

Behavior of Capital Structure and Its Impact on Financial Performance: Empirical Study from Indonesian Listed Mining Sector in 2011-2015

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Abstract: *The declining of China's economic global as one of the Indonesia's reference country on trading activities of mining firms because most of the mining commodities distribute to China as the importer. This condition has great impact on lower financial performance and also the capital structure as well. This study investigates the behavior of capital structure on mining sector that listed on Indonesia Stock Exchange (IDX) and impact of capital structure on financial performance. This study using an unbalanced panel data over five years (2011-2015). The results of this study show that capital structure decision on mining sector employs the balancing use of debts and equity while capital structure on each mining subsector has the different behavior (low and high leverage) and mining firms has a negative trend of financial performance during 2011-2015. The negative relationship between capital structure and financial performance based on pecking order theory because higher debts will impact on lower profitability. On the other hand, a positive relationship between capital structure and financial performance based on trade-off theory show that mining firm with higher debts will lead firm to the higher profitability level to avoid default risk. Thus, There is no specific capital structure theory for explaining the relationship between capital structure and financial performance.*

Keywords: capital structure, financial performance, mining sector, panel data

1. Introduction

The global economic slowdown have an impact on the declining of economic growth in all around the world, include Indonesia. There are two types of risk that must be face on Indonesia's business competition as the impact of global economic slowdown are global risk and domestic risk [1]. Global risk happens because the uncertainty of increasing federal funds rate in US that affects to strengthen of the US (USD) currency to Indonesia currency (IDR). The consequence of domestic devaluation is the decreasing of world trading commodities' demand and also price commodities as well. Based on [2], crude oil price as the most important commodity in global trading throughout 2015 decreases 47.14% than previous year, then following by price decreasing on other primary world trading commodities such as coal, crude palm oil, and rubber.

The business development of Indonesian firms is influenced of China's economic condition in particular since 2012. The most Indonesia's world trading commodity that has great impact on China's economy is coal because China is a typical country that uses coal as the basic energy on business activities and also as the biggest importer of Indonesian coal production in recent years. Coal mining represents the mining industry development in Indonesia because mining firms dominate mining sector that is shown in Indonesia Stock Exchange (IDX) over a period five-years (2011-2015).

The global risk also affects on domestic economic condition that is shown by the unstability condition in financial market. Mining sector has the lowest stock return than another sector that listed in Indonesia Stock Exchange from 2011 to 2015. IDX shows the market capitalization of mining sector remains since 2012 that contributes 7.78% to 3.31% throughout 2015 [3][4][5][6][7]. On the other hand,

outstanding of bank financing on mining sector decreases from 131.95 trillions of IDR to 124.43 trillions of IDR with the Non-Performing Loan (NPL) reaches 3.69% as the second highest NPL after construction sector [1]. Mining firms have difficult problem to cover their debts because the declining of firms' profitability. There are an oversupply of commodities and avoiding firm's cash flow performance. Mining sector has a negative trend since 2011 with contribution 10.49% to 8.70% throughout 2015 [8][9].

The worse performance of mining sector on financial market and bank financing during 2011 until 2015 shows the dynamics of capital structure of mining sector either using the mix of debts and equity to obtain the maximum firm's value and market share price. Mining firms consider the benefit and cost of financing from internal and external funding. Furthermore, the capital structure also impacts on financial performance because mining firms' business activities is influenced by the declining of global trading condition. Furthermore, the study of behavior of capital structure on mining sector and its impact on financial performance is important.

There are two main objectives of this study. First, this study investigates capital structure decision of mining firms which listed in Indonesia Stock Exchange, either using debts or equity when firms have lower financial performance in the periods 2011-2015. Additionally, mining sector has four subsectors in IDX: coal mining subsector, crude petroleum and natural gas production subsector, metal and mineral mining subsector, and land/stone quarrying mining subsector. Thus, this study also discovers the behavior of capital structure and financial performance on each mining subsector that is compared for more exploring the implication to policymaker and government. The second objective of this study is to analyze the impact of capital

structure on financial performance on mining sector. The previous studies of capital structure and its impact on financial performance in Indonesia mostly concern on financial sectors [10][11][12]. The behavior of capital structure between financial sector and nonfinancial sector because the financial sector is arranged by Financial Services Authority of Indonesia (OJK) directly. Therefore, the trading value of financial sector's stock has a positive trend since 2011 and also has the biggest proportion in IDX throughout 2015. Mining sector is the biggest proportion of trading value in IDX throughout 2011 and decrease significantly from 2012 until has the lowest proportion throughout 2015 because the declining of mining commodities' demand.

The previous study of capital structure's impact on mining sector done by [13] that uses periods from 2005 until 2009. Capital structure that is measured by long-term debts to total equity ratio (LTDTE) and total debts to total assets ratio (TDTA) has a positive relationship with financial performance that is represented by profitability ratios (ROA and ROE) while LTDTE and TDTA has a positive relationship with market ratio that is represented by PER. This study uses different proxies of capital structure i.e. short-term debts to total assets (STDTA), long-term debts to total assets (LTDTA), and total debts to total equity (TDTE). The debt ratios consider types of debt as capital structure's proxy and also ratio between total debts and total assets is based on characteristic of mining sector that uses firm's asset as the main resource for increasing the firm's performance on its business.

The rest of paper is organized as follows. Section 2 gives literature review of capital structure and financial performance and its relation. Section 3 describes the data and justifies the choice of the variables used in the analysis. Section 4 presents the methodology to analyze the empirical results of each purposes on this study. Section 5 discusses empirical results and the last section presents the conclusion, policy implications, and recommendation.

2. Literature Review

2.1 Capital Structure

Capital structure is one of the important policy of a firm in corporate finance perspective. The development of capital structure theories show the dynamic about financing of a firm, either using debts or equity to maximize the firm value. The theory of capital structure was firstly proposed by [14] that argues firm value of levered or unlevered firm are the same because they assume no bankruptcy costs and in the perfect market. The perfect market is impossible happens. Furthermore, [15] revise their first theory with considering taxes as one of the costs when firm had debts in order to maximize firm's value. Taxes has the role as the payment to attain greater tax shield in the context firm has lower payment of taxes. This theory also called The MM Theory II.

[16] argues that firm's value depends on the other consideration of a firm with bankruptcy costs and agency costs to attain optimum capital structure. [17] describes that the greater bankruptcy costs may lead firm to the bankruptcy probability with higher debts level, both directly and

indirectly. The use of debts in capital structure also leads to agency costs that is caused by a relationship between shareholders and firm's managers. On the other hand, the firm should considers the benefit (tax shield) and costs when firm have financing from debts. This theory also called trade-off theory. [18] argue that the sources of financing in investment should have the preferences that called pecking order theory. The first financing is from retained earnings (internal financing) because it has the smallest cost of financing. The second financing is from debts (external financing) and the last one is from equity that is obtained by issuing new stocks.

2.2 Financial Performance

Generally, financial performance measures the capability of a firm to evaluate the business activities based on the internal resources with the certain value. Financial performance of a firm also shows the development of a firm for attaining its goal, either operations or non operations activities which is measured by productivity and efficiency value.

[19] explains the financial ratios is one of the reference for measuring the financial performance of a firm. There are five category of financial ratios : liquidity ratios, activity ratios, debt ratios, profitability ratios, and market ratios. The previous studies use profitability ratios and market ratios as the proxy of financial performance. The variables of profitability ratios that measure financial performance of a firm are Return on Assets (ROA) and Return on Equity (ROE) while the market ratios usually is measured by Price to Earnings Ratio (PER) and Market to Book Value Ratio (MBV).

2.2 The Relation between Capital Structure and Financial Performance

The previous studies that focus on analyzing impact capital structure on financial structure have ambiguous results. The majority of capital structure studies that have empirically investigated were using trade-off theory and pecking order theory. The comparison of these theories because there is an inverse relationship between capital structure and financial performance on these theories. Trade-off theory has a positive relationship between capital structure and financial performance. A higher debts level may lead to the higher profitability level of a firm. Pecking order theory has a negative relationship between capital structure and financial performance. A firm would prefer use internal financing because it is not as costly as the external financing. Thus, the pecking order theory argues that a profitable firm uses less debt capital to get higher earnings.

A number of studies have been done to explain the relationship between capital structure or firm leverage and financial performance. [20] conclude there is a negative significant relationship between firm leverage and profitability because if debt financing is the dominant mode of external financing, then profitability level will decrease. [17] concludes there are positive and negative relationship between capital structure and financial performance of listed firms in Ghana during 1998-2002. Capital structure uses proxy STDTA and TDTA has a positive significant

relationship with ROE while capital structure uses LTDTA has a negative significant relationship with ROE. [21] concludes that STDTA and TDTA have a significant negative impact on ROA while capital structure (STDTA, LTDTA, and TDTA) has no significant impact on financial performance measured by ROE or Gross Profit Margin. [13] concludes a positive relationship between capital structure measured by LTDTE and TDTA with firm performance measured by ROA and ROE while other results show a negative relationship between LTDTE and TDTA with firm performance measured by PER. [22] investigate that debt policy that is measured by STDTA, LTDTA, and TDTA of listed firms on Tehran Stock Exchange has a negative significant relationship with financial performance that using gross profit margin, ROA, and TOBINSQ. [23] describe that capital structure has negative impact on financial performance in Pakistan during 2004-2009. [24] also find that leverage is negatively with operating performance that is measured by ROA. [25] conclude that financial leverage on textile sector during 1999-2012 has a negative relationship with ROA while capital structure that is measured by STDTA has a positive relationship with TOBINSQ. [26] concludes that leverage of Romanian manufacturing firms which is measured by TDTA has a negative relationship with ROA as a proxy of financial performance and also firm leverage which is measured by TDTA and STDTA has a negative significant relationship with financial performance that is measured by ROE. Other study by [27] also show a negative relationship between capital structure and financial performance in 2004-2014. Thus, majority results of the previous studies show that a profitable nonfinancial firms have less debts on their business and the hypotheses on this study using a trade-off theory for explaining the negative relationship between capital structure and financial performance.

3. Data

This study uses secondary data that is obtained from financial statements data of mining sector firms which listed in Indonesia Stock Exchange (IDX) from 2011 until 2015. Mining sector in IDX consist of five subsectors: coal mining subsector, crude petroleum and natural gas production subsector, The criteria of the firms' sample in this study are: 1) firms listed in IDX from 2011-2015 with minimum 2 periods of financial statement; 2) firms have financial report between periods 2011 until 2015; 3) firm never delisted from IDX and has never a negative equity during periods of the study. In addition, another secondary data also obtain from Bank of Indonesia, World Bank, and firms' website. The number of firms' sample of this study is presented in Table 1.

Table 1: Number of firm's sample

Mining Subsector	Number of Firms Sample				
	2011	2012	2013	2014	2015
Coal	13	16	17	18	17
Crude petroleum and natural gas	6	7	7	7	7
Metal and mineral	6	7	8	8	8
Land/stone quarrying	2	2	2	2	2
Others	0	0	0	0	0
Total	27	32	34	35	34

Source:[3][4][5][6][7]

4. Methodology

The first objective uses descriptive analysis with identifying capital structure decision on mining sector and also each subsectors. The second objective uses unbalanced panel data regression to investigate the relationship between capital structure and financial performance on mining sector. In order to attain the purpose of second objective, classical assumption testis required to ensure models being analyzed do not have any problem of multicollinearity, heteroskedasticity, and autocorrelation. The model is adapted from several previous studies [12][17][23].

In this study, capital structure is independent variable that is measured by four variables which based on several studies: short-term debt to total assets/STDTA [17][21][22][23][25], long-term debts to total assets/LTDTA [12][17][21][22][23][25], total debts to total assets/TDTA [12][13][17][21][22][23][25][27], and total debts to total equity/TDTE [12][13][25].

In this study, financial performance is dependent variable that is measured by profitability ratios and market ratios based on earlier studies. Profitability ratios use return on assets/ROA [10][11][13][22][23][25][26][27] and return on equity/ROE [10][11][13][17][26] while market ratios are measured by price to earning ratio/PER [11][13] and TOBINSQ [10][22][25][27]. TOBINSQ's formula is adapted from previous study by [28].

There are four models in this study. There is a multicollinearity problem uses independent variable that is measured by TDTA. Thus, the models for analyzing the impact of capital structure on financial performance uses three independent variables: STDTA, LTDTA, and TDTE. The models of this study is presented below:

$$ROA_{it} = \beta_0 + \beta_1 STDTA_{it} + \beta_2 LTDTA_{it} + \beta_3 TDTE_{it} + e_{it} \quad (1)$$

$$\beta_1, \beta_2, \beta_3 < 0$$

$$ROE_{it} = \gamma_0 + \gamma_1 STDTA_{it} + \gamma_2 LTDTA_{it} + \gamma_3 TDTE_{it} + e_{it} \quad (2)$$

$$\gamma_1, \gamma_2, \gamma_3 < 0$$

$$PER_{it} = \delta_0 + \delta_1 STDTA_{it} + \delta_2 LTDTA_{it} + \delta_3 TDTE_{it} + e_{it} \quad (3)$$

$$\delta_1, \delta_2, \delta_3 < 0$$

$$TOBINSQ_{it} = \eta_0 + \eta_1 STDTA_{it} + \eta_2 LTDTA_{it} + \eta_3 TDTE_{it} + e_{it} \quad (4)$$

$$\eta_1, \eta_2, \eta_3 < 0$$

Notes:

ROA_{it} = proxy of profitability ratio and equals net profit after tax (NPAT) divided by total assets for firm i in time t

ROE_{it} = proxy of profitability ratio and equals net profit after tax (NPAT) divided by total equity for firm i in time t

PER_{it} = proxy of market ratio and equals price divided by earnings per share (EPS) for firm i in time t

TOBINSQ_{it} = proxy of market ratio and equals sum of market value of total equity and book value of total debts divided by book value of total assets for firm i in time t

STDTA = proxy of debt ratio and equals short-term debts divided by total assets
 LTDTA = proxy of debt ratio and equals long-term debts divided by total assets
 TDTE = proxy of debt ratio and equals long-term debts divided by total assets
 e_{it} = error term
 $\beta_0, \gamma_0, \delta_0, \eta_0$ = intercept
 $\beta_i, \gamma_i, \delta_i, \eta_i$ = regression coefficient

The panel data regression has three regression models: pooled least square (PLS), fixed effect model (FEM), and random effect model (REM). The tests for choosing the best model of static panel data regression are Chow test (test for choosing model between PLS and FEM), Hausman test (test for choosing model between FEM and REM), and the last one is Lagrange Multiplier test (test for choosing model between REM and PLS).

If the best model were PLS or FEM, the model must have no heteroskedasticity and autocorrelation. The heteroskedasticity test and autocorrelation test are not necessary if the best model was REM. If the PLS or FEM still has heteroskedasticity and autocorrelation, the method uses the Generalized Least Square (GLS) because this method assumes there is no heteroskedasticity and auto serial problem in the model [29][30]. REM is free from heteroskedasticity and autocorrelation problem because the model using GLS technique on model.

5. Empirical Results

5.1 Behavior of Capital Structure and Financial Performance on Mining Sector and Its Subsector

This subsection uses descriptive analysis on describing the behavior of capital structure and financial performance of mining firms. According to the Table 5, the behavior of capital structure on mining sector generally applies the low leverage because total debts to total assets (TDTA) on the level 0.46 until 0.50 although shows the positive trend of capital structure. It means that the use of debts and equity of mining firms is balance. The positive trend of capital structure that is measured by TDTA because the decreasing industry condition that is caused by decreasing of demand and price commodities and it impacts to lower capacity of mining firms to cover their obligations (debts). Mining sector is one of Indonesian primary sector in IDX. The results show that mining firms prefer using debts over retained earning or equity. [31] describe that primary sector firms make direct use of natural resources and most of the products from this sector provides raw materials. This condition neither have an easy access to the equity market nor do they have sufficient retained earnings, so the only option is using debts as source of firm financing.

Based on types of debt, the proportion of long-term debts dominates than short-term debt with ratio 3:2. It is equitable of mining firms's characteristic because their external financing is used for their investment activities that needs higher debts. In addition, non current assets of mining sector dominates than current assets with proportion between 59.33% until 70.06% with the positive trend. Non current

assets is dominated by fixed assets and mining properties that reached 65% until 70% from non current assets in each year. Furthermore, the capital structure that is measured by total debts to total assets (TDTE) also higher during the study periods. This condition shows that investors do not have high expectations on investing for mining sector.

Table 2: Behavior of capital structure on mining sector

Variable	2011	2012	2013	2014	2015
STDTA	0.20	0.19	0.19	0.22	0.20
LTDTA	0.25	0.29	0.30	0.28	0.29
TDTA	0.46	0.48	0.49	0.50	0.49
TDTE	0.84	0.93	0.97	1.01	0.97

Source : firms' annual report

The capital structure on each mining subsector is shown in Table 6. According to Table 6, the capital structure on each mining subsector have different pattern. The coal mining subsector applies low leverage with balancing the use of debts and equity and also describes the mining sector condition in Indonesia. Metal and mineral mining subsector also apply low leverage and the use of debts maximum 40%. TDTE of metal and mineral mining subsector also less than 1 and it shows that firms employed more equity. On the contrary, crude petroleum and natural gas production subsector has high leverage with TDTA ratio ranges between 0.61 and 0.70 and TDTE ratio more than 1. In addition, land/stone quarrying mining subsector also applies high leverage because TDTA ranges more than 0.50 and TDTE ranges more than 1. The different policy of each subsector has its benefit and risk for the firms. Higher leverage can improve opportunities to get higher profitability and also high cost of financing that can make higher probability of bankruptcy. On the other hand, low leverage protects the firm to its liquidity and lower opportunities to bankrupt but the opportunities of higher profitability is lower.

Table 3: Capital structure on each mining subsector

Mining subsector	2011	2012	2013	2014	2015
Coal					
STDTA	0.21	0.20	0.20	0.21	0.16
LTDTA	0.25	0.30	0.29	0.27	0.29
TDTA	0.46	0.50	0.49	0.48	0.45
TDTE	0.85	0.99	0.95	0.91	0.82
Crude petroleum and natural gas production					
STDTA	0.29	0.22	0.22	0.29	0.32
LTDTA	0.32	0.39	0.40	0.36	0.38
TDTA	0.61	0.61	0.62	0.65	0.70
TDTE	1.57	1.59	1.61	1.82	2.33
Metal and mineral					
STDTA	0.10	0.12	0.15	0.17	0.16
LTDTA	0.18	0.19	0.22	0.23	0.19
TDTA	0.28	0.31	0.37	0.40	0.36
TDTE	0.39	0.46	0.59	0.67	0.56
Land/stone quarrying					
STDTA	0.47	0.46	0.50	0.43	0.34
LTDTA	0.11	0.12	0.11	0.08	0.20
TDTA	0.59	0.58	0.61	0.51	0.53
TDTE	1.42	1.36	1.54	1.04	1.14

Source : firms' annual report

Table 4 shows financial performance of mining firms that listed in IDX using profitability ratios (ROA and ROE) and

market ratio (TOBINSQ). PER can not be explained either on sector or subsector level because the price of stock is different among each mining firm and the variety are so high. Thus, the variable that shows financial performance only using three variables on descriptive analysis although the model using four variables (ROA, ROE, PER, and TOBINSQ).

Table 4: Financial performance on mining sector

Variable	2011	2012	2013	2014	2015
ROA (%)	12.02	7.70	4.06	2.08	-0.91
ROE (%)	22.11	14.88	8.00	4.17	-1.79
TOBINSQ	2.10	1.66	1.31	1.25	0.89

Source : firms' annual report

According to Table 4, the fluctuation of financial performance on each variable is so high during the periods in this study. Since the decreasing of demand and commodities price of mining sector in 2012, mining firms has worse performance both on profitability ratios (ROA and ROE) and market ratios (TOBINSQ). Number of Net profit after tax (NPAT) of mining firms decreases every year and it affects ROA and ROE, even have a negative ROA and ROE throughout 2015 because the number of mining firms which is having loss more (18 firms) than previous years (between 7 until 11 firms). The market ratio of mining sector which is measured by TOBINSQ also has the worst performance in 2015 (0.89) because the market value of mining firms is less than book value of assets. It shows that the potential of stocks market is not as marketable as the previous years (2011 until 2014) or called unmarketable for investment activity.

Table 5 indicates financial performance on each mining subsector in the periods 2011 until 2015 that shows the negative trend. The mining subsector that has the best financial performance is coal mining subsector although TOBINSQ ratio is less than 1 in 2015 (0.94). It happens because the declining of crude oil price as the most influential commodity on world trading activities while the declining of commodity demand and price. Furthermore, TOBINSQ of each mining subsector has the ratio below 1 throughout 2015. It means the market value of each subsector is undervalued and show the less investors. On the other hand, the most fluctuating financial performance of mining subsector is land/stone quarrying subsector because this subsector only has two firms. ROA and ROE of land/stone quarrying subsector from 2011 until 2014 still has the positive performance, but in 2015 these profitability ratios shows the negative performance that is caused by the declining of crude oil price.

Table 5: Financial performance on each mining subsector

Mining subsector	2011	2012	2013	2014	2015
Coal					
ROA (%)	16.15	9.68	4.73	3.21	2.65
ROE (%)	29.87	19.27	9.25	6.13	4.82
TOBINSQ	2.80	2.11	1.63	1.36	0.94
Crude petroleum and natural gas production					
ROA (%)	1.95	1.31	3.70	-0.04	-7.07
ROE (%)	5.01	3.39	9.66	-0.13	-23.54
TOBINSQ	1.08	0.98	0.89	1.02	0.83
Metal and mineral					

ROA (%)	13.28	9.41	3.03	2.00	-1.05
ROE (%)	18.52	13.73	4.81	3.35	-1.63
TOBINSQ	1.56	1.21	1.12	1.28	0.85
Land/stone quarrying					
ROA (%)	8.45	6.06	4.65	1.18	-20.78
ROE (%)	20.46	14.32	11.79	2.41	-44.41
TOBINSQ	1.24	1.27	1.17	0.95	0.80

Source: Firms' annual report

5.2 Impact of Capital Structure on Financial Performance on Mining Sector during 2011-2015

Table 6 shows that best model of each dependent variable is REM, except PER uses GLS because the estimator has the heteroskedasticity and autocorrelation problem when used PLS model. From the Table 6, capital structure has no significant relationship with market ratio which is measured by TOBINSQ. Another model shows that capital structure has a significant relationship with financial performance which is measured by ROA, ROE, and PER.

Table 6: Estimation results of panel data regression

Independent Variable	Dependent Variable on Each Model			
	ROA	ROE	PER	TOBINSQ
Best Model	REM	REM	GLS	REM
STDTA	0.173	0.404	-10707.7*	-0.227
LTDTA	0.211	0.561**	-10383.5**	-2.105
TDTE	-0.072**	-0.182*	1628.5**	-0.019

* = significant at 1% level; ** = significant at 5% level

Source : STATA 14 software output

5.2.1 Impact of Capital Structure on ROA

The estimation results show that capital structure which is measured by TDTE has a negative significant relationship with ROA. The higher TDTE is caused by higher total debts. The higher debts of mining firms happen because decreasing of cash flow. Equity of mining firms is dominated by issued of stocks only, without retained earnings. Thus, the mining firms can not cover the obligations to creditor which is dominated by long-term debts. On the other hand, ROA of mining firms decrease because net profit after tax mostly decrease that is caused by number of demand and commodity price is lower year by year. Investors are not interested in investing activities because there is no business movement that is profitable, either from price of stocks that is constant and or decreasing. This result supports pecking order theory because there is a negative relationship between capital structure and financial performance. An inverse relationship between capital structure and ROA is consistent with the results of prior studies [21][25][26].

5.2.2 Impact of Capital Structure on ROE

Capital structure that is measured by LTDTA has a positive significant relationship with ROE while TDTE has a negative relationship with ROE. Thus, the result is supported by trade-off theory. Long-term debts have higher proportion than short-term debts on mining firms because firm's needs for supporting investment activities and reaching higher profitability primarily for investors. On the other hand, TDTE has a negative relationship with ROE shows that this result is supported by pecking order theory. A higher TDTE is caused by declining of payment capacity of mining's firm. This condition makes the lower profitability which is

measured by ROE because the number of debts is more than number of equity because equity can not be supported by retained earnings because mining firms have less net profit after tax (NPAT). The percentage decreasing of NPAT is bigger than previous years while number of equity is constant and it will make ROE less than previous year. A positive relationship between capital structure and ROE is consistent with previous study by [13] while a negative relationship between capital structure and ROE is shown on previous studies [17][26].

5.2.3 Impact of Capital Structure on PER

Capital structure that is measured by STDTA and LTDTA has a negative significant relationship with market ratio measured by PER while relationship between capital structure that is measured by TDTE has a positive significant relationship with PER. Therefore, the results shows that relationship between capital structure and financial performance is supported both of trade-off theory and pecking order theory. The lower STDTA and LTDTA will affect to higher PER because mining firms mostly use low leverage policy for supporting business operation. A higher PER is obtained by closing price of stock that is constant or less decreasing and also is followed by lower EPS because NPAT is also declining as the impact of the lower demand and price of mining commodities.

Nowadays, mining firms employ cost efficiency in its business, both cost of revenue and other costs include interest expenses. The friction of capital structure which is dominated by equity to debts is not the same direction of NPAT that has negative trend. When NPAT of mining firms decrease, the number of issued stocks was constant. This condition affects to the lower EPS. When EPS decreased and is followed by the stock price of mining firms that were constant, this condition will affect to the higher PER. The percentage of EPS' declining is higher than the percentage of stock price's declining. Thus, TDTE has a positive significant relationship to PER. This finding that shows a negative relationship between capital structure and PER is supported by previous research by [13].

6. Conclusion, Policy Implications, Recommendation

6.1 Conclusion

Generally, behavior of capital structure on mining sector in Indonesia uses low leverage because mining firms use a balance debts and equity as source of financing. From the mining subsector perspective, there is a different behavior of capital structure. The capital structure of coal mining and metal and mineral mining subsector employ low leverage which inversely policy with crude petroleum and natural gas production subsector and land or stone quarrying subsector which show the high leverage. Furthermore, the financial performance of mining firms has a negative trend both on sector and subsector level which is caused by the declining of economic global in China.

The relationship between capital structure and financial performance on mining sector has a positive and negative significant effect. A negative relationship between capital

structure and financial performance on mining firms shows that the higher debts as financing source will impact to the decreasing of financial performance. Thus, the result use pecking order theory. The change of behavior from internal funding (retained earnings) to external funding (debts) that is employed on mining firms caused by the lower profitability (net profit after tax) from its business operation and this condition make the cash flow of mining firms is unstable. Most of mining firms apply efficient costs, either from cost of revenue or selling and general administrative costs. Issuing new stocks is not a good choice because the investors considers the macroeconomic condition of mining business that is showed by the lower price and demand of mining commodities. On the other hand, a positive relationship between capital structure and financial performance means that a higher debts has an impact to the higher profitability. This result is consistent with trade-off theory. The higher debts will lead mining firms more profitable. Thus, [32] describes that there has been no one universal theory which explained capital structure significantly.

6.2 Policy Implications

The firms managers must maintain the debt level wisely although declining of firm performance for minimizing risk of firm default. The higher debts and different behavior of each subsector on mining firms show that the government and policymakers (i.e. Bank Indonesia and Financial Service Authority) to concern on nonfinancial sector prudently. The higher debts in the declining economic condition should be regulated with the government regulations on each subsector. The investors should consider macroeconomic conditions on investing activities although firm performance shows a negative trend over five years (2011-2015).

6.3 Recommendation

Suggestion for further study related to the impact of capital structure on the financial performance of mining firms is may also use in another sector beside financial sector and mining sector that listed in Indonesia Stock Exchange. Furthermore, next study also can analyze all of sectors that listed in Indonesia Stock Exchange. The next study may add control variables, such as firm size and asset or sales growth based on the previous studies [12][17]. In addition, the next study also may add more research period that hopefully can explain more on this study.

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