, H. M. I. S. (2016). Impact of dividend policy on firm performance: An empirical evidence from Pakistan Stock Exchange. *American Journal of Economics, Finance and Management*, 2(4), 28-34.

- Kadioglu, E., & Yilmaz, E. A. (2017). Is the free *cash flow* hypothesis valid in Turkey? *Borsa Istanbul Review*, 17(2), 111-116. <https://doi.org/10.1016/j.bir.2016.12.001>
- Lachheb, A., & Slim, C. (2017). The impact of free cash flow and agency costs on firm performance. *Proceedings of ISER 56th International Conference Rome Italy*.
- La Porta, R., Lopez de Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Agency problems and dividend policies around the world. *The Journal of Finance*, 55(1), 1-33. <https://doi.org/10.1111/0022-1082.00199>
- Mai, M. U. (2010). Dampak kebijakan dividen terhadap nilai perusahaan dalam kajian perilaku oportunistik manajerial dan struktur corporate governance – Studi empiris pada perusahaan manufaktur go public di Pasar Modal Indonesia. *Dissertation*. Semarang: Universitas Diponegoro.
- Michael, K. (2014). The relationship between free cash flow and investment of firms quoted at the Nairobi Securities Exchange. Master of Science Program. Nairobi: University of Nairobi.
- Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, 5(2), 147-175. [https://doi.org/10.1016/0304-405X\(77\)90015-0](https://doi.org/10.1016/0304-405X(77)90015-0)
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information the investors do not have. *National Bureau of Economic Research*. [https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- Nidar, S. R. (2010). Analisis struktur modal, kebijakan dividen, dan volatilitas pendapatan terhadap kinerja emiten terbaik. *Trikonomika*, 9(2), 105-112.
- Pamungkas, H. S., & Puspaningsih, A. (2013). Pengaruh keputusan investasi, keputusan pendanaan, kebijakan dividen, dan ukuran perusahaan terhadap nilai perusahaan. *Jurnal Akuntansi dan Auditing Indonesia*, 17(2), 156-165. <https://doi.org/10.20885/jaai.vol17.iss2.art6>
- Park, K., & Jang, S. (2013). Capital structure, free cash flow, diversification and firm performance: a holistic analysis. *International Journal of Hospitality Management*, 33(2013), 51-63. <https://doi.org/10.1016/j.ijhm.2013.01.007>
- Pratiwi, R. (2016). Pengaruh struktur modal dan investment opportunity set terhadap kinerja fundamental dan pasar saham sektor pertambangan Bursa Efek Indonesia. *Thesis*. Bogor: Institut Pertanian Bogor.
- Ross, S. A. (1977). The determination of financial structure: The Incentive-Signalling Approach. *The Bell Journal of Economics*, 8(1), 23-40. <https://doi.org/10.2307/3003485>
- Sawicki, J. (2009). Corporate governance and dividend policy in Southeast Asia pre- and post-crisis. *European Journal of Finance*, 15(2), 265-282. <https://doi.org/10.1080/13518470802604440>
- Shamsabadi, H. A., & Chung, B. S. M. R. (2016). Corporate governance and dividend strategy: lessons from Australia. *International Journal of Managerial Finance*, 12(5), 583-610. <https://doi.org/10.1108/IJMF-08-2015-0156>
- Smith, C., & Watts, R. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics*, 32(3), 263-292. [https://doi.org/10.1016/0304-405X\(92\)90029-W](https://doi.org/10.1016/0304-405X(92)90029-W)
- Soejono, F. (2010). Pengaruh kepemilikan, keputusan investasi, pengalaman dan kinerja finansial. *Jurnal Bisnis dan Akuntansi*, 12(1), 29-38
- Suartawan, A., & Yasa, G. W. (2017). Pengaruh investment opportunity set dan free cash flow pada kebijakan dividen dan nilai perusahaan. *Ejurnal Akuntansi Universitas Udayana*, 11(2), 63-73.
- Subramaniam, R., Devi, S. S., & Marimuthu, M. (2011). Investment opportunity set and dividend policy in Malaysia. *African Journal of Business Management*, 5(24): 10128-10143. <https://doi.org/10.5897/AJBM11.687>
- Sudiyatno, Bambang dan Elen Puspitasari. (2010). Tobin's Q dan Altman Z-Score sebagai indikator pengukuran kinerja perusahaan. *Kajian Akuntansi*, 2(1), 9-21.

Dividend policy, investment opportunity set, free cash flow, and company performance: Indonesian's agricultural sector

Choiri Chosiah, Budi Purwanto, Wita Juwita Ermawati

- Suganda, T. R., & Sabbat, E. H. (2014). Sinyal profitabilitas dan reaksi pasar modal terkait peningkatan dividen saat laba meningkat. *Jurnal Keuangan dan Perbankan*, 18(3), 335-344.
- Sukendro, J., & Pujiharjanto, C. A. (2012). Pengaruh kebijakan dividen terhadap kinerja perusahaan di Indonesia (Studi empirik pada perusahaan-perusahaan non keuangan yang terdaftar di Bursa Efek Indonesia dengan Probabilistic Regression Model). *Proceeding of Conference in Business, Accounting, and Management (CABM)*, 1(1), 475-484.
- Wang, G. Y. (2010). The impacts of free cash flow and agency costs on firm performance. *Journal Services Science and Mangement*, 3(4), 408-418. <https://doi.org/10.4236/jssm.2010.34047>
- Yegon, C., Cheruiyot, J., & Sang, J. (2014). Effects of dividend policy on firm's financial performance: econometric analysis of listed manufacturing firms in Kenya. *Research Journal of Finance and Accounting*, 5(12).
- Yero, J. I., & Usman, S. H. (2013). Free cash flow, growth opportunity and performance of Nigerian Quoted Food, Tobacco & Beverages Firms. *Kaduna State University International Conference*.
-