# A Determinants of Dividend Payout Ratio in Indonesian listed Banking

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***Abstract*— This paper is investigating determinants of dividend payout ratio in Indonesia listed banking for year 2012-2018. Dividend is important factors for investors make decision whether to buy or sell shares especially shares in banking industry. Banking industry is essential financial institution for a country and its growth is very important. This paper address on what should be look for determinants of Dividend Payout Ratio for banking industry. Not many papers investigate Dividend Payout Ratio in Indonesian banking industry. Independent variables are factors Loan Deposit Ratio (LDR), Capital Adequacy Ratio (CAR) and Return on Equity (ROE). As literature reveals many contradictions in dividend theory, we investigated which factors effect on banking industry listed in Indonesian Stock Exchange. Sample is selected using purposive sampling with total 10 banks meet criteria. Analyses method used in this paper is multiple regression using E-views version 9.0 and the model is Fixed Effect. Regression results are LDR and ROE affect Dividend Payout Ratio. We suggest bank can manage its LDR ratio wisely since LDR is a source of revenues for bank, while ROE ratio must be assessed regularly because ROE is a measurement how well bank uses its resources to generate profit. Implication on this paper are first, good banking can manage its LDR efficiently because different between Loan and Deposit is profit for the bank, secondly, ROE is profit and consistently effect on dividend. Hence investors should invest on banking industry with consistently yield profit.**

***Keywords—dividend payout ratio, loan deposit ratio, capital adequacy ratio, return on equity, bank.***

## I. INTRODUCTION

Dividend is very close related to firm value because firm value will capture the future growth of a company. Investors can use dividend payment as a measurement of firm value according to [1]. Shareholders always want to maximize their firm value [2]. Managers always act on behalf of shareholders to maximize shareholders' wealth [3].

There are many controversy on dividend whether dividend can influence firm value. Miller and Modigliani or MM Theory (1958) said dividend is irrelevant and there is no effect on firm value. MM Theory known as Dividend Irrelevant Theory which is said the world is efficient market and there is no floatation cost, no tax, no transaction cost, no agency cost.

All investors have the same information because there is no fee to get information, everyone has the same access to information. There is nothing to hide. With all this situation the amount of dividend paid to investor is not relevant to firm value. On the other hand, Theory Bird in Hand proposed[4] [5] said that on uncertainty world and asymmetry information, investors prefer to receive dividend now rather than capital gain in the future. With high dividend payment, investor believe in future cash-flow and reduce cost of capital and increase the value of the firm.

Signaling Theory said dividend announcement sent a signal to investors about the firm future earning and management perception. Management will not be increasing dividends unless they certain about the future earning to meet the increase in dividends. On the other hand, dividend reduction is perceived as bad news because it sent negative massage that future earnings will be less than current earnings [6].

The word dividend comes from Latin word "dividendum" which means 'thing to be divided". Dividend is a distribution to shareholders out of profit or reserves available for this purpose. Profit distributed to shareholders as dividend payment are from earning after tax and after deducted for retained earnings [2].

Company should have positive income when distribute dividend. Dividend distributed to ordinary shareholders using proportion rate and the rest will be invested back to the company in the form of retained earnings. The larger dividend paid the fewer profits invested back to retained earnings and the more company should rely on long-term fund such as issuing more shares or bonds Dividend policy can be slightly different from country to countries due to policies, rules, regulation, institutions and capital markets. [7]. The main objective of this paper is to identify the effects of LDR, CAR and ROE on Dividend Payout Ratio using

banks listed in Indonesian Stock Exchange for period 2012-2018.

## II. LITERATURE REVIEW

Empirical, theoretical studies, and research on dividend payout ratio in banking sector become more important because banking industry is essential part of economic in the country. Dividend is always expected by investors who proponents of bird in the hand theory. This paper wants to investigate whether LDR, CAR, ROE have effect on Dividend Payout Ratio. There are several studies on dividend payout ratio in banking sector both domestic and international and the results are varying. There are several determinants for dividend in banking industry, among them are Loan to Deposit Ratio, Capital Adequacy Ratio, Profitability, and Leverage.

Dividend Payout Ratio formula is Dividend Per Share divided by Earning Per Share or Dividend Paid divided by Net Income. Dividend Payout Ratio is the proportion of earnings paid out as dividends to shareholders, typically express as a percentage [2]. LDR is showing liquidity of a bank. Formula for LDR is total loans divided by deposits from third parties. LDR has strong relation to DPR because loan will earn profit to be used as dividend payment in the future. Research done by [8] said LDR has positive effect and significant on DPR in Indonesian banks. Dividend payment generally increase the wealth of firm [9]. Based on theoretical concept, it can be proposed first alternative hypotheses as follow:

$H_1$: Loan to Deposit Ratio (LDR) has effect on Dividend Payout Ratio (DPR)

CAR as significant indicator of safety and stability for banks because CAR provide cushion for absorbing losses [10]. These losses are coming from loan. CAR is close to related to LDR. CAR is calculated by dividing a bank's capital by its risk-weighted assets or in simple word is total equity capital divided by total asset. The higher LDR the higher CAR because bank should add more equity to cover loan.

CAR has negative correlation with DPR. CAR is solvability ratio for bank industry. In which solvability ratio measures ability of a company to pay its debts. Dividend payment will lower CAR because this payment will increase the leverage and potentially shift risk from shareholders to debt holders [11]. Bank Indonesia (BI) required minimum CAR 8%. It means bank should retain its equity minimum 8% to bear the risks from loans or productive assets. The higher CAR the better because bank is in stable condition. The relation between CAR and DPR is the CAR will reduce every time bank paid dividend. Dividend will reduce capital Based on theoretical concept it can be proposed second alternative hypotheses as follow:

$H_2$: Capital Adequacy Ratio (CAR) has effect on Dividend Payout Ratio (DPR)

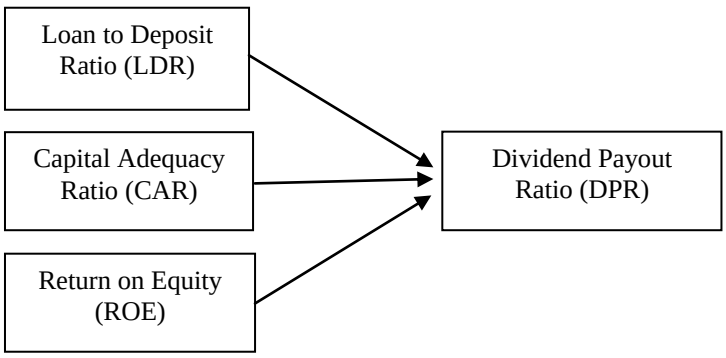
ROE is efficiency ratio to measure the future prospect of the bank, which investors can see the growth of profit. Formula ROE is Net Income divided by Total Equity. The higher ROE the better for the bank and vice versa, low ROE can be caused by the number of loans idle cannot distribute, too much funds can't invested in securities, interest expenses from saving and time deposit too high, small spread for Net Interest margin. If ROE is higher means the bank has better performance, higher profit and it will bigger allocation for dividend [2]. Based on theoretical concept, it can be proposed third alternative hypotheses as follow:

$H_3$: Return on Equity (ROE) has effect on Dividend Payout Ratio (DPR)

## III. DATA AND METHODOLOGY

The purpose of this research is to examine of factors determining Dividend Payout Ratios, there for Dividend Payout Ratio is used as dependent variable and independent variables are Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR) and Return on Equity (ROE). Data are taken from banking sectors whose shares are traded in Indonesia Stock Exchange (www.idx.co.id) for the year 2012-2018. With total number of 32 banks only 10 banks meet criteria and 7 years observation make total data 70 data. This research is using multiple regression analysis with help of E-views 9.0 and type of data is panel data. Criteria set as companies reported their audited financial statements, do not have any loss in Income Statements, paid dividend during observation years and not delisted during observation. To test whether independent variables jointly or simultaneously have a significant effect on dependent variable, I propose the theoretical framework as follow:

**Picture 1: Theoritical Framework**




The regression model is as follow:

$DPRi, t = \alpha + \beta 1 LDRi, t + \beta 2 CARi, t + \beta 3 ROEi, t + e$

Where:

| | |
|---|---|
| DPRi, t | : *Dividend Payout Ratio (*DPR*)* company i on year t |
| LDRi, t | : *Loan to Deposit Ratio* (LDR) company i on year t |
| CARi, t | : *Capital Adequacy Ratio* (CAR) company i on year t |
| ROEi, t | : *Return on Equity (*ROE*)* company i on year t |

Table 1 shows the descriptive statistic for all regression variables. It shows mean, median, maximum, minimum,

standard deviation, skewness, kurtosis dan Jarque-Bera for all sample data.

Table 1: Data Descriptive Statistics

| | DPR | LDR | CAR | ROE |
|---|---|---|---|---|
| Mean | 39.12857 | 74.71429 | 19.05714 | 14.8 |
| Median | 26.5 | 74 | 18 | 14 |
| Maximum | 501 | 103 | 27 | 29 |
| Minimum | 11 | 60 | 13 | 3 |
| Std. Dev. | 58.05443 | 8.892503 | 3.434209 | 5.254674 |
| Skewness | 7.344243 | 0.802297 | 0.426898 | 0.230766 |
| Kurtosis | 58.91588 | 3.338331 | 2.313586 | 2.900553 |
| | | | | |
| Jarque-Bera | 9748.482 | 7.843479 | 3.500385 | 0.650127 |
| Probability | 0 | 0.019807 | 0.17374 | 0.722482 |
| | | | | |
| Sum | 2739 | 5230 | 1334 | 1036 |
| Sum Sq. Dev. | 232551.8 | 5456.286 | 813.7714 | 1905.2 |
| | | | | |
| Observations | 70 | 70 | 70 | 70 |

Table 2: shows panel regression results dependent variable is DPR using Fixed effect model

| | | | | |
|---|---|---|---|---|
| Dependent Variable: DPR | | | | |
| Method: Panel Least Squares | | | | |
| Date: 08/12/19 Time: 17:06 | | | | |
| Sample: 2012 2018 | | | | |
| Periods included: 7 | | | | |
| Cross-sections included: 10 | | | | |
| Total panel (balanced) observations: 70 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| LDR | 2.68861 | 1.00198 | 2.683298 | 0.0095 |
| CAR | -3.06936 | 3.028869 | -1.013368 | 0.3152 |
| ROE | -5.848908 | 2.316308 | -2.525099 | 0.0144 |
| C | -16.69195 | 109.095 | -0.153004 | 0.8789 |
| | Effects Specification | | | |
| Cross-section fixed (dummy variables) | | | | |
| R-squared | 0.326381 | Meandependentvar | | 39.12857 |
| Adjusted R-squared | 0.184566 | S.D. dependent var | | 58.05443 |
| S.E. of regression | 52.42394 | Akaike info criterion | | 10.92259 |
| Sum squared resid | 156651.4 | Schwarz criterion | | 11.34017 |
| Log likelihood | -369.2906 | Hannan-Quincriter. | | 11.08846 |
| F-statistic | 2.301462 | Durbin-Watson stat | | 1.450612 |
| Prob(F-statistic) | 0.017974 | | | |
| F-statistic | 1.649258 | Durbin-Watson stat | | 1.166377 |
| Prob(F-statistic) | 0.186504 | | | |
| | Unweighted Statistics | | | |
| R-squared | 0.066169 | Mean dependent var | | 39.12857 |
| Sum squared resid | 217164.2 | Durbin-Watson stat | | 1.111829 |

The effect of bank specific bank variables on DPR is examined by panel data estimation. The regression results of fixed effect regression are showing in Table 2 mentioned above. The dependent variable is DPR. Model corresponds to cross-section fixed effects. The model is estimated using a panel of 70 observations for period 2012 to 2018 derived from 10 banks listed in Indonesian Stock Exchange. As shown in Table 2 Adjusted R square value 0.184566 suggests that model serves its purpose in determining the impact of specific variables on DPR. In other words, 18.46% variability of DPR can be explained by LDR, CAR, ROE. From DW statistic we can serial correlation of residuals. The good threshold is below 2. From table XX shows DW statistic output is 1.166377. With F-statistic of 1.649258 ($p < 0.0000$) for panel data regression.

The results of estimation using Fixed Effect Model with help of E-Views version 9 in the table 2 can be formed the following equation:

DPR = -16.69195 +2.68861 LDR – 3.06936CAR - 5.848908ROE + e

From table 2 shows both LDR and ROE have significant value lower than 0.05. Threshold for significant must be lower than 0.05 in order to-be said effected to dependent variable.

## IV. RESULT AND CONCLUSION

### The Influence of Loan Deposit Ratio (LDR) on Dividend Payout Ratio

Hypothesis testing results denotes that the regression coefficient of 2.68861 with significant value of 0.0095 which less than 0.05 means Loan Deposit Ratio has effect on Dividend Payout Ratio. The result of this study showed that changes in the value of LDR does contribute significantly to DPR in banking sector which is an increase or decrease value of LDR will have impact on increase or decrease in DPR. Coefficient for Loan Deposit Ratio is positive means the higher Loan Deposit Ratio will increase Dividend Payout Ratio. LDR measures liquidity of banks. This hypothesis can be explained as this higher LDR means bank gave more loans to borrowers for more revenues for banks. Investors believe bank managed its loan careful and agree with business practice, as we agree bank must consider higher risks when it has more loans. Higher loans will result more revenues and more dividend allocated to be distributed later. The results supported by the researched conducted by [12] showing LDR positive and significant effect on DPR.

### The Influence of Capital Adequacy Ratio (CAR) on Dividend Payout Ratio

Hypothesis testing results denotes that the regression coefficient of -3.06936 with significant value of 0.3152 which more than 0.05 means CAR has no effect on Dividend Payout Ratio. Coefficient for Capital Adequacy Ratio is negative means the lower Capital Adequacy Ratio will increase Dividend Payout Ratio or vice versa. When CAR is increasing and DPR decreasing it can be explained that the banks hold its equity for purpose in investment so it will reduce the amount of dividend paid to shareholders. [13] [14] show that maintaining high capital ratios undercut bank profitability by diverting equity capital from more productive uses, such as investment in loans and other risky assets. Other researches done by [15] [13] [16] agreed with my finding who said bank accumulates too much capital means high overhead cost in the forms of foregone profit, with smaller profit then smaller dividend will be distributed into shareholders. CAR measures capital provided by the banks how to absorb losses without endangering customer deposits. It show increasing or decreasing CAR does not have effect on DPR. Dividend payment are taken from net income and the payment is using cash available.

### The Influence of Return on Equity (ROE) on Dividend Payout Ratio

Hypothesis testing results denotes that the regression coefficient of -5.848908 with significant value of 0.0144 which less than 0.05 means ROE has effect on Dividend Payout Ratio. Coefficient for ROE is negative means the lower ROE will increase Dividend Payout Ratio or increasing ROE will decrease DPR. This can be explained why ROE decrease then dividends increase. Low ROE caused by low income then the bank tries to increase its dividend payment to attract more new investors. According

to [17] Bank will pay more dividend and shift risk [18] on dividend payment on countries with weak shareholder protection. In my opinion, Indonesia is one of country with low protection from authority.[17] also mention dividend payment are used to camouflage invariable financial information. Consistently pay dividend will create good financial performance since dividend payment as one of good indicator company performance. According [19] Bank IPO tend to pay dividend than non IPO. In this research all the banks used as sample are IPO. This result is similar with [20] Baker (2007),Amitabh and Chara (2012) confirmed that firm profitability is negatively related to dividend payout of the firm. The explanation for this result is there may be a situation where company would need to plough back a major proportion of its profit to support their investment opportunities. Similar result by [21] [22] revealed that profitability is not a significant variable in explaining and predicting dividend behavior of the company. Lower ROE cannot be judged as in-profitable but it rather as growing company and retained earnings are used for productive expansion. Lower ROI can be happened to bad macro-economic at the present time.

## V. Conclusion

The research examined the effect of LDR, CAR, ROE on DPR of ten listed banks during the period 2012-2018. The result of research concluded that LDR and ROE have significant effect on DPR. For variable LDR is significant and has positive coefficient with DPR showing the more loans distributed to business and people, the more interest revenue for the bank and dividend payment are taken from revenue minus expenses. CAR is not significant result and it has negative coefficient with DPR. It means banks with the lower capital will pay more dividend because IPO banks more likely to pay dividends to attract new investors [19]. Even nearly insolvent banks are allowed by regulators to continue to pay dividends so that they might still able to raise new equity.[23]. ROE is significant and has negative coefficient with DPR means the lower capital then lower net income the banks will pay more dividend. Bank can pay dividend even though the bank has lower ROE because bank has enough cash to pay dividend. Firms distribute more dividend generally enjoy higher market value L. Pugachev (2019). Dividend payment is associated with good growth and trusting business and the bank tends to pro investors and showing even though the profit is not significant number, but bank pay dividend. This result is agreed with CAR coefficient which both variables show lower capital but more dividend payment. This situation can be explain as this, the payment of dividend is not solely based on profits, there are many considerations such as good corporate governance, trusting the business, good growth opportunity for banking industry, low risks where all these condition will increase the confidence of new investors to buy shares.

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