

EXTERNAL FACTORS WITH GOVERNMENT AND COMPANY POLICIES THAT HAVE AN IMPACT ON THE DEBT SERVICE COVERAGE RATIO OF COAL COMPANIES

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Abstract: Coal companies are industries that require large capital in building their industries, therefore companies must be able to know what external factors and internal factors that can affect financial performance and DSCR. This study uses a quantitative approach with secondary data from 4 coal companies listed on the IDX in 2011-2018. In this study structural and identity, equations are used with the 2SLS method. The results showed that (1) DSCR conditions, companies that had financial flexibility, with DSCR above the minimum requirements namely ADRO, INDY, and PTBA but BYAN did not have (2) the number of coal exports was influenced by the difference in Chinese GDP and the number of export coal sales, the number of domestic coal sales is influenced by differences in Indonesian GDP and the number of domestic coal sales. EBIT which is the company's profitability performance is affected by gross profit. FCF is the company's liquidity performance which is influenced by EBITDA and CAPEX. Principal payments are the company's liquidity performance that is affected by liabilities. DSCR, corporate solvency performance is influenced by the principal payment ratio, (3) the decline in Chinese GDP is anticipated by lowering production costs, general and administrative costs, sales and marketing costs, and CAPEX, have an impact on increasing the financial flexibility of the company and its DSCR. If The amount of DMO is added and the domestic coal price was set by the government or by market price, it impacted on increasing the financial flexibility of the company and its DSCR.



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Keywords: coal firms, debt service coverage ratio, domestic market obligation, two-stage least squares

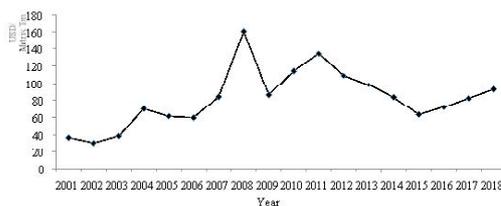
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Companies that conduct business must pay attention to changes that occur due to the impact of the micro, macro, and global economy. Kartikahadi et al. (2016) an

entity that is already full of liabilities will result in less flexibility in making decisions in the financial sector, the source of funds will be limited or not available to expand, spend the opportunities that arise or pay off liabilities that have matured. The company's ability to meet its obligations in the form

of principal and interest expense to creditors can be calculated using Debt Service Coverage Ratio, this ratio is very useful for company management to find out financial flexibility and decision making (Sambasiva 2017). In 2001-2008 coal prices experienced an upward trend, resulting in profits for companies exporting coal. The increase in coal prices is due to economic growth in developing countries. Coal prices based on the New Castle Index (Australia) 2001-2018, are presented in Figure 1



Sumber: S&P Global Platts (2019)

Figure 1 Coal Prices Based on The New Castle Index (Australia) 2001-2018

Based on Figure 1 the price of coal in 2001-2008 experienced an increasing trend when the global financial crisis occurred in 2008 the impact of coal price decline until 2009. In 2010 coal prices experienced an increasing trend. In 2011-2015 there was a downward trend again. Fluctuations in coal prices are caused by the coal markets of China and India which are Indonesia’s coal export destinations.

China decided to reduce coal imports, domestic demand is pursued by increasing domestic products to optimize its domestic mining business. The furnaces belonging to several ceramic factories in India stopped operating because of environmental issues. There was also a decrease in the volume of coal from Russia that was exported to Europe. So Russia is looking for alternative markets to Japan and Korea. The impact of Indonesian coal demand from Japan and Korea is reduced. In March 2018 the government intervened the price of coal supplied to the State Electricity Company at 70USD per ton with a calorific content of 6322 kcal. (Keputusan Menteri Energi dan Sumber Daya Mineral, 2018).

The trade war between the United States and China has an impact on the economic growth of both countries and globally. China, as a coal importer, experienced a decline in GDP in 2018, to 6.6% the lowest GDP growth rate for 28 years (World Bank, 2018). This event coincided with the decline in Indonesia’s coal commodity exports which affected the fluctuation of coal company Free Cash Flow on the Indonesia Stock Exchange in 2011-2018, presented in Table 1.

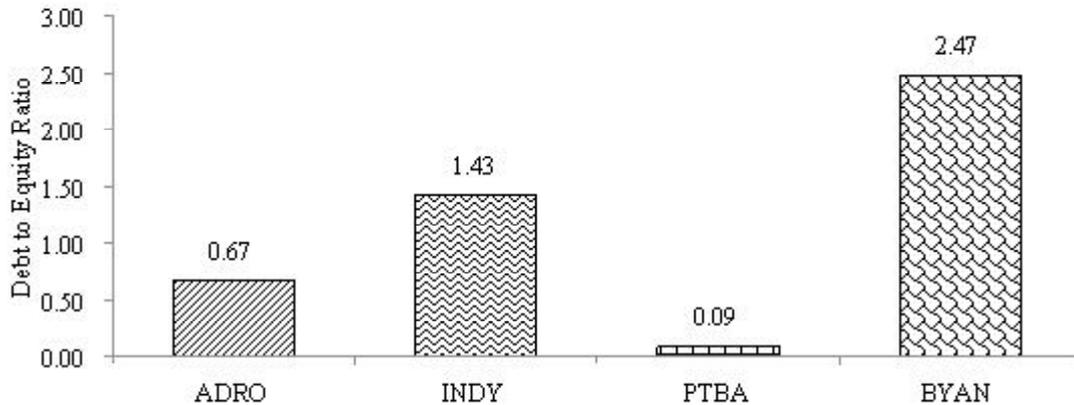
Table 1 Free Cash Flow of Coal Companies in 2011-2018 (Billion Rp)

Year	ADRO	INDY	PTBA	BYAN
2011	787	-1.643	3.189	782
2012	-558	-2.197	1.335	-1.582
2013	6.605	530	809	75
2014	6.080	-954	1.200	381
2015	5.662	-1.845	1.175	55
2016	7.601	232	1.627	670
2017	9.043	1.627	1.731	5.374
2018	7.151	1.977	7.034	7.092

Sumber: Indonesian Stock Exchange (2018)

Table 1 in general free cash flow of coal companies fluctuated in 2011-2018, caused by fluctuations in earnings before interest and tax and coal sales. Free cash flow shows that positive companies make a lot of money that is used to run the company and invest to grow the business. negative free cash flow shows that the company is not able to generate sufficient cash to support the business (Andreas, 2017). When a company faces an unexpected event, it requires additional funds used to cover the losses of the previous year, invest, and expand. According to Damodaran (2002), one alternative source of funding that can be used to finance operating activities is debt. The description of the debt of coal companies in the Indonesia Stock Exchange in 2011-2018 is presented in Figure 2.

Figure 2 shows the average debt to equity ratio of coal companies varies, showing the company has a consideration of facing situations and conditions for business continuity. Companies that have debts

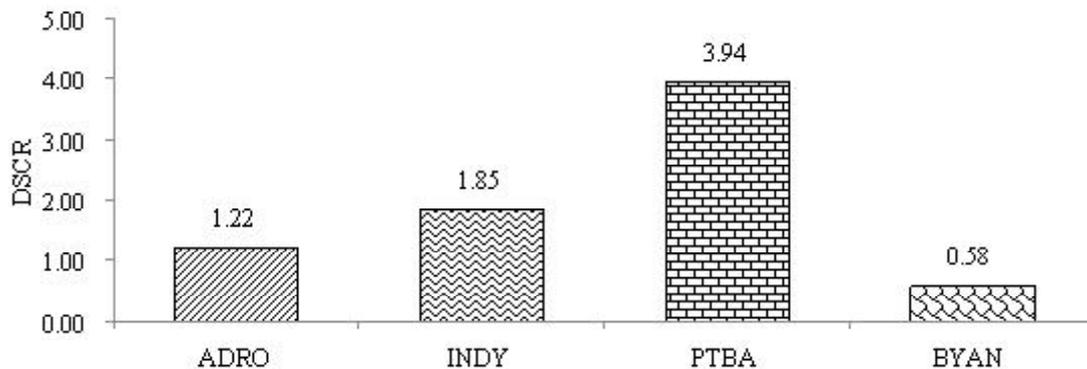


Sumber: Maybank Kim Eng Securities (2019)

Figure 2 The Average Debt to Equity Ratio of Coal Companies on The Indonesia Stock Exchange in 2011-2018

must pay off debts in the coming period. Failing to meet obligations to creditors causes the company to not have financial flexibility. Companies with a debt service coverage ratio of less than 1.20 do not

have financial flexibility (Ruster, 1996). An illustration of the ability of a coal company to meet its obligations assessed using the debt service coverage ratio is presented in Figure 3.



Sumber: Maybank Kim Eng Securities (2019)

Figure 3 Average Debt Service Coverage Ratio of Coal Companies on The Indonesia Stock Exchange in 2011-2018

Figure 3 shows the average value of the debt service coverage ratio of coal companies listed on the Indonesia Stock Exchange in 2011-2018, some companies have the financial flexibility and do not have financial flexibility. Companies that have financial flexibility are PT Adaro Energy Tbk (ADRO), PT Indika Energy Tbk (INDY), and PT

Tambang Batubara Bukit Asam Tbk (PTBA). The company that lacks financial flexibility is PT Bayan Resources Tbk (BYAN). Therefore it is necessary to examine the condition of the debt service coverage ratio as an indicator of financial flexibility, external and internal factors that affect the company's performance, and its impact on the debt service

coverage ratio of coal companies. Based on the background, the formulation of the research problem is:

1. The Value of debt service coverage ratio of each coal companies.
2. The factors affect the coal company's debt service coverage ratio.
3. The impact of external and internal factors on the coal company on its debt service coverage ratio

LITERATURE REVIEW

Capital Structure

The company's capital structure is a combination of short-term debt, long-term debt, and equity. Companies can choose among many alternative capital structures (Acaravci 2015). According to Brigham (2011) funding using debt has advantages and disadvantages. The advantages of financing with debt include: (1) the interest paid on debt can be a tax deduction, and (2) the return on debt is fixed so that creditors do not participate in receiving company profits if the company achieves extraordinary success. Weaknesses in funding with debt include: (1) the use of large amounts of debt will increase the risk of the company, which increases the cost of debt, and (2) if the company experiences a bad period and its operating income is insufficient to cover interest expenses, shareholders forced to cover these shortcomings, otherwise the company will experience financial difficulties or lack financial flexibility.

Debt Service Coverage Ratio

Debt Service Coverage Ratio (DSCR) is used to see how far the company's ability to meet obligations that are fixed. The higher the DSCR, the safer the company's ability to meet its obligations. According to Pranowo (2010), the debt service coverage ratio is the company's ability to meet its obligations to pay debts, both the loan principal and interest payments. Companies with a DSCR value of less than 1.20 do not have financial flexibility (Ruster 1996). If the company has a specific debt service coverage ratio target, or the bank (creditors) sets a certain debt service coverage ratio, then the use of

debt must be analyzed for its effect on that ratio. If new debt results in increased interest payments, it will be better if the new debt is canceled or re-evaluated.

Free Cash Flow

According to Brigham & Houston (2006) free cash flow as cash flow available to be distributed to all investors (shareholders and debt holders) after the company places all of its investments in fixed assets, new products, and working capital needed to maintain current operations walk. According to Damodaran (2002) the formula for calculating free cash flow is as follows:

$$FCF = EBIT(1 - Tax\ rate) + Depreciation - Capital\ expenditure - Working\ capital$$

Domestic Market Obligation

The domestic market obligation is the priority of supplying mineral and coal needs for domestic interests. Mineral and coal mining companies can still export their commodities as long as the minimum percentage of coal sales is met (Bappenas 2016). Coal Domestic Market Bonds are regulated in Regulation of the Minister of Energy and Mineral Resources of the Republic of Indonesia Number 34 the Year 2009 Mineral and Coal Mining Business Entity must prioritize the supply of mineral and coal needs for domestic interests. Besides, the price of coal for electric power needs is also stipulated in the Decree of the Minister of Energy and Mineral Resources of the Republic of Indonesia Number 1395 K / 30 / MEM / 2018 to determine the selling price of coal for the supply of electricity for public use of USD 70 (seventy dollars United States) per metric ton.

Previous Research Review

Some previous studies that are closely related to the debt service coverage ratio and its relevance to the study, as follows:

Hooshyar et al. (2017) title of the research factors affecting the financial flexibility of firms listed on the Tehran stock exchange. The method used is regression. The results showed that financial lever-

age and current ratio variables on companies listed on the Tehran Stock Exchange did not have a significant impact on financial flexibility and company size variables had a negative and significant impact on financial flexibility and profitability variables had a positive and significant impact on financial flexibility.

Setianto and Kusumaputra (2017) with the title corporate financial flexibility, investment activities, and cash holding: evidence from Indonesia. The method used is regression. The results show that financial flexibility increases investment ability and reduces the sensitivity of investment activities to cash flow. Further analysis shows that financially flexible companies in Indonesia tend to have higher cash levels as a buffer to achieve financial flexibility.

Lameijer (2016) with the title research on financial flexibility, bidder's m & performance, and the cross-border effect. The method used is OLS (Ordinary Least Squares) regression. The results show partial evidence to support the positive effects

of the value of financial flexibility and the cross-border effect on the performance of M&A bidders. Collectively, these findings increase understanding of the interdependence between financial flexibility and investment.

Rahimi and Mosavi (2016) with the title value of financial flexibility and financial policy: empirical evidence from the firms listed on the stock exchange, the method used is multivariate regression and estimation of the least-squares method. The results explained that the value of financial flexibility has a significant inverse relationship with the company's dividend payments, financial leverage, and changes in its cash balance. The results also show companies that give more value to their financial flexibility have lower dividend payments, prefer to pay off shares by paying dividends, have lower leverage ratios, and tend to raise more money.

Daneshfar et al. (2016) titled the effect of financial flexibility companies listed on the stock exchange capital structure decisions. The method used is regression. The results showed that all cash mar-

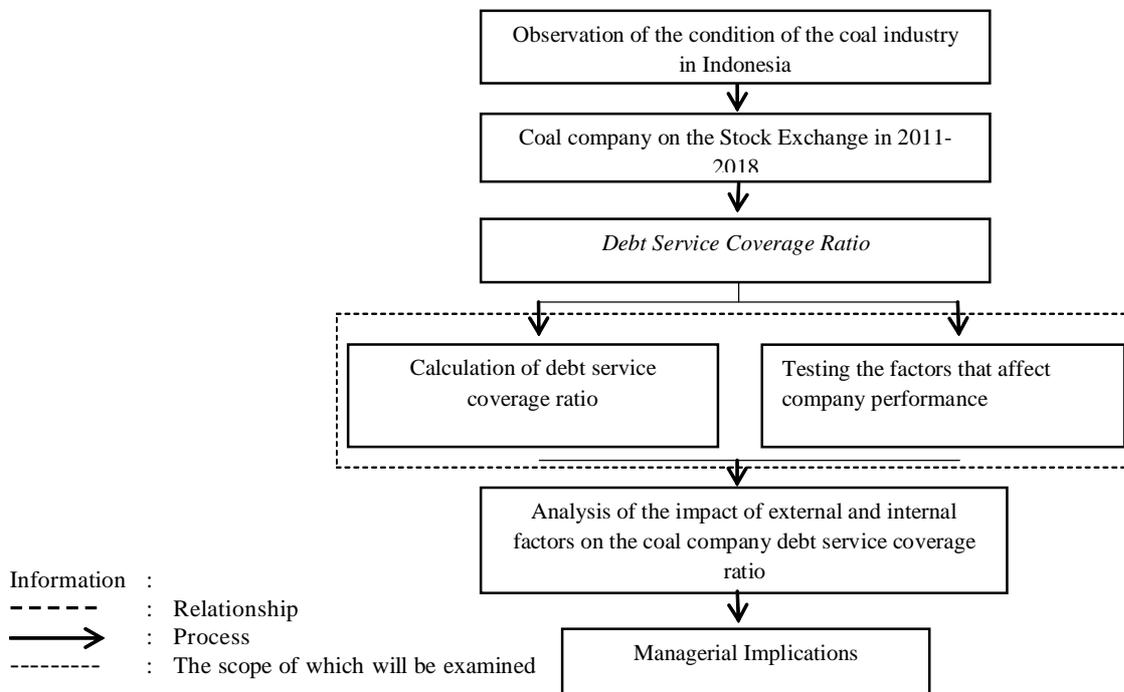


Figure 5 Conceptual Research Framework

ginal value variables, flexibility values, and leverage ratios, had a direct and significant relationship to capital structure decisions.

Conceptual Research Framework

Based on the formulation of the problem and the purpose of the study, the conceptual framework is presented in Figure 5. The research objective is to analyze the condition of the debt service coverage ratio, the factors that affect the company’s performance, and the impact of external and internal factors on the debt service coverage ratio of coal companies registered at Indonesia Stock Exchange 2011-2018.

METHOD

Research Approach

The study uses two approaches namely descriptive and econometric approaches. Descriptive ap-

proach to explaining the debt service coverage ratio. An econometric approach to finding out the factors that influence and the impact of external and internal factors on the debt service coverage ratio of coal companies.

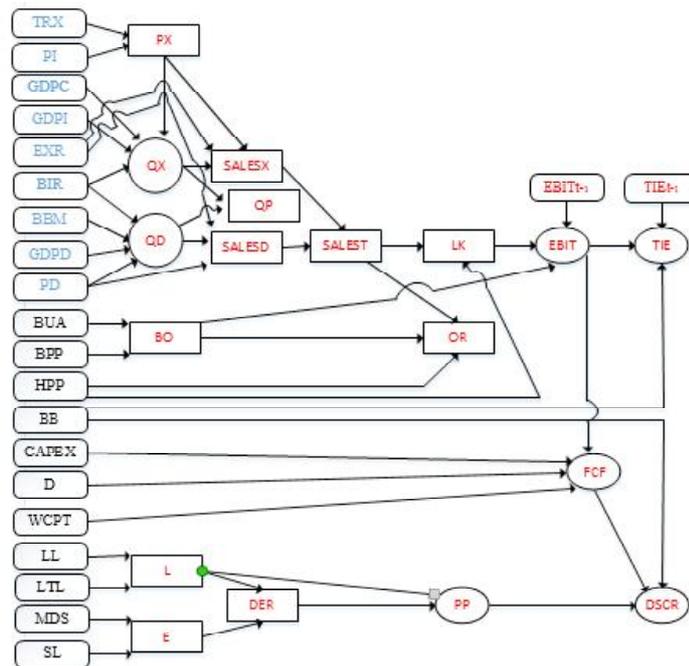
Data Types and Sources

The data used is panel data consisting of 4 (four) coal companies listed on the Indonesia Stock Exchange in 2011-2018, namely PT Adaro Energy Tbk (ADRO), PT Indika Energi Tbk (INDY), PT Tambang Batubara Bukit Asam Tbk (PTBA), and PT Bayan Resources Tbk (BYAN).

Data analysis

Model Specifications

The diagram of the relationship between variables in the Coal Company Debt Service Coverage Ratio Model is presented in Figure 4.



Information:
 Exogenous Variables:
 Endogenous Variables:
 Structural Equations:
 Identity Equations:

Figure 4 Diagram of the interrelationship between variables in the coal service debt leverage ratio model

The specifications of the econometrics model in the form of a simultaneous equation system are as follows:

1. The price of export
 $PX = PI \times (1 - (TRX/100))$ (1)
2. Total export coal sales
 $QX_{it} = a_0 + a_1 PX_{it} + a_2 (GDPC_{it}/GDPC_{it-1}) + a_3 GDPI_{it} + a_4 BIR_{it-1} + a_5 QX_{it-1} + U_1$ (2)
 Expected parameter sign (Hypothesis): $a_1, a_2, a_3, > 0, a_4 < 0, 0 < a_5 < 1$
3. Amount of domestic coal sales
 $QD_{it} = b_0 + b_1 PD_{it-1} + b_2 (GDPD_{it} - GDPD_{it-1}) + b_3 BBM_{it} + b_4 (BIR_{it}/BIR_{it-1}) + b_5 QD_{it-1} + U_2$ (3)
 Expected parameter sign (Hypothesis): $b_1, b_2, b_3, > 0, b_4 < 0, 0 < b_5 < 1$
4. Total domestic and export coal sales
 $QP = QX + QD$ (4)
5. Sales of export coal
 $SALESX = QX \times PX \times EXR$ (5)
6. Domestic coal salesan batubara dalam negeri
 $SALESD = QD \times PD \times EXR$ (6)
7. Total export sales of domestic and domestic coal
 $SALEST = SALESX + SALESD$ (7)
8. Gross profit
 $LK = SALEST - HPP$ (8)
9. Operating expense
 $BO = BUA + BPP$ (9)
10. Operating ratio
 $OPR = HPP + BO/SALEST$ (10)
11. Earnings before interest and tax
 $EBIT_{it} = c_0 + c_1 LK_{it} + c_2 BO_{it} + c_3 EBIT_{it-1} + U_3$ (11)
 Expected parameter sign (Hypothesis): $c_1 > 0, c_2 < 0, 0 < c_3 < 1$
12. Time interest earning
 $TIE_{it} = d_0 + d_1 EBIT_{it} + d_2 BB_{it} + d_3 TIE_{it-1} + U_4$ (12)
 Expected parameter sign (Hypothesis): $d_1 > 0, d_2 < 0, 0 < d_3 < 1$
13. Free cash flow
 $FCF_{it} = e_0 + e_1 EBIT_{it} + e_2 D_{it} + e_3 CAPEX_{it} + e_4 (WCPT_{it}/WCPT_{it-1}) + e_5 FCF_{it-1} + U_5$ (13)
 Expected parameter sign (Hypothesis): $e_1, e_2 > 0, e_3, e_4 < 0, 0 < e_5 < 1$
14. Liability
 $L = LL + LTL$ (14)
15. Equity
 $E = MDS + SL$ (15)
16. Debt to equity ratio
 $DER = L / E$ (16)
17. Principal payment
 $PP_{it} = f_0 + f_1 DER_{it-1} + f_2 L_{it} + f_3 PP_{it-1} + U_6$ (17)
 Tanda parameter yang diharapkan: $f_1, f_2 > 0, 0 < f_3 < 1$

18. Debt service coverage ratio

$$DSCR_{it} = g_0 + g_1 (FCF_{it}/FCF_{it}) + g_2 BB_{it-1} + g_3 (PP_{it}/PP_{it-1}) \dots\dots\dots (18)$$

Tanda parameter yang diharapkan: $g_1 > 0, g_2, g_3 < 0$

A list of endogenous variables in the coal service debt ratio service ratio model is presented in Table 2.

A list of exogenous variables in the coal service debt ratio service ratio model is presented in Table 3.

Table 2 lists Endogenous Variables of The Debt Service Coverage Ratio of Coal Companies

Notation	Endogenous variables	Interna/External	Unit
PX_{it}	The price of coal exports it	External	USD/tons
QX_{it}	Total export sales of coal	Internal	Million Tons
SALESX	Sales of export coal	Internal	Billion Rp
QD_{it}	Total domestic coal sales	Internal	Million Tons
SALESD	Domestic coal sales	Internal	Billion Rp
SALEST	Total export sales of domestic and domestic coal	Internal	Billion Rp
BO	Operation expense	Internal	Billion Rp
OPR	Operating ratio	Internal	Ratio
LK	Gross Profit	Internal	Billion Rp
$EBIT_{it}$	Earning before interest and tax it	Internal	Billion Rp
TIE_{it}	Time interest earning it	Internal	Ratio
TIE_{it-1}	Time interest earning it-1	Internal	Ratio
FCF_{it}	Free cash flow it	Internal	Billion Rp
L	Liabilitas	Internal	Billion Rp
E	Equity	Internal	Billion Rp
DER_{it}	Debt to equity it	Internal	Ratio
PP_{it}	Principal payment it	Internal	Billion Rp
DSCR	Debt service coverage ratio	Internal	Ratio

Table 3 Lists the Exogenous Variables of The Coal Service Debt Ratio Service Ratio

Notation	Exogenous variables	Internal/External	Unit
TRX	Export coal sales tax	External	%
PI	International coal prices	External	USD/tons
PD_{it}	Domestic coal prices	External	USD/tons
$GDPC_{it}$	Gross domestic product of China it	External	Rp/Year (Billion)
$GDPI_{it}$	Gross domestic product of India it	External	Rp/Year (Billion)
EXR	Exchange rate	External	USD/Rp
BIR_{it}	Indonesian bank interest rates	External	%
BBM_{it}	The price of industrial diesel	External	Rp/liter
$GDPD_{it}$	Gross domestic product of Indonesia it	External	Rp/Year (Billion)
BUA	General and administrative expenses	Internal	Billion Rp
BPP	Selling and marketing expenses	Internal	Billion Rp
HPP	Cost of goods sold	Internal	Billion Rp
BB_{it}	interest expense it	Internal	Billion Rp
$CAPEX_{it}$	Capital expenditure it	Internal	Billion Rp
LL	Current liabilities	Internal	Billion Rp

External Factors with Government And Company Policies That Have an Impact on ...

LTL	Non-current liabilities	Internal	Billion Rp
MD	Paid capital	Internal	Billion Rp
TMD	Additional paid-in capital	Internal	Billion Rp
SL	Retain earning	Internal	Billion Rp

Estimation and Simulation Methods

The coal service debt ratio coverage model is estimated using the Statistical Analysis System / Econometric Time Series (SAS / ETS) software, with the following stages:

1. Before the parameter estimation stage, each structural equation in the model needs to be identified. The result of model identification is Over Identified and the model is estimated using the Two-Stage Least Squares (2SLS) method.
2. Before the simulation stage impacts of external and internal factors, the model is validated using Theil's Inequality Coefficient (U-Theil) criteria

Simulation Scenarios

Simulation scenarios for the impact of external factors on China's gross domestic product, domestic market obligation, and domestic coal prices. The impact of internal factors of cost of production, general and administrative expenses, sales and marketing expenses, and capital expenditure on the coal companies' debt service coverage ratio are:

- S1: In the condition of China's gross domestic product, it drops by 0.1% which is anticipated by lowering the cost of production, general and administrative expenses, selling and marketing expenses, and capital expenditure by 20%.

S2: Under conditions of government policy Domestic Market Obligation (DMO) the number of domestic sales plus 4.5 million tons/year at the prevailing price level.

S3: Under the conditions of the Domestic Market Obligation (DMO) government policy, the number of domestic sales is added to 4.5 million tons/year and the domestic coal price is set at 70 USD / year.

S4: Under conditions of government policy Domestic Market Obligation (DMO) the number of domestic sales plus 4.5 million tons/year and the proposed domestic coal price of the company is 80 USD / year.

RESULTS AND DISCUSSION

Condition of Debt Service Coverage Ratio of Coal Companies

The condition of the debt service coverage ratio of coal companies is presented in Table 4. Coal companies with a debt service coverage ratio above 1.20 have the financial flexibility and coal companies with a debt service coverage ratio below 1.20 do not have financial flexibility. Coal companies that have financial flexibility are PT Adaro Energi Tbk (ADRO), PT Indika Energi Tbk (INDY), PT Tambang Batubara Bukit Asam Tbk (PTBA) the company has a DSCR value above 1.20. The com-

Table 4 Conditions of Debt Service Coverage Ratio of Coal Companies in 2011-2018

Emiten	Debt Service Coverage Ratio								Average	Classification
	2011	2012	2013	2014	2015	2016	2017	2018		
ADRO	1,26	0,70	0,30	0,31	0,59	2,40	3,22	1,00	1,22	> 1,20 = have financial flexibility
INDY	0,97	0,39	0,52	2,00	0,85	0,92	4,55	4,60	1,85	> 1,20 = have financial flexibility
PTBA	4,24	4,40	3,41	4,93	1,36	4,19	3,87	5,15	3,94	> 1,20 = have financial flexibility
BYAN	3,71	-0,06	-0,86	-1,26	0,40	0,01	0,62	2,11	0,58	< 1,20 = lacks financial flexibility

Sumber : Bursa Efek Indonesia (2019)

pany that lacks financial flexibility is PT Byan Resources Tbk (BYAN), the company has a DSCR value below 1.20.

Internal factors that cause coal companies to have the financial flexibility and do not have are companies that have a debt service coverage ratio below 1.20, in general, have an average DER greater than other coal companies. This is in accordance with the research of Hochmuth (2010) companies that use low leverage funds have the ability of financial flexibility. From the discussion, it can be concluded that companies that use external funding with low debt have high financial flexibility compared to companies that have high debt. Daneshfar et al. (2016) the value of flexibility and leverage ratio, has a direct and significant relationship to capital structure decisions.

Coal Company Debt Service Coverage Ratio Estimation Results

The debt service coverage ratio model of coal companies in the study was built from 18 equations, consisting of 7 behavioral equations and 11 identity equations. The model goes through several stages

of model respecification. In general, all explanatory variables included in the behavioral equation have signs that match expectations, especially as seen from economic theory. The statistical criteria commonly used in evaluating the estimation results of the model are quite convincing.

Results of the Coal Company Financial Flexibility Model Validation

The results of the validation of the debt service coverage ratio model of the coal company showed 67.00% of the variables had U-Theil values below 0.50 and 33.00% values above 0.50. This shows that during the observation period namely 2011-2018 the predictive value of endogenous variables is good enough to be used for simulation models.

Impact of External and Internal Factors on Debt Service Coverage Ratio of Coal Companies

The impact of external and internal factors on the coal company debt service coverage ratio is presented in Table 5.

Table 5 Impact of External and Internal Factors on The Debt Service Coverage Ratio of Coal Companies

Endogenous Variables	Unit	Basic Value	Impact of Simulation Scenarios (%)			
			S1 Δ (%)	S2 Δ (%)	S3 Δ (%)	S4 Δ (%)
PX	USD/Tons	84.4072	0.0000	0.0000	0.0000	0.0000
QX	Million Tons	12.7649	-0.0110	-33.5788	2.5856	-33.5788
QD	Million Tons	5.2305	0.0000	86.0338	86.0338	86.0338
QP	Million Tons	17.9954	-0.0078	1.1875	1.1875	1.1875
SALESX	Billion Rp	13,844,583.0000	-0.0114	-33.2181	-33.2181	-33.2181
SALESD	Billion Rp	5,332,759.0000	0.0000	100.1297	78.4974	103.9970
SALEST	Billion Rp	19,177,341.0000	-0.0082	3.8627	-2.1527	4.9381
BO	Billion Rp	1,832.7000	-20.0033	0.0000	0.0000	0.0000
OPR	Ratio	0.0009	-20.0225	0.7874	8.6614	-1.1249
LK	Billion Rp	19,162,006.0000	0.0078	3.8658	-2.1544	4.9421
EBIT	Billion Rp	15,767,953.0000	0.0078	3.8964	-2.1213	4.9809
TIE	Ratio	45,384.5000	0.0079	4.1651	-1.8218	5.3137
FCF	Billion Rp	11,738,585.0000	0.0111	3.9228	-2.0911	5.0143
L	Billion Rp	18,991.0000	0.0000	0.0000	0.0000	0.0000
E	Billion Rp	16,172.5000	0.0000	0.0000	0.0000	0.0000
DER	Ratio	2.0191	0.0000	0.0000	0.0000	0.0000
PP	Billion Rp	3,231.5000	0.0000	0.0000	0.0000	0.0000
DSCR	Ratio	2.5229	0.0040	3.2344	1.2367	2.0175

Based on Table 5, Simulation 1 (S1) on the condition of China's gross domestic product fell by 0.1% which is anticipated by lowering the cost of production, general and administrative expenses, selling and marketing expenses, and capital expenditure by 20% increasing debt service coverage ratio of coal companies 0.0040%. Simulation 2 (S2) on the government domestic market obligation policy conditions, the number of domestic sales plus 4.5 million tons/year at the prevailing price level has an impact on increasing the debt service coverage ratio of coal companies 3,2344%. Simulation 3 (S3) on the conditions of the domestic market obligation policy, the number of domestic sales plus 4.5 million tons/year and the domestic coal price set by the government of 70 USD / year has an impact on increasing the debt service coverage ratio of coal companies at 1,2367%. Simulation 4 (S4) on the domestic market obligation policy conditions, the number of domestic sales plus 4.5 million tons/year, and the proposed domestic coal price of the company at 80 USD / year has an impact on increasing the debt service coverage ratio of coal companies by 2,0175%.

MANAGERIAL IMPLICATION

To increase the debt service coverage ratio of coal companies on the condition that (1) China's gross domestic product falls, (2) domestic coal prices are set by the government, the company is advised to reduce the cost of production, general and administrative expenses, sales and marketing expenses, and capital expenditure by doing company efficiency. The efficiency of the cost of production by reducing the stripping ratio, which is done by accurate mine planning requires accurate geological data obtained from detailed exploration and mapping to produce an effective and efficient mining process. The efficiency of capital expenditure by prioritizing the procurement of capital expenditure directly related to production, such as heavy equipment and crushing machines. The Byan Resources Tbk (BYAN) company that has a high debt ratio is expected to reduce its debt by obtaining cash deposits by adding contracts with vendors. The company Adaro Energy Tbk (ADRO), Indika Energi Tbk (INDY), and PT Tambang Batubara Bukit

Asam Tbk (PTBA) is still biased to increase debt while still paying attention to the debt service coverage ratio.

CONCLUSION

1. The condition of the debt service coverage ratio of coal companies, companies that have financial flexibility, namely PT Adaro Energy Tbk (ADRO) with an average DSCR of 1.22, PT Indika Energi Tbk (INDY) with an average DSCR of 1.85, and PT Bukit Asam Coal Mine Tbk (PTBA) DSCR average of 3.94 Meanwhile, PT Byan Resources Tbk (BYAN) does not have the financial flexibility of an average DSCR of 0.58.
2. The amount of export coal sales is influenced by the difference in China's gross domestic product and the amount of lag-1 export coal, the amount of domestic coal sales is influenced by the difference in Indonesia's gross domestic product and the number of domestic coal sales lag t-1, (a) earnings before interest and tax which is a measure of the company's profitability performance is influenced by gross profit, (b) free cash flow which is a measure of the company's liquidity performance affected by earnings before interest and tax, depreciation, capital expenditure, (c) principal payment which is a measure of liquidity performance companies are affected by liabilities, and (d) debt service coverage ratio which is a measure of the company's solvency performance is influenced by the principal payment ratio.
3. Impact of external and internal factors on coal service debt service coverage ratio, (a) If the decline in Chinese gross domestic product is anticipated by lowering the cost of production, general and administrative expenses, sales and marketing expenses, and capital expenditure, the impact on increasing debt service company coverage ratio. (b) If the government implements the Domestic Market Obligation (DMO) policy on the prevailing domestic coal price and 80 USD / ton the company has financial flexibility.

REFERENCE

- Acaravci S. K. 2015. *The determinants of capital structure: evidence from the turkist manufacturing sector*. International Journal of Economics and Financial Issues. 5 (1): 158-171.
- Andreas. 2017. *Analysis of Operating Cash Flow to Detect Real Activity Manipulation and Its Effect on Market Performance*. International Journal of Economics and Financial Issues. 7 (1): 524-529.
- Bappenas. 2016. *Laporan akhir kajian ketercapaian target DMO batubara sebesar 60% Produksi nasional pada tahun 2019*. Jakarta (ID): Direktorat Sumber Daya Energi, Mineral dan Pertambangan BAPPENAS.
- Brigham E. F. Houston J. F. 2010. *Dasar-Dasar Manajemen Keuangan Buku 1. Ed ke-11*. Jakarta (ID): Salemba Empat
- Bursa Efek Indonesia. 2019. *Laporan keuangan tahunan*. [On Line]. From: www.idx.co.id [Juli 28, 2019].
- Damodaran A. 2002. *Capital structure: the choices and the trade off*. [On Line]. From: <http://people.stern.nyu.edu/adamodar/pdfiles/acf3E/presentations/capstruchoices.pdf> [January 06, 2017].
- Daneshfar S, Tabriz A. A., and Mohagheghzadeh F. 2016. *The effect of financial flexibility companies listed on the stock exchange capital structure decisions*. Jurnal of Novel Applied Sciences. 5(6): 213-218.
- Hochmuth D. 2010. *Sources of financial flexibility and their economic significance empirical evidence from the financial crisis 2007-2009* [Tesis]. Denmark (DK): University of Aarhus
- Hooshyar A. M., Valizadeh A. S., and Mohammadi M. F. 2017. *Factors affecting financial flexibility of firms listed in tehran stock exchange*. IOSR Journal of Economics and Finance. 8(1): 109-114.
- Kartikahadi H., Sinaga R. U., Syamsul M., Siregar S. V., and Wahyuni E. T. 2016. *Akuntansi Keuangan Berdasarkan SAK Berbasis IFRS Buku 1 Edisi Keua*. Jakarta (ID): Ikatan Akuntan Indonesia
- Kementrian ESDM. 2009a. *Keputusan Menteri Energi dan Sumber Daya Mineral Republik Indonesia Nomor 1395 K/30/MEM/2018 Tentang Harga Jual Batubara Untuk Penyediaan Tenaga Listrik Untuk Kepentingan Umum*. [On Line]. From: https://www.bappenas.go.id/files/5415/0898/5954/Laporan_Akhir_Kajian_DMO_Batubara_Final.pdf [May 25, 2018].
- Kementrian ESDM. 2009b. *Peraturan Menteri Energi dan Sumber Daya Mineral Nomor 34 Tahun 2009 Tentang Pengutamaan Pemasokan kebutuhan Mineral dan Batubara untuk Kepentingan Dalam Negeri*. [On Line]. From: <http://jdih.esdm.go.id/peraturan/Permen%20ESDM%2034%202009.pdf> [May 25, 2018].
- Lameijer M. 2016. *Financial flexibility, Bidder's M&A performance, and the cross-border effect*. [Tesis]. Belanda (NL): Groningen University
- Maybank Kim Eng Securities. 2019. *Laporan keuangan perusahaan batubara*. [On Line]. From: <https://www.maybank-ke.co.id> [August 03, 2019].
- Pranowo K. 2010. *Corporate financial distress perusahaan publik (non financial companies) di indonesia* [Dissertation]. Bogor (ID): Institut Pertanian Bogor
- Rahimi K, Mosavi A. 2016. *Value of financial flexibility and firm's financial policies: empirical evidence from the firms listed in tehran stock exchange*. International Journal of Economic and Finance. 3(4): 207-215
- Ruster J. 1996. *Mitigating commercial risks in project finance*. Working Paper. [On Line]. From: <http://siteresources.worldbank.org/EXTFINANCIALSECTOR/Resources/282884-1303327122200/069ruster.pdf> [November 18, 2017].
- Sambasiva K. R. 2017. *Impact of financial distress on the debt service coverage in ethiopia: a case of manufacturing firms*. Europe Journal of Business and Management. 9(7):2222-2839
- Setianto R. H. and Kusumaputra A. 2017. *Corporate financial flexibility, Investment Activities, and cash holding: evidence from Indonesia*. Indonesian Capital Market Review. 9(17): 75-85
- S&P Global Platts. 2019. *Coal prices based on index new castle (Australia)*. [On Line]. From: <https://www.spglobal.com/platts/en> [August 01, 2019].
- World Bank. 2019. *Gross domestic product china*. [On Line]. From: <https://databank.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG/1ff4a498/Popular-Indicators> [July 20, 2019].