Effect of Return On Assets (ROA), Capital Adequacy Ratio (CAR), Loan To Deposit Ratio (LDR) Against SUKUK Prices In Islamic Banks In Indonesia

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ABSTRACT: This study aims to analyze the effect of Return on Assets (ROA), Capital Adequacy Ratio (CAR), Loan To Deposit Ratio (LDR) to the prices of sukuk (sharia bonds) Islamic banks in Indonesia. This study is expected to explain that there is an increase in the performance of Islamic banks in Indonesia, namely liquidity ratios, profitability and sovability with the existence of sukuk funds. The Action Plan carried out on each evaluation strategy begins by defining a series of theoretical concepts, relevant levels of analysis, and measurable indicators. The dependent variable of this study is the price of sukuk (Islamic bonds) and the independent variables of this study are Return On Assets (ROA), Capital Adequacy Ratio (CAR) and Loan to Deposit Ratio (LDR). The data analysis model uses multiple linear regression (multiple linear regression method). Obseration of the data used is the data of these variables in the last 10 years, in 2006-2015. Data is obtained from Bank Indonesia. The analysis was carried out with the help of SPSS Software (Statistical Package Social Science). The results of this study prove that simultaneously Return On Assets (ROA), Capital Adequacy Ratio (CAR), Loan To Deposit Ratio (LDR) affect the price of sukuk (sharia bonds) Islamic banks in Indonesia. The partial test results prove that Return On Assets (ROA) does not affect the price of sukuk (Islamic bonds) in Islamic Banks in Indonesia. Capital Adequacy Ratio (CAR) affects the price of sukuk (Islamic bonds) Islamic banks in Indonesia. The Loan To Deposit Ratio (LDR) affects the price of sukuk (Islamic bonds) in Islamic banks in Indonesia.

KEYWORDS: **ROA[1], CAR[2], LDR[3] and Price of SUKUK [4]**

I. INTRODUCTION

The potential of domestic sukuk in 2003-2007 continues to increase. In 2003 there were only 6 issuers with a nominal value of Rp. 740 billion, then in 2007 the total issuers reached 21 issuers with a nominal value of Rp. 3.23 trillion so that the market share of Islamic bonds reaches 2.5%, among the 21 issuers there are 3 issuers from the banking sector, namely Bank Muamalat, Bank Syariah Mandiri and Bank Bukopin, among the 3 banks there are 2 Islamic banks namely Bank Muamalat and Bank Syariah Mandiri.

In Islamic banks capital is needed to see the performance of banks based on capital adequacy ratio as well as conventional banks. Capital serves to maintain public trust, as a final buffer to protect the bank from unexpected losses and maintain the continuity of its business when the economy experiences difficulties.

Efforts to encourage the bank intermediation function in the form of credit expansion must be balanced with adequate additional capital. If the bank manager cannot provide additional adequate capital, then the decline in the value of capital adequacy is inevitable. Banks must provide total capital of at least 8% of assets rather than according to risk. One alternative to increasing capital carried out by banks is by issuing bonds.

A bond is a statement of debt from a bond issuer to a bond holder along with a promise to repay the debt principal along with a coupon (bond) at the time of payment due. Islamic bonds with a relatively long period of time between 5 and 7 years. The need for additional capital is also felt by Islamic banking to strengthen the capital structure. One example of Islamic banks in Indonesia can we see from the ratios of Bank Syariah Mandiri before and after the issuance of Islamic bonds (sukuk).

Table 1. Bank Syariah Mandiri ratios before and after bond issuance syariah (*sukuk*)

	Des 00	Des 01	Des 02	Des 03	Des 04	Des 05	Des 06	Des 07
CAR	117,18%	63,18%	38,91%	20,87%	10,57%	11,88%	12,56%	12,44%
ROA	2,60%	3,30%	3,51%	1,03%	2,86%	1,83%	1,10%	1,53%
ROE	4,10%	4,43%	3,61%	3,61%	22,28%	23,39%	18,27%	32,22%

Bank Syariah Mandiri issues Islamic bonds in October 2003 with a principal amount of Rp. 200 billion, 5 years. From the table above, it can be seen after Bank Mandiri issued sukuk, the CAR ratio was relatively stable. For financial ratios, there was an increase in the ROE ratio despite a decline in 2006 but increased dramatically the following year, while ROA tended to be stable.

II. LITERATURE REVIEW

2.1. Definition of Sukuk (Sharia Bonds)

According to language, sukuk is the root word of the Arabic "sakk", plural "sukuk or sakaik" which means hitting or hitting, and can also mean printing or forging so that it says "keep nukud" means printing or forging money. The term sakkbermula is from the act of affixing someone's hand stamp to a document that represents a contract for the formation of rights, bonds, and money. In the modern concept it is mentioned that financing security provides rights to wealth and dependents and other forms of property rights. Budgets are defined as a legal document that is proof of the surrender of capital to ownership of a property that may be transferred and is eternal or long-term (Nazaruddin, 2010) .

Economic experts provide a definition of sukuk in different views. Therefore, it is necessary to be asserted that sukuk is a sharia investment product that places the use of shares in a tangible asset, usufructs, and services. or a reasonableness of the project or a certain form of investment. Referring to the Fatwa of the National Sharia Council No.32 / DSN-MUI / IX / 2002, Islamic bonds are long-term securities based on sharia principles issued by issuers to holders of Islamic bonds that require issuers to pay income to holders of Islamic bonds in the form of profit sharing, margin or free, and repay bond funds at maturity (Edwin, 2014).

Sukuk has several characteristics, including:

a. Is proof of ownership of an asset, benefit right, service or certain investment activities.
b. The income given is in the form of rewards, margins, profit sharing, according to the type of contract used in the issuance.
c. Free from the elements of usury, gharar, and maysir.
d. Requires the issuance of underlying assets.
e. The use of proceeds must be in accordance with sharia principles.

2.2. Sukuk Formation Mechanism

In general, the provisions of the mechanism regarding Islamic bonds (sukuk) are as follows:

1. Islamic bonds must be based on sharia concepts that only provide income to bond holders in the form of revenue sharing and payment of obligations at maturity.
2. Mudharabah Islamic bonds issued must be based on the form of distribution of previously agreed profits and income received must be non-halal.
3. The ratio (ratio) for profit sharing must be determined according to the agreement before the issuance of the bond.
4. Distribution of income can be done periodically or in accordance with the joint provisions, and at maturity it is taken into account as a whole.
5. The sharia aspect supervision system is carried out by the Sharia Supervisory Board (DPS) or the Sharia Expert Team appointed by the DSN-MUI.
6. If the bond issuing company neglects or violates the terms of the agreement, an investor refund must be made and must be made in a debt statement.
7. If the issuer is negligent or injured, the investor can withdraw the funds.
8. The ownership rights of mudharabah Islamic bonds (sukuk) can be transferred to other parties in accordance with the agreement of the agreement.

The mechanism for forming sukuk is almost the same as the mechanism for establishing Islamic bonds, there are only minor differences. In general, in the formation of sukuk, there are at least three parties involved, namely the originator or heir who acts as the legal owner of the asset, Special Purpose Vehicle (SPV) a trusted body that acts to issue sukuk certificates, and sukuk holders or investors who invest in sukuk products.

A set of assets will be selected by the originator for sale to the SPV, with the understanding that these assets will later be leased back by the originator (if ijarah sukuk is used), with the agreed rental value and within the specified period the originator will be purchased at the same price. Then the SPV secures its assets with ijarah sukuk for sale to investors so that the assets become joint property of the investors who agree not to be distributed, but entrusted to the SPV for lease and the intended rental results will be shared with investors according to their respective capital participation. When sukuk is

mature, flow of rents is terminated and joint assets owned by investors, will be sold initially by the SPV to the originator and the selling price will be paid initially to each investor according to the initial capital value.

2.3 Types of Sukuk

1) Sukuk Ijarah application

This form of sukuk ijarah consists of tangible assets, where investors have a part of assets and income related to ijarah. And the benefit that is beneficial for investors is obtaining lease rights for assets which with the sukuk contract can benefit from al-ijarah (Nazaruddin, 2010).

2) Salam Sukuk Application

In economic studies, greeting contracts are intended as zero-coupon bay 'Salamsukuk, which is provided to investors by non-tradable short monetary investments, based on commodity backed instruments that resemble Treasury Bills. Usually contractors who win tenders, for example for the construction of an area, need funds for the completion of development, funds can be obtained by using sukuk greetings.

3) Application of Murabahah Sukuk

Murukah sukuk application is in the bank. Bank as a trader who buys property from a supplier and resells a number of the property to the customer. This is due to the fact that interbank sales and trade agreements and traders or developers are carried out in the form of cash, while sales for customers are carried out by banks in installments with a number of agreements between customers and developers, as done in conventional buying and selling documents. Here Bank Islam acts as a capital institution that is suitable for the soul of buying and selling. The time span between buying and reselling the property certainly poses a risk to the property itself. Doing the same thing will guarantee profits against bay buying and selling, and it is justified to replace the guarantee of risk taking, called the risk of the security of the property.

4) Sukuk Mudharabah Application

In relation to mudharabah sukuk, where the issuer of the certificate is called mudarrib, the party contributing capital is called the owner of the capital (sahibul maal) and the funds collected are mudharabah capital. Certificate holders have assets operated in mudharabah activities and profits divided according to agreement and losses will be borne by the fund provider.

5) Application of Musyarakah Sukuk

Sukuk musyarakah has two forms, namely musyarakah mutlakah and musyarakah are limited.

6) Istukna Sukuk Application

In terms of economics, sukuk istisna is zeroo non-tradable sukuk coupon, which first determines the assets to be used as collateral (usually the contractor gets the project to be built), and after completion will be sold to buyers, and profits will be shared with istisna holders installment sale and purchase contract in forming a guarantee of debt or direct buying and selling. This form certificate can be said as a fixed size zero sukuk coupon.

7) Hybrid Application / PooledSukuk

The form of hybrid / pooled sukuk is a new innovation in various aspects of sukuk on assets that did not yet exist when the contract was carried out, which combined between istisna contract and ijarah contract. The istisna contract is made in forming assets, then the asset will be leased back to the originator.

2.4. ROA

ROA (*Return On Assets*) is a ratio that measures the ability of banks to generate profit or profit (can be called profitability) by comparing net income with resources or total assets owned. Its function is to see how effective banks are in using their assets in generating income. The greater the value of ROA means the better the ability of banks to generate profits. ROA measures the ability of banks to generate profits by dividing pre-tax profits with assets.

2.5. CAR

CAR (*Capital Adequacy Ratio*) is a capital adequacy ratio that shows the ability of banks to provide funds that are used to overcome the possible risk of losses. This ratio is important because by keeping the CAR at a safe limit (minimum 8%), it also protects customers and maintains overall financial system stability. The greater the value of CAR reflects the better banking ability in facing the possibility of risk of loss. CAR measures capital adequacy by comparing capital (capital) with risky assets

2.6. LDR

LDR (*Loan to Deposits Ratio*) is a ratio that measures the ability of banks to meet short-term liabilities (can be called liquidity) by dividing total credit against total Third Party Funds (TPF). Banking liquidity

needs to be managed to meet the needs when customers take their funds and distribute loans (loans) to borrowers (debtors). If the LDR value is too high, it means that banks do not have sufficient liquidity to cover their obligations to customers (DPK). Conversely, if the value of LDR is too low, it means that banks have sufficient liquidity but their income may be lower, because as is known in the world of banking to obtain income through loans distributed. LDR measures the ability of banks to manage funds by comparing the size of loans provided by banks with the amount of deposits.

III. RESEARCH METHODS

Parameters observed

Operational definitions used in this study are Return On Assets (ROA), Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Owned sukuk and sukuk issued.

Tabel. 2. Operational variable

No	Variable	Definition	Indicator	Skala
1.	*Return On Asset* (ROA)	The ratio between earnings before tax to the average assets owned by banks in one period.	$ROA = \frac{EBIT \times 100\ \%}{Total\ asset}$	Ratio
2	*Capital Adequancy Ratio* (CAR)	The ratio of the minimum capital fulfillment obligation that must be owned by the bank.	$CAR = \frac{Equity \times 100\%}{ATMR}$	Ratio
3	*Loan to Deposit Ratio* (LDR).	Comparison between total loans channeled with total third party funds.	$LDR = \frac{Financing \times 100\%}{Total\ DPK}$	Ratio
4	Sukuk Price	The nominal value of sukuk owned by Islamic Banking.	Owned sukuk value	Ratio

Population and Samples

The population to be used in this study are all Islamic Banking in Indonesia in the financial statements at the Financial Services Authority (OJK) in 2008-2017.

Data analysis technique

The data analysis model uses multiple linear regression (multiple linear regression method). The analysis is done with help *Software* SPSS (*Statistical Package Social Science*).

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Y : *Sukuk* β_1- β_3 : Koefisien Regresi
X_1 : ROA α : Koefisien Konstanta
X_2 : CAR e : *Error term*
X_3 : LDR

Asumsi Klasik Test

The classic assumption requirement that must be met by multiple regression models before the data is analyzed is the Normality, Multicollinearity, Autocorrelation and Heteroscedasticity test.

F Test

According to Sugiyono (2008: 257): "To test the multiple correlation coefficient used the F Test". The F test (Simultaneous Test) is carried out to see together the significant effect of the independent variable on the dependent variable. The criteria for testing hypotheses simultaneously are as follows: - H0 is accepted if F count ≤ Ftable at α = 5% and - H0 is rejected (H1 is accepted) if Fcount> Ftable at α = 5%

T Test

Testing with a level of significance is carried out with the provision that if the significance results in the table t <α 0.05, then H0 is rejected, while the opposite is the opposite if the significance level in table t> α 0.05, then H0 is accepted. The t table is sought by taking into account the level of trust (α) and degree of freedom. The criteria:

- -If t count> t table (α 0.05) then H0 is rejected (influential)
- -If t count <t table (α 0.05) then H0 is accepted (no effect).

IV. RESULTS & DISCUSSION

1. DISCUSSION

Descriptive statistics

A general description of the results of measurement of these sample variables is presented in the description of the data as in the following table:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Harga SUKUK	48	4606.84	35386.20	167.93	8780.59970
ROA	48	.08	1.16	.7644	.27783
CAR	48	14.09	17.91	15.6375	.95736
LDR	48	79.65	102.22	89.4825	6.42716
Valid N (listwise)	48				

From the calculations before and after the date of the announcement of the stock split, the statistical results are as follows:

1. The average SUKUK price is 167.9 with a standard deviation of 8780.59970. The maximum value is 35386.20 and the minimum value is 4606.84. This indicates that the data is quite varied and differs between the maximum and minimum values.
2. The average ROA is 0.76 with a standard deviation of 0.28. The maximum value is 1.16 and the minimum value is 0.08. This indicates that the data is quite homogeneous and spread between the maximum and minimum values.
3. The average CAR is 15.64 with a standard deviation of 0.96. The maximum value is 17.91 and the minimum value is 14.09. This indicates that the data is quite homogeneous and spread between the maximum and minimum values.
4. The average LDR is 89.48 with a standard deviation of 6.43. The maximum value is 102.2 and the minimum value is 79.65. This indicates that the data is quite homogeneous and spread between the maximum and minimum values.

Normality Test

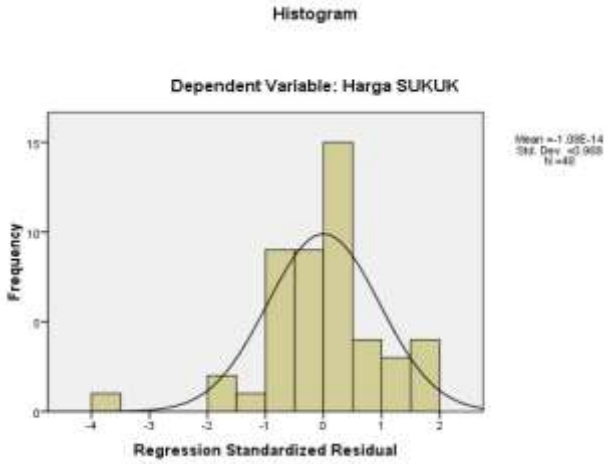
The results of the normality test using the kolmogorov-smirnov (K-S) test are as seen in the following table:

One-Sample Kolmogorov-Smirnov Test

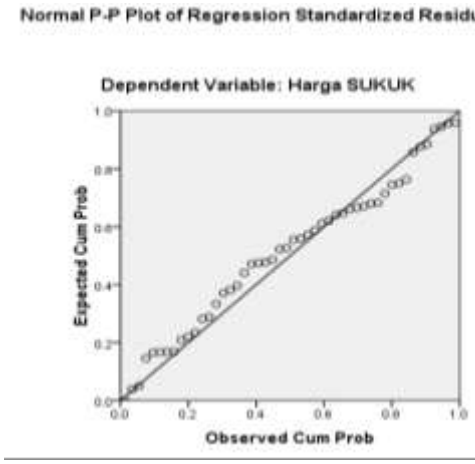
		Unstandardized Residual
N		48
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	2.88841239E3
Most Extreme Differences	Absolute	.096
	Positive	.084
	Negative	-.096
Kolmogorov-Smirnov Z		.663
Asymp. Sig. (2-tailed)		.772

a. Test distribution is Normal.

From the results of the Kolmogorov-Smirnov test, it can be seen that DATA is normally distributed because the significant value is <0.05 (5%).



From the Histogram Graph in the Figure it can be concluded that the data pattern forms a bell and is in the middle - meaning the data distribution is normal.



From the PP-Plos curve in Figure it can be concluded that the curve approaches the normal distribution. This can be seen in the normal PP-Plots curve where scattered points approach the diagonal line.

Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	ROA	.879	1.137
	CAR	.841	1.189
	LDR	.948	1.055

a. Dependent Variable: Harga SUKUK

Based on the test results above, it can be seen that the Tolerance number is far closer to 1 and the VIF value is around the numbers 1 and 2 and no more than 10, it can be concluded that there is no multicollinearity between the independent variables.

Autocorrelation Test

Model Summary[b]

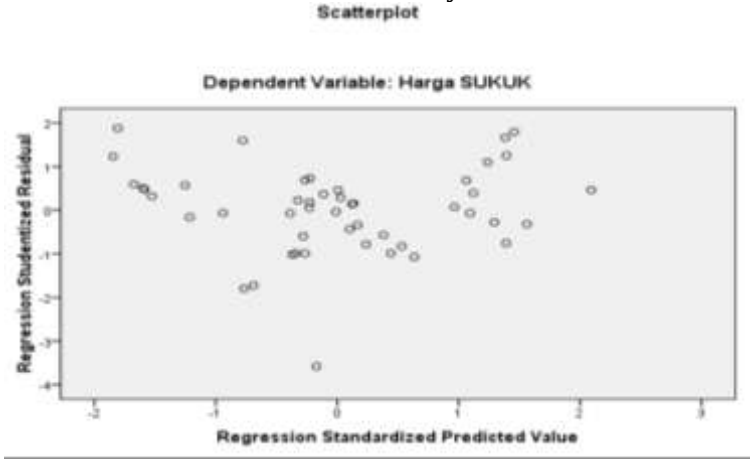
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.944[a]	.892	.884	2985.25745	1.679

a. Predictors: (Constant), LDR, ROA, CAR

b. Dependent Variable: Harga SUKUK

Based on the Durbin-Watson statistical table, it can be seen that the Durbin-Watson value is located between the upper limit or Uper Bound (DU) and 4-DU, then the autocorrelation coefficient is zero or there is no positive or negative autocorrelation.

Heteroscedasticity Test



From the Scatterplot graph it can be seen that the resedual spread is regular and does not form a pattern. This can be seen at scattered points or plots. The conclusion that can be taken is that there is no heteroskadisity.

T Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	88464.829	10707.158		8.262	.000
	ROA	-3093.484	1671.346	-.098	-1.851	.071
	CAR	2336.782	496.002	.255	4.711	.000
	LDR	-1182.901	69.602	-.866	-16.995	.000

a. Dependent Variable: Harga SUKUK

From the regression coefficient table above, a conclusion can be drawn, namely:

$$Y = 88464.829 - 3093.484X_1 + 2336.782X_2 - 1182.901X_3$$

1. A value of 0.222 means that if the variables CR, DER, ROE and EPS are constant (fixed), the stock return is 0.222.
2. The value of β1 is -3093,484, which means that the effect of the ROA variable on the SUKUK price is negative where if the variable ROA (X1) increases by one then the SUKUK price will decrease by 3093,484.
3. The value of β2 is 2336,782, which means that the effect of the CAR variable on the SUKUK Price is positive where if the variable CAR (X2) increases by one then the SUKUK price will increase by 2336,782.
4. The value of β3 is -1182.901, which means that the effect of the LDR variable on the SUKUK price is negative, where if the LDR variable (X3) increases by one, the SUKUK price will decrease by -1182.901..
   - **Partial test results of ROA (X1) on SUKUK Prices (Y)**
     It can be seen above that ROA has a t-count (-1.851)> t-table (-1.994) with a significance of 0.071> 0.05 which indicates that ROA individually does not affect the SUKUK Price, meaning the hypothesis is rejected.
   - **Partial test results CAR (X2) on the SUKUK Price (Y)**
     It can be seen above that CAR has a t-count (-1.851)> t-table (-1.994) with a significance of 0.071> 0.05 which indicates that CAR individually does not affect the SUKUK Price, meaning the hypothesis is rejected.
   - **LDR (X3) partial test results on SUKUK prices (Y)**
     It can be seen above that the LDR has a t-count (-1.851)> t-table (-1.994) with a significance of 0.071> 0.05 which indicates that LDR individually does not affect the SUKUK Price meaning the hypothesis is rejected

F Test

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.232E9	3	1.077E9	120.871	.000[a]
	Residual	3.921E8	44	8911762.024		
	Total	3.624E9	47			

a. Predictors: (Constant), LDR, ROA, CAR

b. Dependent Variable: Harga SUKUK

Based on the ANOVA test or F-test, obtained F count (120,871)> F-table (2,668) with a significance level of 0,000 <0,05. Based on these results it can be concluded that the variables ROA, CAR and LDR simultaneously influence the SUKUK Price.

V. CONCLUSION & SUGGESTION

Effect of ROA on Sukuk Prices

Based on the test results, partially obtained ROA regression coefficients which show a negative sign. This means an increase in ROA will drive a decline in sukuk prices. Vice versa, a decrease in ROA will

lead to an increase in sukuk prices. Based on the results of the t test, it shows that individual ROE does not affect the price of sukuk. Thus, the effect of ROA on sukuk prices is not statistically significant. The proof of this hypothesis is not in line with articles written by Sasongko and Haryanto (2003) conducting research on the effect of profitability ratios on sukuk prices. The results of his research show that only ROE has an effect on changes in sukuk prices.

Effect of CAR on Sukuk Prices

Based on the test results, partially obtained a CAR regression coefficient which shows a positive sign. This means that an increase in CAR will drive an increase in sukuk prices. Likewise, vice versa, a decline in CAR will lead to a decline in sukuk prices. Based on the results of the t test shows that CAR individually affects the price of sukuk. Thus, the effect of CAR on sukuk prices is statistically significant. The proof of this hypothesis is in line with articles written by Ulupui (2005) conducting research on the effect of CAR ratios on sukuk prices. The results of his research indicate that CAR affects the changes in sukuk prices.

Effect of LDR on Sukuk Prices

Based on the results of the test, partially obtained the LDR regression coefficient which shows a negative sign. This means an increase in the LDR will drive a decline in sukuk prices. Likewise, on the contrary, a decline in the LDR will lead to an increase in sukuk prices. Based on the results of the t test shows that the LDR individually affects the price of sukuk. Thus, the effect of LDR on sukuk prices is statistically significant. The proof of this hypothesis is in line with articles written by Suherli (2009) conducting research on the effect of the LDR ratio on the price of sukuk. The results of his research showed that the LDR had an effect on changes in sukuk prices.

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