

The Effect of Profit Efficiency toward Banks Performance: Does Bond Issuance Matter?

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Abstract:

This research paper aims to better understand the impact of earnings efficiency on bank performance. This study will also examine how much the variable issuance of corporate bonds as a source of long-term debt funding for refinancing needs affects bank performance. Contingency framework is based on the integration of financial intermediation theory, pecking order theory and trade-off theory used in this study. The author tries to test the argument on banks that issue bonds and have the majority of shareholding as a sampler of more than 5% in the period between 2011 and 2018. Based on this research which is predictive and exploratory, this research will use analytical techniques to run the regression model. This research finds that banks will show an increase in performance when the percentage of bond issuance as an external funding source is more than 59%. Earnings efficiency proved to have a significant positive effect on bank performance.

Keywords: bank performance, bond issuance, profit efficiency, financial intermediary

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INTRODUCTION

Banks as financial intermediary institutions play a role in economic growth. Capital markets in developing countries are underdeveloped. Banks are still dominant as places to seek financing for companies and individuals. There is as yet a study of how bank profit efficiency measured as net intermediation margin or NIM. There are few studies of conventional banks (CBs) in the developed markets using Slack Based Measurements Data Envelopment Analysis (SMB DEA) (Khan, Kutan, Naz, & Qureshi, 2017), Data Envelopment Analysis (DEA) (Sufian, Kamarudin, & Nassir, 2016), parametric frontier techniques to compute the cost and the profit efficiency indexes for a panel of commercial banks (Duygun, Sena, & Shaban, 2013). Several studies have been conducted to reveal the determinants of interest margins. Interest margin is affected by the variable effects of competition

among banks and interest rate risk faced by banks (L. Allen, 1988); types of loans and deposits of depositors' funds (McShane & Sharpe, 1985); measurement of interest rate risk from lending and deposit rates becomes money market uncertainty (Angbazo, 1997; Ho & Saunders, 1981). Another important extension to the model introduces ownership variables, tax variables, financial leverage, and legal and institutional variables (Demirgüç-Kunt & Huizinga, 2000). The effect of operating costs into the model and using direct measurement of market power (Maudos, Pastor, Perez, & Quesada, 2002). Research on capital structure is focused on the proportion between debt and capital seen on the right side of the company's balance sheet or commonly called leverage. Leverage is the degree of the company's ability to use the asset or source of funds that have a fixed load to realize the goal is to maximize the wealth of

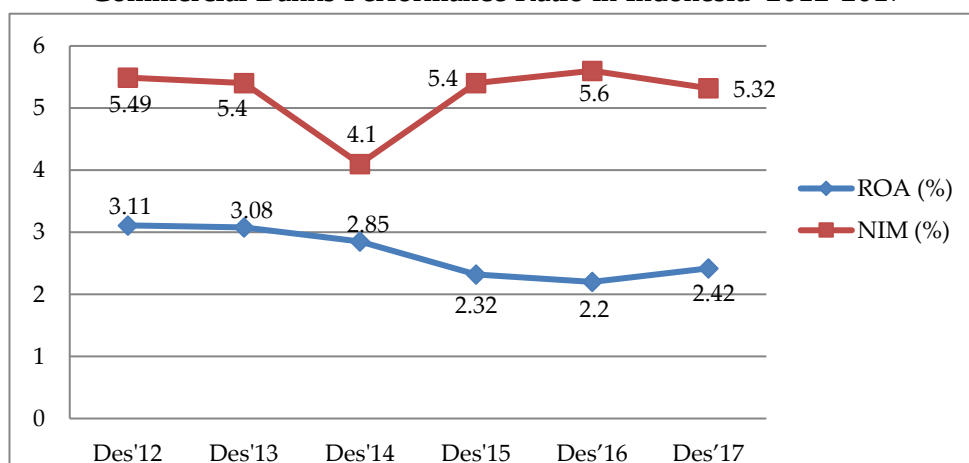
the company owner (Whiting & Gilkison, 2000). Past profitability is the main determinant of leverage and supports the pecking order theory (Krishnan & Moyer, 1996). The level of bank capital directly affects the costs that the bank will use to provide credit by providing alternative funding sources (Berger & DeYoung, 1997). The capital ratio is a proxy of the financial health of banks that affect profit efficiency (Spulbăr & Nițoi, 2014). Bank debt consists of debt to third parties (savings, current accounts, and deposits) and comes from interbank loans and issuance of securities (bonds). Banks are required to find alternative funding alternatives. Efficient funding will occur if the company has an optimal capital structure (Mosko & Bozdo, 2016). Corporate bonds are a source of funding for companies in the form of long-term debt instruments issued by issuers to bondholders that can be obtained from the capital market (Thukral, Sridhar, & Joshi, 2015). Corporate bonds are called fixed-income securities because they offer cash income streams in the form of coupons that are paid periodically as returns with a predetermined formula and the principal amount at maturity. Banks need funds to finance credit expansion, business development, and

refinancing (Xu, 2014). Evidence is consistently showing the issuance of new bonds as a substitute for bonds that will avoid default. The sectors that most contributed to the issuance of corporate bonds for refinancing were companies from the financial or multi-financial services sector. Trade-offs will occur when using high capital ratios to improve bank health and security (Al-Kayed, Zain, & Duasa, 2014). Issuing debt securities is preferred because it is considered as a funding source that is cheaper than equity, although market conditions remained weak bonds (Pessarossi & Weill, 2013). Bonds are an alternative source of bank funding that can improve bank performance (Astrauskaite & Paškevičius, 2014).

1.2 Financial performance of banks and bond financing in Indonesia

Based on the data obtained from Indonesian banking statistics in 2018, the profitability ratio of commercial banks (ROA) has decreased from 2012 to 2017 (Figure 1). This is due to the existence of margins from weak lending and the high ratio of problem loans. Net Interest Margin (NIM) at the end of 2017 was at 5.32 percent, down compared to 2015 and 2016.

Figure 1.
Commercial Banks Performance Ratio in Indonesia 2012-2017

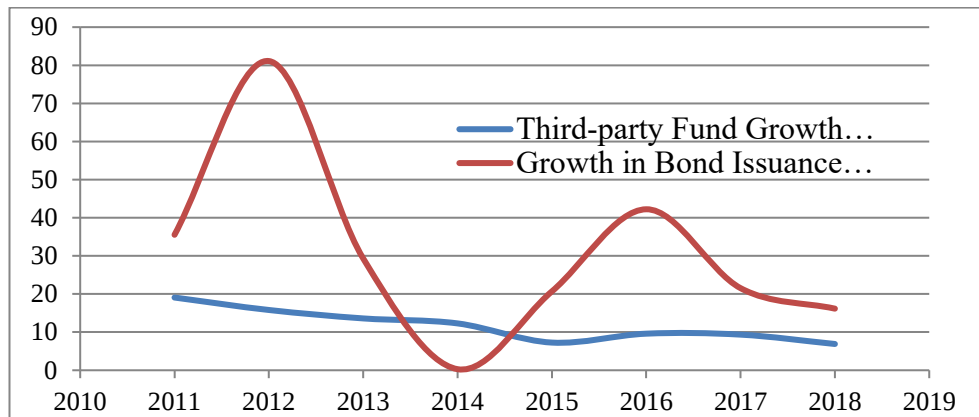


The phenomenon of bond issuance in the banking sector is influenced by improving market perceptions of risks to the industry as well as increasing capital requirements for financial

institutions. The growth of third-party funds (TPF) began to slow down since 2011, while the percentage of bond issuance growth was above TPF, although there was a tendency to decline (Figure 2).

Figure 2.

Third-Party Funds Growth compared to Bond Issuance Growth in the Banking sector in Indonesia 2011-2018

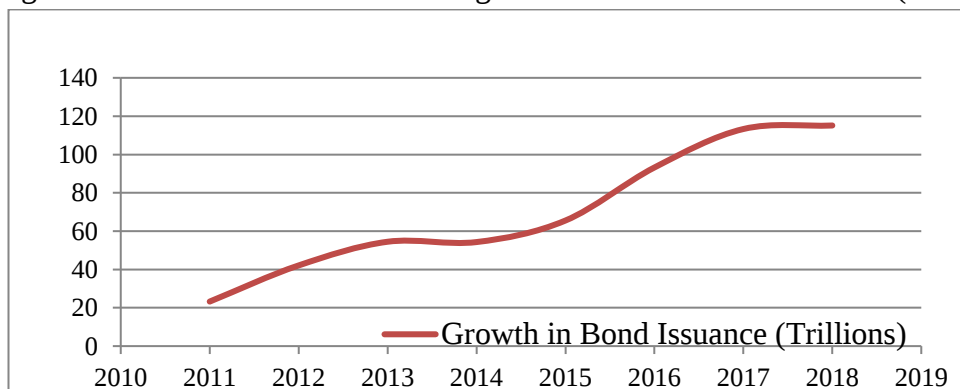


Banks need alternative funding sources to deal with the possibility of decreasing internal liquidity from TPF sources. Potential deposits have been declining due to an increase in inflation that has caused a downward trend in deposit rates. External funding source is one way for banks to meet their capital needs and target lending. This is needed to maintain or increase the capital adequacy ratio amid the planned credit expansion and various new

regulations from Bank Indonesia. Bond issuance is usually done to meet capital adequacy and refinancing for banks that have needs. This system is more efficient because it is not going through financial intermediaries in encouraging long-term economic growth (Franklin Allen & Gale, 2001). Bonds are alternative funding for companies that need fast funds, characterized by a tendency to increase the issuance of corporate bonds by the banking sector in Indonesia (Figure 3).

Figure 3.

The growth of bonds issuance in banking sector in Indonesia 2011-2018 (Trillion)



Efficiency is an indicator used to assess the ability of banks to manage interest income to be greater than the interest expense. Productive assets are the bank's resources to generate interest income of the bank as an intermediary institution. Bank's operating income is functioned for lending, buying securities, bonds, and interbank deposits. While interest expenses needed to repay a loan from another bank, the third

party loans funds and pays a coupon when issuing securities or bonds. It is expected that with the increase in interest income, banks are expected to be able to finance their operational activities. Interest income is used to pay off maturing debt and pay off long-term debt (LTD). This is following the purpose of the bond issuance, namely for refinancing (financing long-term debt that is due), one of which

is a debt due to the previous bond issuance. Reduced debt will be able to improve profitability as a proxy of the bank's performance (Vithessonthi & Tongurai, 2015). Debt will play a role in the supervision of companies because companies with high leverage tend to pay more attention to the debt market reaction. Debt gives a positive signal to the market and thus potentially reducing asymmetric information between companies and investors that lead to lower future financing costs (Leland & Pyle, 1977). The investigation of the influence on the performance of bank profit efficiency will involve variable rate bonds against long-term debt (BLTD) as a new variable that will serve as mediation. The result is that the bank will show an increase in performance when the percentage of bond issuance as a source of external funding reaches more than 59%. Profit efficiency is proven to have a significant positive effect on bank performance.

2. LITERATURE REVIEW

2.1. Profit Efficiency

Production analysis is carried out to classify the inputs and outputs of financial companies. What is production as the process of transformation at a financial company? (Frisch, 1965). Transformation is a process of changing the input from the form previously known to produce output with new forms. The transformation process in banks as financial intermediary institutions is the process of channeling funds from surplus units and lending those funds to deficit expenditure units. Outputs and inputs from financial companies must be clearly described before modeling the production and costs developed for financial companies. The output from financial institutions (especially the commercial banks) that have been used by various authors is total assets, assets, total deposits, demand deposits, savings and loan account numbers, gross operating income a combination of these measures. In fact, it has been suggested to be able to adopt any output size of financial firms for size consistent with the goal of researchers (Benston, 1972).

Pesek stated that conceptually there was a clear difference between inventory held by manufacturing companies and productive assets owned by banking companies. (Pesek, 1970). First off, most of the bank's balance sheet items "perishable" in the sense that the cost should be continuously expended to maintain a certain level of productive assets. Secondly, the inventory does not generate revenues directly to the manufacturing company, while productive assets are the company's main source of banking revenue. Earning assets as bank output is analogous to the inventory as output in manufacturing companies (Mackara, 1975). Mackara argues that the problem of loan repayment, extension, replacement, and others, the practical problems associated with the use of productive assets as a measurement of output. Determination of the maximum level of income from the output of the productive assets includes determining the mix of assets and the size and composition of deposits determined in amounts consistent with the equilibrium level of productive assets (Sealey & Lindley, 1977). There are two approaches to the basic concept of the efficiency model in the banking sector, namely; cost efficiency and profit efficiency (Berger & Mester, 1997). The profit efficiency approach is superior to cost efficiency because profit efficiency takes into account inefficiency in terms of input and output, while cost-efficiency is only the input side. Profit efficiency is based on comparisons with earnings maximization practices (Fitzpatrick & McQuinn, 2008). In the profit efficiency approach, banks will maximize profits by implementing the pricing opportunity set they have to transform the factors that affect profitability. Factors affecting profitability are reflected in, among others, Net Interest Margin and Loans to Total Asset Ratio (Hassan, 2006; Maudos et al., 2002). J. Maudos et al, and Berger and Mester (Berger & Humphrey, 1997; Maudos et al., 2002) offer a method for determining input, output, and bank profit. Profit efficiency is defined as the difference between interest income minus interest expense compared to the output in the form of total earning assets. The

efficiency value achieved is getting closer to 1, so it can be said that the bank is more efficient. NIM selected as an indicator of efficiency because it is relevant to the position of the bank as an intermediary, it is simple and relatively easy to get the data (Osei, Joseph, & Asenso, 2015). NIM provides an overview of the performance of the bank's main business lines that reflect the extent to which management manages assets (which generate interest income) and liabilities (which generate interest charges) as input of the intermediation process. While the output used is total earning assets. Calculation of NIM not only comes from credit but also from other fund placements that generate interest income (Muljawan, Hafidz, Astuti, & Oktapiani, 2014).

Hypothesis 1: Profit efficiency has a positive effect on bank performance.

2.2. Bond issuance toward long-term debt

Management of the company will maintain the balance of the financial account balance and to develop qualitative as well as possible, in terms of assets, liabilities, and equities (Franklin Allen, Carletti, & Marquez, 2015). An external funding policy is needed by companies to finance opportunities for lending and investment. The pecking order theory states that when a company lacks internal funds, it will first use debt before using equity (Stewart C. Myers, 1984). Debt has many advantages over equity because it is not sensitive to information: debt will not be influenced by inside information (Rajan & Zingales, 1995). Banks would also benefit from a tax deduction when choosing to issue debt for corporate tax is calculated after interest paid to holders of debt securities (Ross, Westerfield, & Jordan, 2008). Corporate profits will increase with increasing debt, but at a certain point (the optimum limit) will go down, because the use of debt after optimal leverage will cause the cost of bankruptcy (bankruptcy costs) greater (Scott, 1977). Trade-off theory explains that to achieve the optimal capital structure of the company, it must be able to combine a balance between the benefits, returns,

risks and costs faced maximizing the performance of the company. An optimal capital structure is a target to be achieved by the bank (Stewart C. Myers & Majluf, 1984). Management conducts debt financing due to the consideration of the cost of capital that can be obtained, compared to the consideration of the rising market value of the company due to debt (Stewart C. Myers, 1984). The role of the intermediary bank as executor in meeting the needs of the fund is the primary issue securities (such as stocks, bonds, commercial paper, etc.). Fulfillment of funds adjusts to the purpose of their needs (OJK, 2016) to be channeled into long-term financing. Bonds as one of the bullet loans are loans that use a balloon payment mechanism. The balloon payment is a loan with a long-term amortization schedule and yearly interest payment (coupon), while the debt principal can be paid later at maturity of the loan or as agreed. The mechanism for arranging payments using this model is one of the advantages of banks that expect large cash flows for their operational needs. Thus the bank can prepare funding before the due date. The difference in mechanism is what differentiates bond funding from ordinary debt funding, where the payment of installment funding with ordinary debt includes principal and interest in the agreed period. Amihud introduced a new governance structure through public company bond issuance (Amihud, Garbade, & Kahan, 1999). Changes in debt structure will be experienced when companies experience financial difficulties (Dudley & Yin, 2018). Bonds are needed to pay bank debts that are due. Refinancing is one of the most important ways to issue new debt (Forte & Peña, 2011), an alternative bank funding for long-term funding needs (Mukherjee, 2012). The company will have more flexibility in building the desired structure using bond financing (Kwan & Carleton, 2010), the company extends the maturity to protect the risk of refinancing in the future (Xu, 2014), issuing debt securities that have a maturity that remains different from the different equity financing that has unlimited terms (Norden, Roosenboom, & Wang, 2016). The company issues bonds because

bank credit becomes relatively more expensive, thus reflecting the scarcity of bank equity (Chang, Fernández, & Gulan, 2017). Substitution between bonds and bank loans is the usual instrument of the business cycle and this process is relevant for macroeconomic performance (Grjebine, Szczerbowicz, & Tripier, 2018). This study uses the ratio of outstanding bonds with long-term debt (BLTD) as a proxy of bond financing (Benzion, Galil, Lahav, & Shapir, 2017). The results showed that companies that enhance the long-term debt outstanding bonds tend to increase and vice versa. These findings confirm the hypothesis that the increase in a bond against LTD least partly because of the issuance of new bonds, in addition to long-term debt unpaid.

Hypothesis 2: Funding by issuing bonds has a positive effect on bank performance.

Hypothesis 3: Funding by issuing bonds plays a role in mediating the effect of profit efficiency on bank performance

3. METHODOLOGY

3.1. Sample characteristic

The source of data is a secondary data panel, which is a combination of time series and cross-section. The period of research started from 2011 to 2018. Sampling criteria of banks are explained as follows: (1) it carried out corporate actions to issue bonds, and had a record of outstanding bonds; (2) it had a majority shareholding of more than 5 percent, and (3) it always presented and published financial reports in a row from 2011 to 2018. To determine the samples we used the purposive sampling method. It is because the researcher has understood the information that was needed. The information has obtained from a particular target group that can provide the desired information because the sample does have information and meets the criteria specified by the researcher. The data collection technique is the documentation of the Indonesian Central Securities Depository recorded since the beginning of 2000 to June 2018. 40 out of 134 banks listed in the Financial Services Authority have issued

bonds in Indonesia, and only 24 banks of them constantly have the value of bonds circulated from 2011 to 2018, consisting of 4 state-owned commercial banks, 13 private banks, and 7 regional government-owned banks. Therefore, that was 192-panel data observed.

3.2. Variable Measurement

3.2.1. Independent Variable

The level of profit efficiency of financial intermediary institutions is measured by NIM (Osei et al., 2015; Stiglitz & Weiss, 1981). Eric Osei-Assibey and Joseph Kwadwo Asenso said that wide interest rate margins can lead to adverse selection and moral hazard which exacerbate default levels. Dabla-Norris, Floerkemeier, and Charles M. Banda stated that the high-interest rate spread implies a higher efficiency increase. Interest rate spread is the result of the market interactions on transaction costs and asymmetric information (Banda, 2010; Dabla-Norriseier & Floerkemeier, 2007). It might lead to an increase in banking inefficiency and reduced the demand for—and benefits of—a financial intermediary. The effect of the profit efficiency would be either positive or negative according to the bank's ability and expertise in its operations. The high NIM value is related to the low level of efficiency and uncompetitive market conditions.

3.2.2. Mediation Variable

The purpose of issuing bonds (bonds) is refinancing (Hansen & Crutchley, 1990; Harford, Martos-Vila, & Rhodes-Kropf, 2015). Issuance of corporate bonds that proxy as the ratio of bond financing with long-term debt (LTD), where LTD is a long-term debt (over 1 year) (Benzion et al., 2017). Used LTD because long-term debt is considered a more stable source of funding, and is less likely to cause defaults in the short term (Jankowitsch, Nagler, & Subrahmanyam, 2014).

3.2.3. Dependent variable

Company performance is the result of the implementation of all company policies measured in

a certain period (Djalilov & Piesse, 2016; Fama & French, 1998). ROA is the most important measure used to compare the performance of an operational bank because the ratio is not distorted by the high equity multiplier (Kosmidou, Tanna, & Pasiouras, 2008). ROA represents the size of the company's ability to generate better returns on its asset portfolio (Ozili & Uadiale, 2017). ROA is considered to demonstrate the efficiency of the bank in using its assets as a resource investment to generate profit (Rahman, Sulaiman, & Mohd Said, 2017; Sufian et al., 2016; Terraza, 2015; Yasser & Mamun, 2017).

3.3. Model Analysis

The analysis technique used in this research is Structural Equation Modeling (SEM) based on variance or Partial Least Squares (PLS), and thus, this technique is also called as PLS-SEM (Hair, Sarstedt, Hopkins, & Kuppelwieser, 2014). PLS-SEM can work efficiently with small sample sizes and complex models. The most important stage before evaluation of model in PLS-SEM analysis is

determination of resampling method. Resampling is a procedure to redesign the sample because the significance value of PLS model estimation remains unknown. There are two resampling methods considered, respectively bootstrapping and jackknifing. The selection is given to bootstrapping because this resampling method is stable when the original sampling is more than 100. In this paper, the PLS-SEM model is using WarpPLS 6.0. All of the hypothesis, each H1, H2 and H3, tested by using the following model:

$$BLTD = \beta Y_1 X_1 NIM + e_1 \quad (1)$$

$$ROA = \beta Y_1 X_1 NIM + \beta Y_2 X_1 BLTD + e_2 \quad (2)$$

2. RESULT AND FINDING

2.1. Descriptive Analysis

Table 1 presents descriptive data from the research variables that contain the minimum rate, maximum rate, mean rate, and standard deviation. The descriptive statistical test resulted show that all variables have an average value higher than the standard deviation. It means that the overall data has a small variation.

Table 1.
Descriptive Statistics of Variable Observed

Variable	N	Mean	Max	Min	SD
NIM	192	0.064	0.130	0.015	0.024
BLTD	192	0.514	1.218	0.034	0.292
ROA	192	0.021	0.052	-0.049	0.013

2.2. Evaluation of Structural Model Using ROA-Based Firm Performance

Table 2 presents the results of evaluating structural models using ROA-based company performance. The adjusted R-squared ROA for all bank samples is 0.403. The coefficient of determination in linear regression is often defined as how much ability all independent variables in explaining the variance of the dependent variable. Profit efficiency (NIM) and Bond to Long Term Debt (BLTD) in explaining the variance of Bank Performance (ROA) amounted to 40.3% in the overall sample bank. This means that a

59.7% variance of Bank Performance variables (ROA) are explained by other factors. Adjusted R-squared for Bank Performance variables (ROA) of the sample group is strong category because the variance explained by the independent variable is more than 0.250. The Q-squared value for ROA is more than null so it can be said that the model has predictive validity. The value of the effect size (f^2) of profit efficiency (NIM) to Bank Performance variables (ROA) is 0.383. According to the practical point of view variable NIM has a strong influence on ROA, because of the value of $f^2 > 0.35$. The value of the effect size of NIM on BLTD is 0.100. The value of the effect size of BLTD on ROA is 0.026.

According to the practical point of view, the NIM variable to the BLTD variable and BLTD to ROA has a weak effect because of the value of f^2 $0.02 < 0.15$. The test results on the output Goodness-of-Fit (GoF) indicate that the ROA-based model has very good suitability. Consequently, the P-values for the Average Path Coefficient (APC), Average-Square (ARS) and Adjustable-Square (AARS) significance are at level < 0.01 . The second value of Average Block VIF (AVIF) and Average Full Collinearity VIF (AFVIF) is ideal < 3.3 , which can then be said that no multicollinearity problem was

found among exogenous variables. The goodness-of-fit value 0.505 means that the suitability of the model was included in the large category. Observed indices, such as Symson's Paradox (SPR), R-Squared Contribution Ratio (RSCR), and Non-Linear Bivariate Causality Direction Ratio (NLBCDR), all of these values were > 0.70 , which can be considered as no causality problem in the model. Also, the Statistical Suppression Ratio (SSR) index has a value > 0.70 , in which ROA-based model was acceptable.

Table 2.

Result of Structural Model Evaluation Using ROA-Based Bank Performance

Description Path	Path Coefficient	Adj. R ²	Q ²	Effect Size	Standard Error
All data samples					
NIM→ROA	0.624***	0.403	0.410	0.383	0.056
NIM→ BLTD	0.317***	0.096	0.106	0.100	0.062
BLTD→ROA	-0.177***			0.026	0.048
Mediation test for all data samples					
Description Path		Indirect effect		Total effect	
NIM→BLTD→ROA		-0.056***		0.567***	
APC/ARS/AARS		: 0.373 *** / 0.255 *** / 0.505***			
AVIF/AFVIF/ Goodness of Fit (GoF)		: 1.002/ 1.401/ 0.393			
SPR/RSCR/SSR/NLBCDR		: 1.000 /1.000 / 1.000 / 1.000			

***, **, * denotes significance levels at 0.001, 0.05 and 0.1, respectively.

All estimates influence between-variables with a robust standard error.

The question relevant to this ROA-based model is whether Efficiency Profit (NIM) and Bond Issuance (BLTD) have direct effect on ROA or indirect effect on ROA through Bond Issuance (BLTD). Efficiency Profit (NIM) has a positive and significant effect on ROA with path coefficient of 0.624, which supports Hypothesis 1. Bond Issuance (BLTD) has a negative but significant effect on Bank Performance (ROA) at path coefficient of -0.177. This significant relationship has not supported Hypothesis 2. Mediation hypothesis is tested in PLS-SEM using Variance Accounted For (VAF) developed by Latan and Ghazali (2017). Bootstrapping technique is used to understand the sampling distribution for the

indirect effect. Such arrangement is consistent with Hair, Hult, Ringle, and Sarstedt (Hair, Ringle, & Sarstedt, 2013) who said that VAF is considered more proper than other methods to examine mediation in PLS-SEM because this PLS-SEM uses resampling method and does not need assumptions concerning distribution of variables, which thus this method can be used at small sample size. The counted VAF rates for the role of mediation of Bond Issuance (BLTD) in the effect relationship of Profit Efficiency (NIM) on Bank Performance (ROA) is 0.1, $VAF < 0.2$ it was not mediation effect. Non-linear testing applies the Baron and Kenny method to see how big the role of BLTD on ROA (Figure 1.4). The value of the indirect effect coefficient for testing the

mediation hypothesis of NIM $\rightarrow$ BLTD $\rightarrow$ ROA is 0.567 significant at 1% meaning that the BLTD variable can mediate the effect of profit efficiency (NIM) on Bank Performance (ROA). In testing the direct path relationship on the three Efficiency Profit (NIM) and Bond Issuance (BLTD) relationships have a direct effect on ROA or indirect effect on ROA through Bond Issuance (BLTD) significant at 1%. It can be concluded that there is a partial mediation on the relationship between the influence of Efficiency Profit (NIM) and Bond Issuance (BLTD) having a direct effect on ROA or indirect effect on ROA through Bond Issuance (BLTD). Although the direct linkage of Bond Issuance (BLTD) to Bank Performance (ROA) is negative, all three channels are significant. Bond Issuance (BLTD) becomes a suppression variable that increases the regression coefficient between the Efficiency Profit (NIM) variable and Bank

Performance variable (ROA) when inserted in the regression equation. In other words, the effect between Profit Efficiency (NIM) and bank performance (ROA) is hidden by the suppression of variables Bond Issuance (BLTD). When the suppression effect is not controlled, the relationship between Efficiency Profit (NIM) and Bank Performance (ROA) will appear smaller or even of the opposite sign (Cheung & Lau, 2007). The suppression effect may contribute to the development of the theory. The variance of independent variables can be partitioned into components that are relevant to the criteria and the criteria that are not relevant, and the inclusion of suppression effect in the analysis helps to separate variance that is not relevant to the criteria (Tzelgov & Henik, 1991).

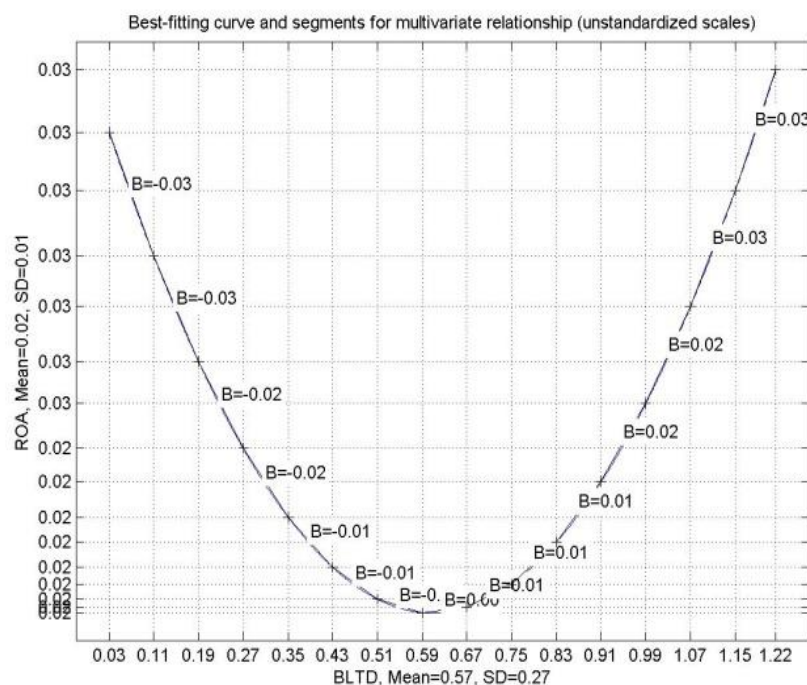


Figure 4.

Non-linear relationship of the effect of Bond Issuance (BLTD) on Bank Performance (ROA)

nature This means that the negative effect of Bond Issuance (BLTD) on Bank Performance (ROA) will reverse to be positive when the bank can increase

funding by using BLTD of 0.59 to increase ROA. The direction of this relationship is why BLTD has

not been able to mediate the effect of profit efficiency on bank performance.

3. CONCLUSION

By using the PLS method we assessed the impact of profit efficiency and bond issuance as a determinant of Indonesian bank's profitability over the period 2011-2018. We built the profitability models, with ROA as a dependent variable. NIM as a measurement of profit efficiency, and BLTD as a measurement of bond issuance. Both of them are called independent variables. As for the research results regarding the impact of internal and external variables on profitability, they are in line with the trade-off theory assumptions. Trade-off theory explains that to achieve an optimal capital structure is to increase the profits of banks by way of an increase in debt financing. At a certain point (the optimum limit) profit will fall, due to the use of debt after optimal leverage will cause the cost of bankruptcy. The significant positive impact of profit efficiency on Return on Assets and the significant negative impact of bond issuance on Return on Assets indicate that banks are advised to apply risk management. The U curve is found concerning the effect of bond funding on bank performance. The findings of this study imply that banks will show an increase in performance when they take advantage of the opportunity to issue corporate bonds above 59% of the total funding needs. Banks do not only rely on funding from Third Party Funds (TPF) and equity capital but also by issuing long-term debt securities because external funding by issuing bonds is proven to improve bank performance. Banks must be able to align between funding needs for refinancing so that they can avoid default problems. Our results should help monetary authorities to reshape their policies to increase the banking performances in Indonesia, with a particular focus on bond issuance. Banks should improve profit efficiency to increased profitability. Finally, our findings are particularly relevant for bank managers. Our remarks give important insights to the managers regarding their operative financing decisions. The future research efforts could be channeled towards several directions. It is possible to expand the research sample including additional banks that operate in Asian or ASEAN countries, as well as employ some other research methodologies. It is possible to redesign the independent variable set, by replacing

some independent variables that could be too co-integrated with dependent variables or include some additional variables.

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