Volume 4, Issue 4, pp. 36-39, 2020.
International Journal of Scientific Engineering and Science
ISSN (Online): 2456-7361

Financial Ratio and Dividend Policy

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Abstract— *This research is aimed to examine effect of return on equity, debt to equity ratio, and cash ratio on dividend policy. Dividend policy measures by list of High Dividend 20 Index of Indonesian Stock Exchange. Research samples are 308 non banking and finance companies with positive earnings and equity. Based on logistic regression analysis, result shows that return on equity, debt to equity ratio, and cash ratio have effect on dividend policy.*

Keywords— *Cash ratio; debt to equity ratio; dividend policy; high dividend 20 index; return on equity.*

I. INTRODUCTION

Every company wants to achieve high performance so they can grow and give optimal return for stakeholders. Financial performance can be used to evaluate the companies from equity sufficiency, liquidity, and profitability [1]. Financial ratios are commonly used to evaluate financial performance for short-term or long-term condition [2]. For short and middle term investors, financial ratios are used to evaluate dividend policy and payment. Financial ratios that commonly used to evaluate dividend payment are liquidity, solvability, profitability ratios [3].

Dividend payment decision is made in shareholders general meeting. Based on regulation *UU No. 40 2007*, shareholders general meeting should be presented at least 6 months after financial statement period, include in dividend payment discussion. Further, dividend payment is regulated in *POJK No.32/POJK04/2014* that says after dividend decision is made, companies have to pay the cash dividend at least 30 days after shareholders general meeting resume is published.

Dividend is companies' profit sharing for investors or shareholders. Dividend policy can be seen from dividend payout ratio, dividend yield, or dividend payment continuity. Dividend payout ratio refers to dividend proportion relative to companies' earnings [4], while dividend yield refers to dividend as return relative stock price [5]. Dividend payment continuity refers to dividend continuously distributed every year in certain period, such as every year in 10 years [6], 4 years [7], or 3 years [8] in a row.

Malia [4] examines the effect of profitability, liquidity, and solvability on dividend payout ratio. It shows return on equity has effect on dividend payout ratio, while current ratio and debt equity ratio has no effect on dividend payout ratio.

Hendrianto [9] examines the effect of profitability, liquidity, and solvability on dividend payout ratio in Indonesian Stock Exchange. It shows that *cash ratio* has effect on dividend payout ratio, while return on equity and debt equity ratio has no effect on dividend payout ratio.

Prakoso and Chabachib [5] examine the effect of profitability, liquidity, and solvability on dividend yield. It shows that return on equity has effect on dividend yield, while current ratio and debt equity ratio has no effect on dividend yield.

Bae and Elhusseiny [6] examines the effect of profitability and solvability on dividend continuity. It shows that the higher return on equity and the lower debt equity ratio, companies keep pay dividend in the next 10 years in a row.

Previous researches provide inconsistent results of relationship between profitability, solvability, and liquidity ratios on dividend policy. It happens because dividend policy is occurred by individual side of dividend policy, such as only seen by the payment ratio [4], [5], [9] or only seen by the continuity [6].

This research is aimed to answer the previous results inconsistence by occurring dividend policy from two sides of payment ratio as well as continuity. Gwilym et al. [10] explains that it can be done by categorizing the companies with high payment ratio, at the same time, distribute the dividend continuously, as called as high dividend group. Oppositely, other companies that do not include in high dividend group will be categorized as low dividend group. Based on environment of Indonesian Stock Exchange, high dividend group refers to 20 companies that listed in High Dividend 20 index. Companies that listed in High Dividend 20 index are companies that distribute dividend continuously 3 years in a row with high dividend yield. On the other hand, companies that do not listed in High Dividend 20 index are include in low dividend group. Since previous research inconsistence is on return on equity, debt to equity ratio, and cash ratio; this research examine the effect of return on equity, debt to equity ratio, and cash ratio on dividend policy based on high and low dividend groups.

Dividend payment source comes from earnings. Companies should have high profitability to pay high dividend. Capability of companies to generate earnings can be seen by how good companies use investors' or shareholders' fund to operate business activities and generate earnings. This capability refers to return on equity, which is effectiveness of equity to generate earnings. The higher return on equity, the higher dividend will be paid [4], [5], [6].

Capital structure is also determines dividend policy. Composition of debt and equity shows how companies activities, include in dividend policy, are funded. This composition can be seen from debt to equity ratio. The higher debt to equity ratio, the higher debt is used over equity. Higher debt leads to higher interest expenses and low earnings, leads to priority of future debt payment over dividend payment. Companies with higher debt to equity ratio will have low payment dividend [6].

Another dividend payment source comes from cash. When cash is involved in dividend payment, companies have to consider their liquidity that refers to cash availability to fulfill current liabilities. It is occurred by cash ratio. The higher cash ratio, the higher dividend will be paid by without worrying their obligation to fulfill current liabilities. Hendrianto [9] shows that cash ratio has positive effect on dividend policy.

II. Literature Review

A. Agency Theory

Agency theory explains the contract between owners or shareholders (principal) to delegate authority to managers (agent) to manage the companies and make best decision for shareholders interest [11]. One of decisions that will be made by manager is earnings usage. One of shareholders' interests is dividend payment as earnings distribution to increase their wealth. On the other hand, manager has to consider if earnings is distributed or used for reinvestment [12].

B. Dividend

Dividend is earnings that distributed to shareholders. It will be taken from retained earnings of companies. Riyanto [13] and Weston and Brigham [14] explain some of dividend policy, which are:

1. Stable dividend that refers to amount of dividend per share is stable and paid every year.
2. Small dividend with extra payment that refers to stable small dividend payment every year and extra payment if companies achieve better performance.
3. Constant dividend ratio that refers to dividend payment with constant percentage.
4. High dividend payment refers to high dividend ratio, and in some stock exchange, indices are made for companies with high dividend ratio; such as Dow Jones U.S. Select Dividend Index (top 100 highest dividend yield in US), Pro Shares S&P 500 Dividend Aristocrats Index (top 500 highest dividend growth in 25 years in a row in US), and High Dividend 20 (top 20 with highest dividend yield in 3 years in a row in Indonesia).

Horne and Wachowicz [15] explains factors that determine dividend policy are liquidity, needs of fund resource, companies' growth, stock market opportunity, internal monitoring for internal fund resource. Dividend measurement can be occurred as follow.

1. Dividend payment status that refers to companies pay and do not pay dividend [16]. The decision comes from shareholder general meeting.
2. Dividend amount that refers to monetary value of dividend per share. The decision also made in shareholder general meeting.
3. Dividend ratio refers to dividend proportion relative to another value. Dividend payout ratio refers to how much earnings is used to pay dividend and measured by dividend proportion relative to earnings [4]. Dividend yield refers to return received by shareholders and measured by dividend proportion relative to stock market [5].
4. Dividend payment continuity that refers to dividend is continuously paid in certain period [16]. Good dividend payment continuity can be seen when companies pay dividend 10 years [6], 4 years [7], or 3 years [8] in a row.

C. High Dividend 20 Index

This research makes two groups of dividend policy, which are high dividend group and low dividend group. It will be occurred by list of High Dividend 20 Index. Indonesian Stock Exchange issues High Dividend 20 Index on 17 May 2018. It consists of 20 companies with high dividend payment and continuously paid. Companies have to meet two conditions to be listed in High Dividend 20 Index, which are:

1. Companies pay cash dividend in last 3 years continuously.
2. Companies include in top 20 with highest dividend yield of all listed companies. Dividend yield in measured by Capped Dividend Yield Adjusted Free-Float Market Capitalization Weighted method.

Benefit of High Dividend 20 Index for shareholders or investors is as consideration for buy-sell-hold stock decision making, especially for dividend-interest investors. Benefit of High Dividend 20 Index for companies is as consideration to make dividend policy in order to raise equity fund from stock market.

D. Hypotheses Development

Place Dividend payment source is earnings. Earnings is generated depends on companies profitability. One of profitability ratio is return on equity. It shows how companies use equity to generate earnings. The higher earnings is generated, the higher dividend is paid [17]. Bae and Elhusseiny [6], Malia [4], and Prakoso and Chabachib [5] find that return on equity has effect on dividend policy.

H1: Return on equity has positive effect on dividend policy

Debt to equity ratio is one of ratios that show proportion balance of debt and equity to provide the assets [18]. If debt to equity ratio is high, then companies have priority to pay the debt first over dividend [13]. Higher debt also increases interest expenses and reduces earnings, further, lower earnings lead to lower dividend. Bae and Elhusseiny [6] finds that debt to equity ratio decrease dividend payment.

H2: Debt to equity ratio has negative effect on dividend policy

Riyanto [13] states that cash position is important to be considered to pays dividend. Since dividend is cash outflow, companies have to ensure if cash ratio is higher enough to fulfill the current liabilities, so they can pay dividend higher. Hendrianto [9] finds that higher cash ratio leads to higher dividend.

H3: Cash ratio has positive effect on dividend policy

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III. METHOD

A. Sample

Research populations are listed in Indonesian Stock Exchange. Samples are selected by purposive sampling method with certain criteria, which are as follow.

1. Companies listed in Indonesian Stock Exchange in 2016. High Dividend 20 Index is currently issued in 2018, so the valuation of 3 years dividend continuity is start 2016 to 2018.
2. Companies are not included in banking and finance industry. This industry in sensitive to regulation, especially for financial ratios evaluation.
3. Companies have positive value of equity and earnings. Regulation of UU No. 40 year 2007 about Limited Companies states that companies allow to pays dividend if only companies have positive equity and have no losses.
4. Companies have complete data.

TABLE I. Sample.

	Number of Sample
Companies listed in Indonesian Stock Exchange in 2016	534
Banking and finance companies	(91)
Negative earnings	(127)
Negative equity	(7)
Incomplete data	(1)
Total	**308**

B. Variables

Dependent variable is dividend policy. This research makes two groups of companies, which are high dividend group and low dividend group. High dividend group consists of companies that listed in High Dividend 20 Index, while low dividend group consists of companies that exclude in High Dividend 20 Index. Dividend policy is measured as dummy variable, score 1 if companies are in high dividend group, score 0 if companies are in low dividend group.

Independent variables are return on equity, debt to equity ratio, and cash ratio. Return on equity is measured as earnings after tax divided by equity [19]. Debt to equity ratio is measured by total debt divided by equity [20]. Cash ratio is measure by cash and cash equivalent divided by current liabilities [20].

Control variable is company's size. The bigger companies, the more companies have resource to generate earnings or to pay dividend. Company's size is measured by logarithm of total assets.

C. Data Analysis

Hypotheses are tested by using logistic regression. Regression model is as follow.

$$DIV = a + b1ROE + b2DER + b3CASH + b4SIZE + e$$

Where DIV is dividend policy, ROE is return on Equity, DER is debt to equity ratio, CASH is cash ratio, and SIZE is company's size. H1 is accepted if b1 is positive and significant. H2 is accepted if b2 is negative and significant. H3 is accepted if b3 is positive and significant.

IV. RESULT

A. Descriptive Statistics

TABLE II. Descriptive statistics.

Variable		**N**	**Mean**	**Std. Deviation**
ROE	Low dividend	294	0.1158	0.13153
	High dividend	14	0.3174	0.39528
	Total	308	0.1250	0.15779
DER	Low dividend	294	1.1153	1.23018
	High dividend	14	0.7602	0.71672
	Total	308	1.0992	1.21308
CASH	Low dividend	294	0.6333	1.09739
	High dividend	14	1.3618	1.34224
	Total	308	0.6665	1.11746
SIZE	Low dividend	294	12.4626	0.65243
	High dividend	14	13.4608	0.56398
	Total	308	12.5079	0.68052

Average of companies' ability to generate earnings from equity usage is 12.50%. Average of debt usage is 109.92% of equity. Average of current liabilities that can be fulfilled by cash is 66.65%. Average size of companies sample is 12.5079. As expected, average of return on equity (ROE) for high dividend group is higher than low dividend one, average of debt to equity ratio (DER) for high dividend group is lower than low dividend one, average of cash ration (CASH) for high dividend group is higher than low dividend one.

B. Preliminary Test

TABLE III. Preliminary test.

Test	**Result**	**Notes**
Model Fitness	Chi square of log likelihood = 70.274*	Model fit with independent variables
	Chi square of *Hosmer and Lemeshow* = 10.263	Model can predict its observation data
Classification Table	Prediction = 98.1%	
Nagelkerke R^2	0.660	
*Significant in 0.01		

Chi square of log likelihood is 70.274 (significant in 0.01) shows that regression model is fit with independent variables. Chi square of *Hosmer and Lemeshow* is 10.263 (insignificant) shows that model can predict its observation data. Overall percentage for dividend policy is 98.1% shows that level prediction is high. Value of *Nagelkerke* R^2 is 0.660 shows that return on equity, debt to equity ratio, cash ratio, and size can explain dividend policy 66%, while 34% dividend policy is explained by other variables.

C. Hypotheses Test

Table 4 shows that return in equity has coefficient value 9.114 (significant in 0.01). It indicates that H1, return on equity has positive effect on dividend policy, is accepted. The result is consistent with Bae and Elhusseiny [6], Malia [4], and Prakoso and Chabachib [5] that find return on equity have effect on dividend policy. Dividend payment source is earnings. Earnings is generated depends on companies profitability. One of profitability ratio is return on equity. It shows how companies use equity to generate earnings. The higher earnings generated, the higher dividend is paid.

Debt to equity ratio has coefficient value -2.401 (significant in 0.05). It indicates that H2, debt to equity ratio has negative effect on dividend policy, is accepted. The result is consistent with Bae and Elhusseiny [6] that finds debt to equity ratio decrease dividend payment. Debt to equity ratio is one of ratios that show proportion balance of debt and equity to provide the assets. If debt to equity ratio is high, then companies have priority to pay the debt first over dividend. Higher debt also increases interest expenses and reduces earnings, further, lower earnings lead to lower dividend.

Cash ratio has coefficient value 0.885 (significant in 0.05). It indicates that H3, cash ratio has positive effect on dividend policy, is accepted. The result is consistent with Hendrianto [9] finds that higher cash ratio leads to higher dividend that finds higher cash ratio leads to higher dividend. Cash position is important to be considered to pays dividend. Since dividend is cash outflow, companies have to ensure if cash ratio is higher enough to fulfill the current liabilities, so they can pay dividend higher.

TABLE IV. Hypotheses test.

Variable	Coefficient	Notes
Constant	-73.301	
ROE	9.114*	H1 is accepted
DER	-2.401**	H2 is accepted
CASH	0.885**	H3 is accepted
SIZE	5.299*	
*Significant in 0.01 **Significant in 0.05		

V. Conclusion

Based on data analysis, return on equity, debt to equity ratio, and cash ratio have effect on dividend policy. The higher companies' ability to generate earning the higher source of dividend payment will be. The higher debt usage, the higher priority to pay debt first and the higher interest expense will be, so the lower earnings payment. The higher cash ratio shows cash power to be used, include in pay dividend without disturb the fulfillment of current liabilities. This research is only use cash dividend consideration because evaluation for High Dividend 20 Index is only for cash dividend. Future research can examine financial ratios on stock, property, or script dividends.

References

[1] Jumingan, *Analisis Laporan Keuangan*. *Bumi Aksara*, Jakarta, 2014.
[2] I. Fahmi, *Analisis Laporan Keuangan*. *Alfabeta*, Bandung, 2012.
[3] B. Raharjo, *Keuangan dan Akuntansi*. *Graha Ilmu*, Yogyakarta, 2007.
[4] Malia, "Pengaruh Kinerja Keuangan Terhadap Kebijakan Dividen," (2015).
[5] P.G.R. Prakoso and M. Chabachib, "Analisis Pengaruh Current Ratio, Size, Debt To Equity Ratio, dan Total Asset Turnover Terhadap Dividend Yield dengan Return On Asset Sebagai Variabel Intervening.," *Diponegoro Journal of Marketing*. vol. 5, no. 2, pp. 1–14, 2016.
[6] B. Bae and M.F. Elhusseiny, "The Relationship Between Dividend Payment Patterns and Firm Characteristics.," *Research in Finance*. vol. 33, pp. 33–42, 2017.
[7] Y.H. Tong and B. Miao, "Are Dividends Associated with the Quality of Earnings?," *Accounting Horizons*. vol. 25, no. 1, pp. 183–205, 2011.
[8] D.J. Skinner and E. Soltes, "What do dividends tell us about earnings quality?," *Review of Accounting Studies*. vol. 16, no. 1, pp. 1–28, 2011.
[9] S. Hendrianto, "Analisis Pengaruh Cash Ratio, Debt to Equity Ratio dan Return on Assets terhadap Dividend Payout Ratio pada Perusahaan Pertambangan yang Terdaftar di Bursa Efek Indonesia.," *competitive*. vol. 1, no. 2, pp. 1–13, 2017.
[10] O.A. Gwilym, A.D. Clare, J. Seaton, and S. Thomas, "Consistent Dividend Growth Investment Strategies.," *The Journal of Wealth Management*. vol. 12, no. 3, pp. 113–124, 2009.
[11] M.C. Jensen and W.H. Meckling, "Theory of the firm: Managerial behavior, agency costs and ownership structure.," *Journal of Financial Economics*. vol. 3, no. 4, pp. 305–360, 1976.
[12] A. Halim, *Manajemen Keuangan Bisnis*. *Ghalia Indonesia*, Bogor, 2007.
[13] B. Riyanto, *Dasar-Dasar Pembelanjaan Perusahaan*. *BPFE*, Yogyakarta, 2001.
[14] J.F. Weston and E.F. Brigham, *Managerial Finance*. *The Dryden Press*, Illinois, 1981.
[15] J.C. Van Horne and J.M. Wachowicz, *Fundamentals of Financial Management*. *Prentice Hall*, New Jersey, 2009.
[16] F. Sirait and S.V. Siregar, "Dividend payment and earnings quality: evidence from Indonesia.," *International Journal of Accounting and Information Management*. vol. 22, no. 2, pp. 103–117, 2014.
[17] A. Risaptoko, "Analisis Pengaruh Cash Ratio, Debt to Total Asset, Assets growth, Firm Size dan Return on Asset Terhadap Dividend Payout Ratio (Studi Komparatif pada Perusahaan Listed di BEJ yang Sahamnya Ikut Dimiliki Manajemen dan Yang Sahamnya Tidak Dimiliki Manajemen," (2007).
[18] D. Prastowo and R. Juliaty, *Analisis Laporan Keuangan: Konsep dan Aplikasi*. *Unit Penerbit & Percetakan AMP YKPN*, Yogyakarta, 2002.
[19] A. Sartono, *Manajemen Keuangan Teori dan Aplikasi*. *BPFE*, Yogyakarta, 2012.
[20] Kasmir, *Analisis Laporan Keuangan*. *Raja Grafindo Parsada*, Jakarta, 2008.