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## The impact of liquidity, solvency, and company value on the dividend payout ratio: an empirical study in the energy sub-sector in the LQ45 period 2017 -2021

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### Abstract

The capital market is very popular with many people, especially after the Covid-19 pandemic yesterday. The COVID-19 pandemic has made people realize how important it is to save and invest, especially in shares. This research analyzes the influence of liquidity, solvency, and profitability on the dividend payout ratio. The population of this research are companies in the energy department registered in LQ45 for the 2017 - 2021 period using a purposive sampling method with a total of 140 companies. The dependent variables in this research are Cash Ratio, debt-to-debt-equity ratio, and price-to-book value, with the result that the cash ratio affects the dividend payout ratio, the debt-to-debt-equity ratio has an effect on the dividend payout ratio, and price to book value has no impact on the dividend payout ratio.

**Keywords:** *Cash Ratio*, Debt to Equity Ratio, Price to Book Value, Dividend Payout Ratio

### 1. Introduction

The capital market is currently in great demand by the public, especially after the COVID-19 pandemic, which has made people aware that it is essential to save and invest, especially in shares. Based on data published by KSEI (2021) in the OJK article (2021), in August 2021, investor growth in the capital market was 57.20%, with the number of investors amounting to 6.10 million compared to 2020 of 3.88 million. According to Law Number 8 of 1995, Capital Markets (UUPM) with Public Offerings and Securities Trading, Public Companies related to Securities and institutions and professions related to Securities (OJK, 2010). In the capital market, various kinds of instruments exist, such as shares, bonds, mutual funds, and others. The capital market can also be interpreted as a market for buying and selling securities that generally have a lifespan of more than one year, such as shares, bonds, and mutual funds (Tandelilin, 2017).

There are various sectors on the Indonesian Stock Exchange, including companies in the energy sector. Companies operating in the energy sector produce and sell them, from the extraction process to distribution to energy sources. According to GDPC Boston (2018) in the article Traction Energy Asia (2020), GDPC Boston University divides the energy subsector into five categories: exploration and extraction, power generation, energy transmission and distribution, multipurpose projects, and energy efficiency projects. According to BPS (2021), final energy consumption in 2020 was 4,914,960 terajoules, while household energy consumption was the second largest after industry, with 1,532,150 terajoules or 31.2% of the total. This data shows that household energy consumption and industrial demand are very high, making the energy sector have excellent prospects in the future.

People invest in shares to get profits from both capital gains and dividends. Capital Gain is the difference between the purchase and sale prices of an asset obtained from a buying and selling transaction. According to Samsul (2006), Capital Gain is income expressed as a percentage of the initial investment capital. Investment income in shares is the profit obtained from buying and selling shares, where if there is a profit, it is called a capital gain, and if there is a loss it is Capital Loss. Dividends are profit distributions given by the company and come from the profits generated by the company (Sulindawati, 2017). Investors make several considerations when investing, including the Dividend Payout Ratio.

In the energy sector listed in LQ45, there are 7 companies: Adaro Energy, Harum Energy, Indika, Bukit Asam, Medco, and Perusahaan Gas Indonesia. Based on data for the

2017-2021 period, the dividend payout ratio fluctuates: the average in 2017 was 30.71, the average in 2018 was 53.15, the standard in 2019 was 49.53, the average in 2020 was 54.37, the average in 2021 was 29.41. Based on this data, the average Dividend Payout Ratio in the energy sector in 2017-2021 fluctuated, but the trend declined. Judging from the average value of liquidity in the energy sector for the 2017-2021 period with the cash ratio proxy, it shows an increasing trend with an average value in 2017 1.57, in 2018 1.24, in 2019 1.80, in 2020 1.99, and 2021 1.23. If it is connected to the decreasing trend value of the average Dividend Payout Ratio, it means there is a problem between liquidity and the dividend payout ratio. The average weight of companies in the energy sector for the 2017-2021 period experienced an increasing trend with an average value of in 2017 1.25, in 2018 1.23, in 2019, 0.97, in 2020 1.09, and in 2021 1.29. So, a problem occurs in the energy sector between company value and the dividend payout ratio, which shows a decline.

Based on the phenomenon, many companies have increased liabilities but can still provide cash dividends. This can be seen on the "Company Fact Sheet LQ45" for the company Adaro Energy Tbk. which experienced an increase in liabilities in the 2019 financial year of IDR 40,107,752 in 2018 to IDR 45,094,086 in 2019. Still, in that year, it provided an increase in cash dividends. The company experienced an increase in the Dividend Payout Ratio for the 2019 financial year; in 2019 it was 40.27 to 138.38 in 2020. This is inversely proportional to the statement made by Suherli & Sofyan (2004) that the greater the leverage in the company, the more likely it is to pay dividends. Low to reduce dependence on external funding by promising high bonuses to potential shareholders.

Based on the background of the problem, this researcher wants to know the influence of Liquidity, Solvency, and Company Value on the Dividend Payout Ratio in the energy industry for the 2017-2021 period.

## 2. Method

The population in this study are energy companies registered in LQ45 during the 2017-2021 period. The technique used for sampling used a purposive sampling method with a total sample of 7 companies. The purposive sampling method is a method that uses a sampling of companies that will be sampled in this research, namely Energy Companies registered in LQ45 in 2021, which publish audited financial reports every year during the 2017-2021 period. The variables in this research include Cash Ratio ( $X_1$ ), Debt to Equity Ratio ( $X_2$ ), Price to Book Value ( $X_3$ ), and Dividend Payout Ratio ( $Y$ ) in companies in the energy sector registered in LQ45 for the 2017-2021 period. The influence of Cash Ratio, Debt Equity Ratio, and Price to Book Value on the Dividend Payout Ratio of energy companies listed in LQ45 for the 2017-2021 period will be analyzed using the multiple regression method.

## 3. Results and Discussion

### Descriptive Test

Table 1

#### Descriptive Statistics

Descriptive statistics	C	Mean	Minimum	Maximum	Std. Deviation
Cash Ratio	140	1.57	0.22	8.53	1.78
Debt to Equity Ratio	140	1.31	0.10	3.86	1.19
Price to Book Value	140	1.16	0.51	3.04	0.60
Dividend Payout Ratio	140	43.09	-10.82	143.39	50.63

Based on Table 1, the Descriptive Analysis in this research amounted to 140 data with observations from 2017-2021. The Cash Ratio shows a minimum value of 0.22% in 2020 by

the company Medco Energi Internasional Tbk. The maximum value is 8.53% in 2020 by the company Harum Energy Tbk. The average value obtained from the Cash Ratio variable during the 2017-2021 period was 1.57% with a standard deviation of 1.78%.

The Debt-to-Equity Ratio variable shows a minimum value of 0.1 in 2020 by Harum Energy Tbk. and a maximum of 3.86% in 2020 by the Medco Energi Internasional company. The average value obtained from the Debt-to-Equity Ratio variable during the 2017-2020 period was 1.31%, with a standard deviation of 1.19%. The Price to Book Value variable shows that the minimum value is 0.51×, namely for Indika Energy Tbk. in 2020, and the maximum value is 3.04×, namely for Bukit Asam Tbk. in 2018. The average value obtained from the price-to-book value variable during the 2017-2021 period was 1.16× with a standard deviation of 0.60×. The Dividend Payout Ratio variable shows a minimum value of -10.82%, namely at Perusahaan Gas Negara Tbk. in 2020 and the maximum value is 143.39%, namely for the company Adaro Energy Indonesia Tbk. in 2021. The average value obtained from the Dividend Payout Ratio variable during the 2017-2021 period is 43.09% with a standard deviation of 50.63%.

### Panel Data Model Estimation

Table 2

*Panel Data Model Estimates*

Test	Test Criteria	Probability	Results
Chow	<i>Cross-section</i>	0.8117	Common Model
Hausman	<i>Random Cross-section</i>	0.8799	Random Model
L.M	<i>Breush-Pagan</i>	0.2351	Common Model

Based on the results of Table 2, the best panel data model estimation is the typical effect. Based on the results of the Chow test, the probability value shows 0.8117, meaning the specific impact is better than the fixed effect. Next, a Hausman test is carried out with a probability value of 0.8799, which means the random product is better than the fixed effect, so it must be continued with the Lagrange test. The results show that the joint development is better than the random effect because the probability value is 0.2351 or  $> 0.05$ .

The next step is to carry out the classical assumption test: first, the multicollinearity test from this test shows that all correlation values are smaller than 0.8, so it can be concluded that the data is accessible from multicollinearity. Second, carry out a heteroscedastic test, which aims to see whether the data has the same residual variance or not, and the results of the heteroscedastic test have a probability value of  $X_1$  of 0.0721, probability of free from heteroscedasticity. Based on the classical assumption test on the data used to estimate the panel data regression parameters, it was concluded that the data was accessible from multicollinearity and heteroscedasticity, the estimated output of the standard effect model was suitable to be used to describe the influence of liquidity, solvency and company value on the Dividend Payout Ratio.

The panel data model estimates based on the joint effect used in the regression equation are as follows.

Figure 1  
*Common Model*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	124.8128	25.41302	4.911371	0.0000
X1	-13.10358	4.212159	-3.110894	0.0040
X2	-35.43139	7.091361	-4.996417	0.0000
X3	-12.33705	12.57190	-0.981319	0.3340
R-squared	0.485084	Mean dependent var		43.43344
Adjusted R-squared	0.435254	S.D. dependent var		50.30314
S.E. of regression	37.80260	Akaike info criterion		10.20984
Sum squared resid	44300.14	Schwarz criterion		10.38760
Log likelihood	-174.6723	Hannan-Quinn criter.		10.27120
F-statistic	9.734684	Durbin-Watson stat		1.578947
Prob(F-statistic)	0.000111			

Based on the results of the F test in Figure 1, the Prob (F-statistic) value has a value of 0.000111, which is below 0.05, which means that the regression equation model used is suitable or appropriate to show the influence of liquidity, solvency and company value on the dividend payout ratio or can it be said that the variables cash ratio, debt to equity ratio, and price to book value together influence the dividend payout ratio. The regression equation can be written as follows:  $\hat{y} = 124.8128 - 13.10358X_1 - 35.43139X_2 - 12.33705X_3 + e$

The t-test results in Figure 1 show that the Cash Ratio has a probability value of 0.0040, which is smaller than  $\alpha = 0.05$ , which means that H1 is accepted, which states that the Cash Ratio affects the Dividend Payout Ratio. The cash ratio coefficient is -13.10358, which means that if the cash ratio increases by 1%, the Dividend Payout Ratio will decrease by 13.10358%. Conversely, when the cash ratio reduces by 1%, the dividend payout ratio will increase by 13.10358%. Based on the 2020 annual report of PT. Bukit Asam Tbk. The company's current ratio is 216.00%, which shows the company's ability to pay short-term debt is relatively the same as the previous year, and based on the annual GMS, shareholders approved a dividend distribution of 35% of the company's profits. At the same time, the remainder was recorded as retained earnings. This result is in line with research by Susmiandini & Khoirutunnisa (2017), which states that the cash ratio has a significant effect on the Dividend Payout Ratio and is not in line with research by Amalia & Kartika (2017), which says that the Cash Ratio does not affect dividend policy which is proxied by the Dividend Payout Ratio.

The Debt-to-Equity Ratio variable has a probability value 0.0000, smaller than  $\alpha = 0.05$ . H1 is accepted and shows that the Equity Ratio affects the Dividend Payout Ratio. The Debt-to-Equity Ratio coefficient of -35.43139 means that if DER increases by 1%, DPR decreases by 35.43139% and vice versa. Based on the 2020 annual report of PT. Harum Energy Tbk. The total liabilities to equity ratio in 2020 decreased to 0.1 times from 0.2 times in 2019. This shows that it is in line with the theory that in the energy sector, the Debt-to-Equity Ratio has an inverse relationship to the Dividend Payout Ratio. These results are in line with research by Putra & Mahfud (2017) showing that the Debt-to-Equity Ratio variable has a significant influence on the Dividend Payout Ratio and is not in line with research by Effendi & Hernita (2022) which states that there is no significant influence between the debt-to-equity ratio (DER) on dividend policy.

The price-to-book value variable has a probability value of 0.3340, which means the value is more significant than  $\alpha = 0.05$ . The conclusion is that H1 is rejected or H0 is accepted, which shows that price-to-book weight does not affect the Dividend Payout Ratio. Based on the financial report of PT. Adaro Energy, Tbk. In 2020, there was a decrease in use for investment, namely \$359,355, compared to the previous year of \$538,504. The PBV value in

2020 was 0.82, while in 2019, it was 0.90. Research by Putra & Mahfud (2017) shows that price-to-book weight does not affect the Dividend Payout Ratio.

The test results above show that the Adjusted R-squared value has a value of 0.435254, which means that the three variables used, namely Cash Ratio, Debt to Equity Ratio, and Price to Book Value, contribute 43.5254% to the Dividend Payout Ratio. In contrast, other variables donate the remaining 57.1812%. Meanwhile, the R-square value is 0.485084, which means that variations in the Dividend Payout Ratio variable are influenced by variations in the Cash Ratio, Debt to Equity Ratio, and Price Book Value variables by 48.5084%, and variations influence the remainder in other variables.

#### 4. Conclusion

Based on the results of the research and discussion that has been carried out, it can be concluded that the Liquidity Variable, which is proxied by the Cash Ratio, affects the Dividend Payout Ratio, which means that the Liquidity variable can provide information in predicting the value of the Dividend Payout Ratio in energy sector companies registered in LQ 45 for the 2017-2017 period. 2021. The Solvency variable, which is proxied by the Debt-to-Equity Ratio, affects the Dividend Payout Ratio, which means that the Solvency variable can provide information in predicting the value of the Dividend Payout Ratio in energy sector companies registered in LQ45 for the 2017-2021 period. The Company Value variable, proxied by Price to Book Value, does not affect the Dividend Payout Ratio, which means that the Company Value variable cannot provide information in predicting the value of the Company's Dividend Payout Ratio. Sectors energy listed in LQ45 for the 2017-2021 period.

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