Conference Paper

Stock Liquidity and Dividend Policy

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Abstract

This research aims to determine the effect of stock liquidity on dividend policy. This research is conducted on nonfinancial firms listed on the Indonesia Stock Exchange over the period of 2014–2016, using purposive sampling method. This research uses two proxies of stock liquidity – Amihud illiquidity ratio and share turnover. This research uses multiple linear regression in order to determine the effect of the independent variable, which is stock liquidity, and control variables consisting of firm size, profitability, leverage, and cash holding on dividend policy as the dependent variable. The analysis shows that stock liquidity as proxied by Amihud illiquidity ratio has a negative insignificant effect, stock liquidity as proxied by share turnover has a negative significant effect, firm size, profitability, leverage and cash holding have a positive and significant effect, while leverage has a negative but insignificant effect on dividend policy. Thus, it can be concluded that stock liquidity has an effect on dividend policy in nonfinancial public firms in Indonesia.

Keywords: stock liquidity, Amihud illiquidity ratio, share turnover, dividend policy

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1. Introduction

Dividend policy is linked to two aspects, the decision to pay or not to pay dividend and the amount of dividend paid or dividend payout ratio. Based on the data provided by Indonesia Central Securities Depository in year 2014 until 2016, the dividend paid by public firms in Indonesia fluctuates. In 2014, there were 249 out of 509 public firms paid dividends. In 2015, there were 257 out of 525 public companies which paid dividends. In 2016, there were 248 out of 539 firms paid dividends. The fluctuation of dividends paid during those years is interesting to analyze.

Firms need to consider various factors in dividend payout, which are the need of funding, the need to retain some of the firm's net income to finance prospective investment, firm's liquidity condition, the behavior of stakeholders and other factors related to dividend payout (Brigham and Gapenski, 1996). According to Jiang et al. (2017) and Banerjee et al. (2007), there is one factor that influences dividend policy, which is stock liquidity.

Jiang et al. (2017) find that stock liquidity decreases the information asymmetry between insiders or majority shareholders and outsiders or minority shareholders by providing more information to outsiders. As the stock market develops, market participants face a tighter competition. They are forced to seek for more private information that can be beneficial for trading. Hence, the reduced asymmetry information between insiders and outsiders, which leads to outsiders knowing more about the financial condition of the company and they can take part in the decision–making process in the company. Thus, it can be concluded that this informational effect influences dividend policy. On the other hand, Banerjee et al. (2007) argue that, in highly liquid markets, investors can cheaply create homemade dividends. This is because the more liquid a stock is, the less the trading friction is, so it is easier for investors to sell their stocks to get a capital gain. In other words, a liquid stock holder has a lesser concern about dividend payout and expects the firm to invest in prospective investment.

In Figure 1.2., there is a fluctuation of stock trading volume in 2013 – 2015 that correlates with the fluctuation of dividend payout in 2014 – 2016 in Figure 1.1. Based on both figures and previous studies, the fluctuation of stock liquidity in a year can influence the dividend payout ratio in the following year. The phenomenon intrigues the author to conduct a deeper research. Moreover, there are only a few researches regarding the influence of stock liquidity on dividend policy in Indonesia.

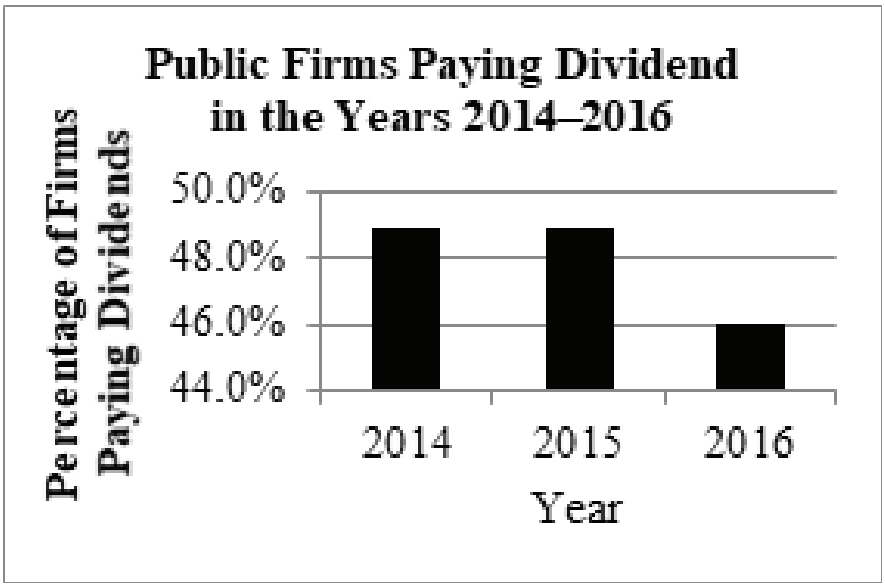

Figure 1: Percentage of public firms paying dividends. **Source:** Indonesia Central Securities Depository (Kustodian Sentral Efek Indonesia).

2. Literature Review

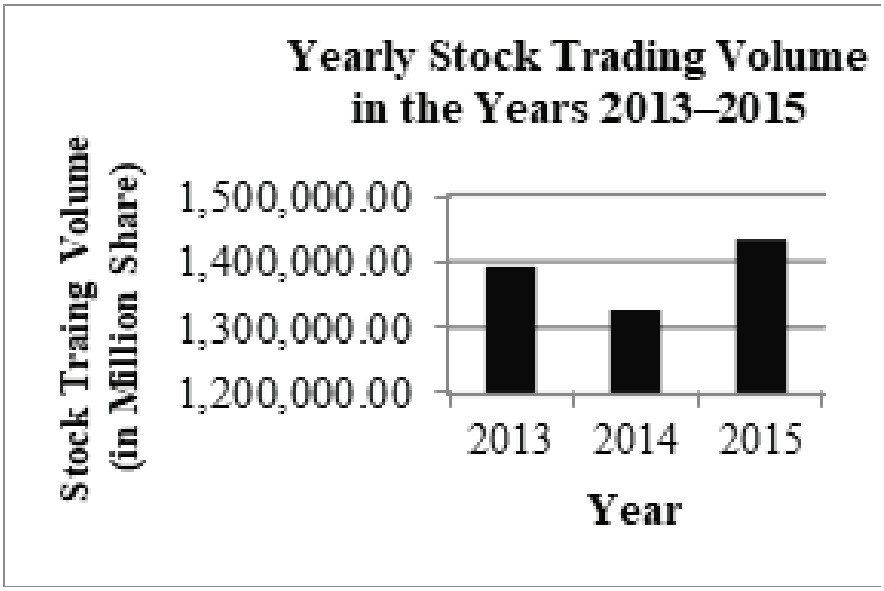

Figure 2: Yearly stock trading volume of public firms. **Source:** Financial Services Authority (Otoritas Jasa Keuangan).

2.1. Stock liquidity

Reilly and Brown (2009:296) define liquidity as the ability to buy or sell an asset quickly and at known price – that is, a price not substantially different from the prices for prior transactions. A liquid stock benefits the investor because it is easy to trade in order to get a capital gain. On the other hand, if the firm issues new stocks and those stocks are traded quickly in the market, the risk of being delisted from capital market is reduced.

There are two stock liquidity measures used in this research. The first one, following the research of Jiang et al. (2017), is Amihud illiquidity ratio (2002), because the theory states that stock liquidity influences the price impact and price in formativeness of stocks and both can be explained by Amihud measurement. Price impact is daily price response associated with one dollar of trading (Amihud, 2002). The bigger the price impact, the less liquid a stock is (Aji, 2012). Stock price informativeness indicates the amount of firm-specific information embedded into share price (Lyimo, 2014).

The second measure of stock liquidity, following the research of Banerjee et al. (2007), is share turnover, which is calculated by dividing the total stock trading volume in a period by the number of shares outstanding. The higher the share turnover, the more liquid a stock is because this indicates investors' interest to own the stock. Besides, the higher the volume traded means a more dispersed ownership, which leads to an increase in trading frequency. A higher liquidity also signifies a higher possibility to get a return from a more liquid stock than from a less liquid stock.

2.2. Dividend

Ross et al. (2016:600) define dividend as a payment made out of a firm's earnings to its owners, in the form of either cash or stock. Sudana (2015:192) argues that dividend policy is related to the amount of dividend payout ratio (DPR), which is the amount of cash paid put to shareholders divided by net income. DPR is amount of cash paid out to shareholders divided by net income. The formula of DPR is as follows:

$$\text{Dividend Payout Ratio (DPR)} = \frac{\text{Dividend}}{\text{Earning After Tax}}$$

2.3. The effect of stock liquidity proxied by Amihud illiquidity ratio to dividend policy

Jiang et al. (2017) argue that firms with higher stock liquidity pay more dividends than those with lower stock liquidity. This relation is stronger when the information environment is more opaque or when the majority shareholders have a higher propensity to expropriate minority shareholders' rights. In general, stock liquidity may decrease the agency problem between majority and minority shareholders by reducing information asymmetry. Consider there is a shareholder who holds some fraction of the firm's total shares. If he decides to decrease his ownership, there will be more shares actively traded and the liquidity of the market will go up; therefore, there will be more information flows in the capital market and more information added into the stocks. As a result, to earn trading gains, speculators need more time to gather information. Amihud illiquidity ratio is as follows:

$$\text{Amihud}_{i,t} = 1/D_{i,t} \; x \; \sum_{d=1}^{D} |\text{Ret}_{i,t,d}|/\text{Volume}_{i,t,d}$$

Description:

$\text{Amihud}_{i,t}$ = Liquidity ratio of firm i in year t

$D_{i,t}$ = Trading days of firm i in year t

$\text{Ret}_{i,t,d}$ = The daily stock returns multiplied by 100 of firm i in year t on day d

$\text{Volume}_{i,t,d}$ = Trading volume in million Rupiah of firm i in year t on day d

For ease of interpretation, the second stop of Amihud measurement is :

$$\text{Liquidity}_{i,t} = -\ln(1 + \text{Amihud}_{i,t})$$

H_1: Stock liquidity, proxied by Amihud illiquidity ratio, has a positive effect on dividend policy.

2.4. The effect of stock liquidity proxied by share turnover to dividend policy

Banerjee et al. (2007) state that, in a perfect or frictionless market, rational investors can satisfy their needs for liquidity by creating a homemade dividend without any cost by selling a portion of their shares. This means earning 1 dollar of dividend equals to selling their investment of 1 dollar. But, in an imperfect market, dividend–paying firms help investors to satisfy their needs for liquidity with trading only a few or even not trading any of their shares to avoid trading friction. A higher trading friction indicates a lower stock liquidity. A lower stock liquidity is denoted by low trading activity, high proportion of zero-trading days and high price impact of order–flow. In conclusion, a higher trading friction leads to an increase in dividend payout. Share turnover formula is:

$$TO_{i,t} = \frac{\text{VOL}_{i,t}}{N_{i,t}}$$

Description:

$\text{TO}_{i,t}$ = Share turnover of firm i in year t

$\text{VOL}_{i,t}$ = Trading volume of firm i in year t

$\text{N}_{i,t}$ = Total shares outstanding of firm i in year t

H_2: Stock liquidity, proxied by share turnover, has a negative effect on dividend policy.

2.5. Other factors influencing dividend policy

2.5.1. Firm size

Firm size has a significant effect on dividend policy because a bigger firm gains easier access to the capital market, thus a bigger firm pays more dividends to its shareholders (Handayani and Hadinugroho, 2009; Najjar and Kilincarslan, 2016). Firm size is a measurement of how big or small is a firm. Firm size is measured by:

Firm Size = ln Total Assets

2.5.2. Profitability

Profitability has a positive and significant effect on dividend payout because a higher liquidity means there is a free cash flow, which potentially causes agency problem. The payment of dividends is expected to be a governance tool to reduce the free cash flow

and the agency problem (Thanatawee, 2011). Profitability measurement in this study uses Return on Assets (ROA), which is the firm's ability to generate earning after tax by using all of its assets. ROA formula is:

$$\text{Return on Assets (ROA)} = \frac{\text{Earning After Tax}}{\text{Total Assets}}$$

2.5.3. Leverage

A higher leverage decreases the amount of dividend that can be paid to shareholders because the firm must pay for the debt and the debt interest (Al–Makawi, 2008; Hardianto and Herlina, 2010;). Leverage measures the firm's long-term ability to meet its obligations. In this study, debt ratio is used and calculated as follows:

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

2.5.4. Cash holding

Cash holding has a positive effect on dividend policy because, in order to pay dividends without influencing its need in the future, such as investment and debt payment, a firm must hold a lot of cash (Lozano and Caltabiano, 2014). Cash holding is the amount of cash and equivalents held by the firm, calculated as follows:

$$\text{Cash Holding} = \frac{\text{Cash and Equivalent}}{\text{Total Assets}}$$

3. Method

This study uses a quantitative approach to test the hypotheses. A quantitative approach is testing the hypotheses using secondary data. The model of this study is multiple linear regression. The variables used in this study are dependent, independent and control variables. The samples used in this study are public nonfinancial firms listed in Indonesia Stock Exchange in 2014 – 2015 and those who have complete stock trading data in 2013 – 2015.

4. Results and Discussions

4.1. The effect of stock liquidity, proxied by Amihud illiquidity ratio, on dividend policy

Table 1.1 shows that stock liquidity measured by Amihud illiquidity ratio (LIQ) has an insignificant negative effect on dividend policy. The Amihud illiquidity measure in this study is already converted to liquidity ratio and it has an insignificant negative effect on dividend policy, which means the more liquid a firm stock is, the less dividend paid by the firm. On the contrary, firms with less liquid stocks pay more dividends. That is because a less liquid stock increases its liquidity risk and information asymmetry, so the shareholders face greater uncertainty. In this case, shareholders want a higher return for illiquid assets. Dividend is considered as a compensation for investing in those illiquid assets.

The insignificant effect is also caused by the informational effect of stock liquidity in Indonesia which has no effect on dividend policy. Price informativeness of Amihud cannot explain its relevance to dividend policy because the Indonesia capital market is weakly efficient (Andrianto and Mirza, 2016; Ady and Mulyaningtyas, 2017). Therefore, the information that is reflected in the price is only based on historical trading data, such as price and trading volume, not including published information, private information and firm-specific information.

Table 1: Regression output of the effect of LIQ on DPR.

Variable	Regression Coefficient (B)	Std. Error	t	Sig.
LIQ	−7.177	10.943	−0.656	0.513
SIZE	0.033	0.009	3.826	0.000
ROA	1.359	0.174	7.819	0.000
LEV	0.017	0.076	0.220	0.826
CASH	0.430	0.162	2.646	0.009
Constant	−0.888			
R-Square	0.367			
Adjusted R-Square	0.351			
F	22.881			
Sig.	0.000			

Source: Regression output from SPSS Statistic 22.

4.2. The effect of stock liquidity, proxied by share turnover on dividend policy

Stock liquidity proxied by share turnover (STO) has a significant positive effect on dividend policy, which means that firms with more liquid stocks pay less dividends, because firms think that shareholders can satisfy their need for liquidity by easily selling liquid stocks to earn capital gain; therefore, shareholders don't really need any dividend. On the other hand, shareholders of less liquid stocks ask for more dividends to compensate for investing in less liquid assets. This result is consistent with Banerjee et al. (2007) and Griffin (2010), but is inconsistent with Jiang et al. (2017). A study by Pastor and Stambaugh (2003) finds that stocks that have higher sensitivity to aggregate liquidity shocks offer higher expected returns. Stocks that are more illiquid face higher trading frictions, so an investor has difficulties to trade it easily to earn capital gain. This encourages the shareholders to ask for dividends as a compensation for illiquid stocks. Investors find that a decrease in liquidity is not beneficial and they ask for a compensation in the form of dividends.

Table 2: Regression output of STO on DPR.

Variable	Regression Coefficient (B)	Std. Error	t	Sig.
STO	−0.073	0.022	−3.280	0.001
SIZE	0.026	0.008	3.088	0.002
ROA	1.295	0.171	7.592	0.000
LEV	0.051	0.075	0.681	0.497
CASH	0.459	0.158	2.646	0.009
Constant	−0.671			
R-Square	0.399			
Adjusted R-Square	0.384			
F	26.139			
Sig.	0.000			

Source: Regression output from SPSS Statistic 22.

4.3. The effect of control variables on dividend policy

Size has a significant positive effect on dividend policy, which means a bigger firm tends to pay more dividends. Al-Najjar and Kilincarslan (2016) find that bigger firms have a higher cash flow, even when they have a low profitability; they pay more dividends to follow their stable dividend policy and maintain the trust from their investors.

Profitability has a significant positive effect on dividend policy, which means more profitable firms pay more dividends to shareholders. A higher profitability generates free cash flow that can lead to agency problem. Dividend payment is expected to reduce this problem. This is consistent with Thanatawee (2011).

Leverage shows an insignificant negative effect on dividend policy, which means the capital structure of the firms uses more debts than assets. This is because the payment of dividend decreases retained earnings, and so the firms will need external financing. This result is consistent with Mulyono (2009) and Chayati (2017).

Cash holding has a significant and positive effect on dividend policy, which means the more cash held by the firm leads to higher dividends because a bigger amount of cash ensures the firm is able to pay dividends without risking its liquidity needs in the future. Zahidda (2017) states that a strong cash position to liquidity needs in the future will be followed by an increase in dividend payment.

5. Conclusion

Stock liquidity, proxied by Amihud illiquidity ratio, has an insignificant negative effect on dividend policy because the liquidity has no informational effect on dividend policy. Stock liquidity, proxied by share turnover has a significant negative effect on dividend policy because dividends act as a compensation for investing in illiquid stocks. Firm size has a significant positive effect on dividend policy because bigger firms have better access to the capital market and a higher cash flow, thus can pay more dividends to maintain their stable dividend policy and investors' trust. Profitability has a significant positive effect on dividend policy because a higher profitability means that there is more profit that can be allocated for dividends. Leverage has an insignificant negative effect on dividend policy

Cash holding has a significant positive effect on dividend policy because, if a firm holds more cash, it can pay dividend without having any concern about future liquidity needs, such as investment and debt payment.

References

[1] Ady, Sri Utami, Alvi Mulyaningtyas. 2017. Exploration of Indonesia Capital Market Efficiency Case Study Indonesia Stock Exchange. *Ekspektra : Journal of Business and Management.* Vol. 1(2), 103-123.

[2] Al-Makawi, Husam-Aldin. 2007. Determinants of Corporate Dividen Policy in Jordan: An Application of the Tobit Model. *Journal of Economic & Administrative Services*, Vol.23(2), 44-70.

[3] Al-Najjar, Basil dan Erhan Kilincarslan. 2016. The Effect of Ownership Structure on Dividend Policy: Evidence from Turkey. *Corporate Governance: The International Journal of Business in Society*, Vol. 16(1), 135-161.

[4] Amihud, Y. 2002. Illiquidity and Stock Returns : Cross – Section and Time Series Effects. *Journal of Financial Markets*.

[5] Andrianto, Y., Adrian Rishad Mirza. 2016. A Testing of Efficient Market Hypothesis in Indonesia Stock Market. 3rd Global Conference on Business and Social Science, Kuala Lumpur, Malaysia. *Procedia – Social and Behavioral Sciences*, Vol. 219, 99 – 103.

[6] Banerjee, S., Gatchev, V.A., Spindt, P.A., 2007. Stock Market Liquidity and Firm Dividend Policy. *J. Financ. Quant. Anal.* 42 (2), 369–397.

[7] Brigham, E.F.dan Gapenski, Louis C. 1996. *Intermadiate Finance Management*. (5th ed.). Harbor Drive: The Dryden Press.

[8] Brown, K.C dan F.K. Reilly. 2012. *Investment Analysis & Portfolio Management*. 10th edition. South Western. Canada.

[9] Chayati, Nuning Nur dan Nur Fadjrih Asyik. 2017. The Effect of Profitability, Investment Opportunity and Leverage on Dividend Policy. *Journal of Accounting Knowledge and Research*, Vol. 6(9).

[10] Fernandez – Amador, O., Gachter, M., Larch, M., Peter, G. 2013. Does Monetary Policy Determine Stock Market Liquidity? New Evidence from the Euro Zone. *Journal of Empirical Finance* Preference : A Case Study on Dhaka Stock Exchange. *Journal of Finance and Accounting*.

[11] Griffin, C. Howard. Liquidity and Dividend Policy. *International Business Research*, Vol. 3(3).

[12] Handayani, Dwi. R dan Bambang Hadinugroho. 2009. The Analysis of the Effect of Managerial Ownership, Debt Policy, ROA, Firm Size on Dividend Policy (Case Study : Manufacturing Firms Listed in Jakarta Stock Exchange in 2001 – 2005). *Managerial Vocus*, Vol. 7(1), Department of Economy, Faculty of Economy. Sebelas Maret University.

[13] Hardianto, Bram dan Herlina. 2010. Free Cash Flow Prediction, Debt Policy and Profitability on the Possibility of Dividend Payment. *Journal of Business Management*. Vol. 3(1), 53 – 74.

[14] Jiang, Fuxia, Yunbiao Ma, Beibei Shi. 2017. Stock Liquidity and Dividend Payouts. *Journal of Corporate Finance*, Vol. 42, 295 – 314.

[15] Indonesia Central Securities Depository. Dividend Payment Year 2014 – 2016. www.ksei.co.id. Accessed on March 22, 2018.

[16] Lozano, Maria Belen dan Simone Caltabiano. 2014. Cross Institutional Cash Holding and Dividend Policies : Focusing on Brazilian Firms. *Journal of Applied Economics*. Vol. 47.

[17] Lyimo, Gregory D. 2014. Smoothness, Earnings Surprise and Stock Price Informativeness. Evidence from Indian Stock Market. International Journal of Academic Research in Accounting, Finance and Management Sciences, 2014, Vol. 4(2), 385-394.

[18] Mulyono, B. 2009. The Effect of DER, Insider Ownership, Size and IOS on Dividend Policy of Manufacturing Firms Listed in IDX. Thesis. Diponegoro University. Semarang.

[19] Financial Services Authority. 2015. Capital Market Weekly Statistics December Week 5, December 28 – 30. 2015. www.ojk.go.id. Accessed on March 22, 2018.

[20] Pastor, L.; Robert F. Stambaugh. 2003. Liquidity Risk and Expected Stock Returns. *The Journal of Political Economy*. Vol. 111(3), 642 – 645,

[21] Ross, S. A., Westerfield, R. W., & Jordan B. D. 2016. *Corporate Finance Fundamentals*. Global edition. Boston : Irwin/McGraw – Hill.

[22] Sudana, I Made. 2015. *Theory and Practices Corporate Financial Management*. 2nd ed. Jakarta: Erlangga.

[23] Thanatawee, Yordying. 2011. Life-Cycle Theory and Free Cash Flow Hypothesis: Evidence from Dividend Policy in Thailand. *International Journal of Financial Research*. Vol 2 (2)

[24] Zahidda, Dewi. 2017. Effect of Profitability, Liquidity, and Cash Position on Dividend Policy of Food and Beverages Firm. Journal of Management Knowledge and Research, Vol. 6(2)