ANALYSIS OF FINANCIAL PERFORMANCE TO PREDICT FINANCIAL DISTRESS IN SHARIA COMMERCIAL BANKS IN INDONESIA

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Keywords :	*ABSTRACT*
CAR, ROA, ROE FDR, NOM, BOPO and Financial Distress	*This study analysis financial performance, capital ratio (CAR)profitability ratio (ROA, ROE), liquidity ratio (FDR), and and Financial Distress efficiency ratio (NOM and BOPO) influencing Islamic financial bank distress in Indonesia. Data were obtained from 13 Sharia public banks or 65 research samples registered on the Indonesia Stock Exchange in 2013-2017 (5 periods). With statistical test tools using descriptive analysts and logistic regression analysts (logistic regression). The results of the analysis show that CAR has a negative and significant effect on financial distress. ROA has a negative and significant effect on financial distress. ROE has a negative and significant effect on financial distress. FDR has a positive and significant effect on financial distress. NOM has a negative and significant effect on financial distress. BOPO has a positive and significant effect on financial distress. The results of the study are expected to be able to contribute to Islamic bank actors in detecting financial distress, namely useful information to provide information on early warning systems (EWS) for managers of Islamic Commercial Banks.*

INTRODUCTION

Islamic banks as one of the banks that serve the people must consistently implement Islamic principles. It is not only a matter of managing public funds and implementing regulatory requirements from the government and others but also must pay attention to the level of profitability. Because this profitability can be done by maximizing profit. Namely by running the intermediation function and raising funds from the public based on sharia principles (mudharabah, murabahah, musyarakah, ijarah, salam, istishna ', other banking services and qardul hasan). Based on the contract, Islamic banks can sell their products to customers in the form of demand deposits, savings and time deposits. In its operations for raising and channeling funds, Islamic banks can act as managers (mudharib) and fund

owners (shohibul maal). In conditions of financial distress, it can disrupt the operations of sharia commercial banks, because it is a condition that must be watched out and anticipated.

Platt and Platt (2000), states that financial distress is defined as the stage of decline in financial conditions that occur before bankruptcy or liquidation. Research methods and financial distress research began to develop from bankruptcy research leading to the health of companies or sharia commercial banks (financial distress). The Altman model is known as the Z-score, which is a score that is determined by the calculation of the standard times financial ratios that indicate the level of possibility of a company's bankruptcy, (Altman, 1968). Pratama (2015), researched financial performance to predict financial distress conditions in Indonesian Islamic Commercial Banks for the 2013-2014 period. The results showed that good liquidity and financial leverage did not significantly influence the financial distress of Islamic Commercial Banks. This can be obtained from the results of the calculation of BOPO and FDR that cannot predict the financial distress of Sharia commercial banks. Kurniasari and Ghozali (2013), in the study of the influence of CAMEL on banking financial distress in Indonesia. The results showed that CAR, NPL, ROA and ROE ratios did not significantly influence the probability of financial distress whereas the LDR and BOPO variables had a significant effect on the probability of financial distress. The results of Ismawati (2015) study that ROE does not affect the probability of banking financial distress. Baskoro (2014) found that ROA is a ratio that measures a bank's ability to obtain profits and overall efficiency, this ratio proved significant.

This research was conducted to reexamine some of the factors that influence the conditions of sharia bank financial distress because in previous studies the results were obtained inconsistently. Besides, this research information is expected to provide information on an early warning system (EWS) for managers of Islamic Commercial Banks. EWS is an effort made by management to predict problems related to banks and other deposit institutions. This research is expected to be EWS information for management, as initial information (in predicting financial distress conditions) before going bankrupt.

The factors that will be tested in this study are whether the capital ratio (CAR) ratio is efficiency (NOM and BOPO) has an effect on sharia commercial bank financial distress listed on the Indonesia Stock Exchange in 2013-2017. The ratio used CAR, ROA, ROE, FDR, NOM, and BOPO (Kasmir, 2010) can be used as a determination of the level of bank soundness or financial difficulties.

METHOD

Population, Samples and Research Methods
The population in this study is BUS (Islamic public banks) in Indonesia as many as 13 BUSs, namely all Islamic commercial banks, with sampling techniques using the survey method. This research was conducted on BUSs that are listed on the IDX (Indonesia Stock Exchange) and have published their financial statements during the period of observation, namely from 2013-2017 (5 years).

Descriptive Statistics Analysis
Descriptive statistical analysis is used to determine the characteristics of the sample used and describe the variables used in the study. Descriptive statistical analysis includes the number, sample, minimum value, maximum value, mean value, and standard deviation.

Logistic Regression Analysis
Testing the hypothesis in this study is to use multivariate analysis using logistic regression (logistic regression). The independent variable is a combination of metric and non-metric (nominal). Logistic regression is a regression that is used to what extent the probability of the occurrence of the dependent variable can be predicted by an independent variable. In the logistic regression, analysis technique does not require more normality tests and classic assumption tests on the independent variables, Ghozali (2006).

The data analysis method used in this study uses descriptive statistics. Test equipment for hypotheses using logistic regression (logistic regression), namely:

$$Y = \text{Ln} \frac{P}{1-P} = b_0 + b_1 CAR + b_2 ROA + b_3 ROE + b_4 FDR + b_5 NOM + b_6 BOPO + e$$

Information:

$$Y = \mathrm{Ln} \; \frac{p \, (\text{No Problem})}{1- \, (\text{Problem})} = \text{financial distress}$$

$b0$ = constant
$b1, ..., b6$ = regression coefficient
CAR = capital adequacy ratio
ROA = return on assets
ROE = return on equity
FDR = finance to deposit ratio
NOM = net operating margin
BOPO = operational costs against operating income

Financial distress is a condition of a company that experiences illiquid but is still insolvency. The following is a definition of financial distress as follows: Financial distress can be described from two extreme points, namely short-term liquidity difficulties to insolvable. Short-term financial difficulties are usually short-term but can develop into severe. Indicators of financial difficulties can be seen from the analysis of cash flow, company strategy analysis, and company financial statements, (Hanafi, 2007). Plat and Plat (2000) define financial distress, as a step in reducing financial conditions that occur before bankruptcy or liquidation. Financial distress begins with the inability to fulfill its obligations, especially short-term obligations including liquidity obligations, and also includes liabilities in the solvency category. Financial distress is a situation where the company's operating cash flow is insufficient to pay off current liabilities (such as trade payables or interest expenses) and the company is forced to take corrective action. Febrina (2010) financial failure is defined as insolvency that distinguishes between cash flow and the stock base. Insolvency based on cash flows are of two forms, namely:

a. Engineering insolvency is a condition where a company is deemed unable to fulfill its obligations when the obligation is due.
b. Insolvency in the sense of bankruptcy is defined as a measure of negative net worth in the conventional balance sheet or the present value of the expected cash flow is smaller than the liability.

In article 2, POJK Number 8 / POJK.03 / 2014 to show the bank's soundness is determined as follows:
1) Banks must maintain and/or improve Bank Soundness by applying prudential principles, sharia principles, and risk management in carrying out business activities.
2) To carry out the responsibility for the continuity of the Bank's business, the Board of Directors and the Board of Commissioners are responsible for maintaining and monitoring the Bank's Soundness and taking the steps necessary to maintain and/or improve the Bank's Soundness as referred to in paragraph (1).
3) Sharia Commercial Banks are required to assess the Bank's Soundness both individually and on a consolidated basis.

Based on the description above regarding the definition of financial distress, the conditions of financial difficulties experienced by Sharia commercial banks can be concluded. Sharia public banks that do not experience financial difficulties are banks that are in the healthy bank category, this must be done by a Sharia commercial bank.

Influence of CAR on Financial Distress of Islamic Commercial Banks
The CAR shows a measure of the extent to which a decrease in bank assets can still be covered by available bank equity. An increase in the CAR ratio indicates an increase in bank health so that it will reduce the risk of financial distress because high capital indicates low credit. Kurniasari (2013), that the CAR ratio that is too low allows investment in risk assets cannot be closed with the Bank's capital, then Ismawati (2015), that CAR has no significant effect on financial distress.

H1: CAR affects financial distress of Islamic Commercial Banks.

Effect of ROA on Financial Distress of Islamic Commercial Banks
This ROA ratio is used for management's ability to achieve overall profits. The greater the ratio, the greater the bank's profit. Ismawati (2015), that the Return On Assets (ROA) in this study has a negative effect with a coefficient of -2.345, significant to the probability of financial distress; then Baskoro (2014) suggested the results that Return On Assets (ROA) is a ratio that measures the Bank's ability to obtain profits and overall efficiency, this ratio proved significant.

H2: ROA affects the financial distress of Islamic Commercial Banks.

The influence of ROE on Financial Distress of Islamic Commercial Banks
ROE is a comparison between a bank's net income and its capital. This is used to measure the Bank's ability to obtain net income. This means that the lower the ratio allows the bank in the increasingly problematic conditions. The higher this ratio shows the bank's net profit increases which have implications for higher stock prices. Ismawati (2015), that ROE has no significant effect on Banking Financial distress and has a negative coefficient (-, 054), which means that the lower the ROE ratio, the lower the level of profit achieved by the Bank so that the possibility of the Bank experiencing problematic conditions will be even greater. Baskoro (2014), that ROE measures the ability of banks or companies to generate profits based on certain share capital and this ratio proved significant.

H3: ROE affects financial distress of Islamic Commercial Banks.

The Influence of FDR on Financial Distress of Islamic Commercial Banks
Financing to Deposit Ratio / FDR (BUS) or Loan to Deposit Ratio / LDR (conventional bank) is a ratio used to measure the liquidity of a bank in repaying funds withdrawals made by depositors by relying on financing provided as a source of liquidity, namely by dividing the amount of funding provided by banks for Third Party Funds (DPK). The higher the FDR, the higher the funds channeled to DPK. Wahyu (2016), that FDR is the ability of bank liquidity to anticipate liquidity needs and weak liquidity risk management. So that it does not directly affect the soundness of the bank. Kurniasari (2013), the high LDR ratio shows the lower ability of the liquidity of the Bank concerned which resulted in the Bank experiencing financial distress.

H4: FDR affects the financial distress of Islamic Commercial Banks.

Influence of NOM on Financial Distress of Islamic Commercial Banks
NOM (Net Operating Margin) is the ratio of rent to a Sharia commercial bank used to find productive assets in generating profits. NOM is also the profitability ratio to generate profits through a comparison of operating income and operating costs with the average of productive assets. NOM has a positive and significant effect on ROA (Sabir, Muhammad and Habbe, 2012).

H5: NOM affects the financial distress of Sharia Commercial Banks

Kurniasari (2013), the higher the BOPO ratio, the more inefficient banks in controlling operational costs against operating income, the greater the likelihood that the Bank will experience financial distress. Yulianto and Sulistyowati (2012) suggest that the BOPO ratio has a low predictive value in determining the soundness of the Bank. Ismawati (2015) argues that BOPO has no significant effect on financial distress. This indicates that the higher the BOPO ratio, the more inefficient the Bank's operating income, so the greater the likelihood that the Bank will experience financial distress.

H6: BOPO has a positive effect on financial distress of Islamic Commercial Banks

Framework
Based on the literature review above, a framework model can be drawn up in this study. This framework outlines the relationship between the independent variables (CAR, ROA, ROE, FDR, NPF,

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and BOPO) and the dependent variable (financial distress) at the Sharia commercial banks in Indonesia, as follows:
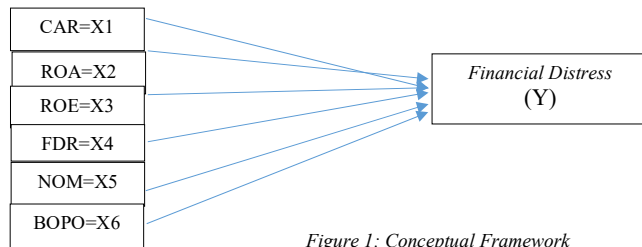

Figure 1: Conceptual Framework

RESULTS AND DISCUSSIONS

Based on the results of the descriptive statistical test, 65 observational data were derived from multiplication between the study periods (5 years; from 2013 to 2017) with the number of sample banks (13 banks).

Table 1. Descriptive Statistics of Islamic Commercial Banks

	N	Minimum	Maximum	Mean	Std. Deviation
CAR	65	11,51	75,83	22,4846	12,70411
ROA	65	-20,13	99,77	9,1009	26,02918
ROE	65	-32,04	102,70	12,9815	25,07179
FDR	65	0,44	157,77	87,1755	28,43109
NOM	65	-32,92	94,01	3,9888	13,39327
BOPO	65	0,08	217,40	88,3429	35,63560
FD	65	0,00	1,00	0,2923	0,45836

Source: Data processed.

The logistic regression model formed is presented in table 2 as follows:

Table 2. Logistic Regression Coefficient Test Results

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	CAR	-,636	,241	6,971	1	,008	,529
	ROA	-,762	,250	9,282	1	,002	,467
	ROE	-,460	,185	6,209	1	,013	,631
	FDR	,772	,257	9,027	1	,003	,462
	NOM	-,541	,245	4,873	1	,027	1,718
	BOPO	,443	,168	6,909	1	,009	,642
	Constant	121,676	39,095	9,686	1	,002	6,970E+052

Source: Data processed.

Based on the results of the logistic regression test from the table above, the existing regression equation is as follows:
FD = 121,676 - 0,636 CAR - 0,762 ROA - 0,460 ROE + 0,772 FDR - 0,541 NOM - 0,443 BOPO + e
Based on Table 2 the results of testing individually or partially as follows:

1. Capital Adequacy Ratio (CAR)
Based on table 2, it can be seen that the wald value is 6.971 (sig. 0.008). The significance value of 0.008 is smaller than the significance level of 0.05 (5%), so it can be concluded that the hypothesis is accepted, namely the Capital Adequacy Ratio (CAR) variable has a significant effect on financial distress. The higher the CAR decreases financial distress. CAR variables which are negative (-)

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indicate that an increase in CAR results in a sharia commercial bank having a tendency not to experience financial distress. The value of the odds ratio of 0.529 shows that an increase in CAR will reduce the tendency of financial distress banks to be 0.529 times higher than banks that have not experienced an increase in CAR.

2. Return on Assets (ROA)
Based on table 2 it can be seen that the wald value is 9,282 (sig. 0,002). The significance value of 0.002 is smaller than the significance level of 0.05 (5%), so it can be concluded that the hypothesis is accepted, namely the variable Return on Assets (ROA) has a significant effect on financial distress. The higher ROA decreases financial distress. The ROA variable which is negative (-) shows that an increase in ROA results in a sharia commercial bank having a tendency not to experience financial distress. The odd ratio value of 0.467 indicates that an increase in ROA will reduce the tendency of financial distress banks to be 0.467 times higher than banks that do not experience an increase in ROA.

3. Return on Equity (ROE)
Based on table 2 it can be seen that the wald value is 6.209 (sig. 0.013). The significance value of 0.013 is smaller than the significance level of 0.05 (5%), so it can be concluded that the hypothesis is accepted, namely the Return on Equity (ROE) variable has a significant effect on financial distress. The higher ROE decreases financial distress. The ROE variable which has a negative sign (-) indicates that an increase in ROE results in a sharia commercial bank having a tendency not to experience financial distress. The odd ratio of 0.631 indicates that an increase in ROE will reduce the tendency of financial distress banks to be 0.631 times higher than banks that do not experience an increase in ROE.

4. Finance to Deposit Ratio (FDR)
Based on table 2, it can be seen that the wald value is 9.027 (sig. 0.003). A significance value of 0.003 is smaller than the significance level of 0.05 (5%), so it can be concluded that the hypothesis is accepted, namely the Finance to Deposit Ratio (FDR) variable has a significant effect on financial distress. The higher the FDR increases financial distress. The FDR variable that has a positive (+) indicates that an increase in FDR results in sharia commercial banks tending to experience financial distress. The odd ratio value of 0.462 indicates that an increase in FDR will increase the tendency of financial distress banks to be 0.462 times higher than banks that have not increased FDR.

5. Net Operating Margin (NOM)
Based on table 2, it can be seen that the wald value obtained is 4.873 (sig. 0.027). Significant value 0.027 is smaller than the significance level of 0.05 (5%), so it can be concluded that the hypothesis is accepted, namely, the variable net operating margin (NOM) has a significant effect on financial distress. The higher NOMs reduce financial distress. The NOM variable which has a negative (-) indicates that an increase in NOM results in a sharia commercial bank having a tendency not to experience financial distress. The odd ratio of 1.718 indicates that an increase in NOM will reduce the tendency of financial distress banks to be 1.718 times higher than banks that have not experienced an increase in NOM.

6. Operational Costs for Operating Income (BOPO)
Based on table 2, it can be seen that the wald value is 6.909 (sig. 0.009). The significance value of 0.009 is smaller than the significance level of 0.05 (5%), so it can be concluded that the hypothesis is accepted, namely the operational cost variable to operating income (BOPO) has a significant effect on financial distress. The higher BOPO increases financial distress. The BOPO variable which has a positive (+) indicates that an increase in BOPO has resulted in sharia commercial banks tending to experience financial distress. The odd ratio of 0.642 indicates that an increase in BOPO will increase the tendency of financial distress banks to be 0.642 times higher than banks that do not experience an increase in BOPO.

Coefficient of Determination (Nagelkerke R Square)
The coefficient of determination is used to find out how much the variability of the dependent variable. The determination coefficient in logistic regression can be seen in Negelkerke R Square. The value of Negelkerke R Square can be seen in the table below.

Table 3. Coefficient of Determination

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	20,948(a)	,588	,838

Source: Data processed.

The amount of determination coefficient in the logistic regression model is indicated by the value of Nagelkerke R Square. The Nagelkerke R Square value is 0.838, which means that the variability of the dependent variable that can be explained by the independent variable is 83.8%, while the remaining 16.1% is explained by other variables outside the research model.

Test the Feasibility of the Regression Model
To see whether the empirical data is following the model so that the model can be said to be fit, match or feasibility of the overall regression model, in this case, using the Hosmer and Lemeshow's test using the following criteria:
a. If the value of Hosmer and Lemeshow $\leq$ 0.05 means that there is a significant difference between the model and the observations so that best fit is not good because the model cannot predict the value of its observations.
b. If the value of Hosmer and Lemeshow> 0.05 means that the model can predict the value of its observations or it can be said that the model is acceptable because it matches the observational data.
The Hosmer and Lemeshow Goodness of fit test can be shown in the following table 4:\

Table 4. Test the Feasibility of the Model

Step	Chi-square	df	Sig.
1	2,284	7	,942

Source: Data processed.

In table 4 shows the Chi-square value of 13.531 with a significance (p) of 0.942. Based on these results, because the significance value is greater than 0.05, the model can be concluded to be able to predict the value of its observations or it can be said that the model is acceptable because it matches the observational data.

Classification Matrix
The classification matrix shows the predictive power of the regression model to predict the possibility of financial distress carried out by Islamic commercial banks in Indonesia. The classification matrix is presented in table 5 below:

Table 5. Classification Matrix

Observed			Predicted FD		Percentage Correct
			Problem	No Problem	
Step 1	FD	Problem	45	1	97,8
		No Problem	3	16	84,2
	Overall Percentage				93,8

Source: Data processed.

The predictive strength of the regression model to predict the possibility of a non-problematic sharia commercial bank is 84.2%. This shows that by using the regression model used, there are as many as 16 sharia commercial banks (84.2%) which are predicted to have no problems from a total of 19 sharia

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commercial banks that are not problematic. The prediction strength of the problematic company model is 97.8%, which means that with the regression model used there are as many as 45 sharia commercial banks (97.8%) which are predicted to have problems with financial distress from a total of 46 troubled sharia public tires. It can be concluded that the predictive power or accuracy of the model in classifying observations is 93.8%.

Effect of Capital Adequacy Ratio (CAR) on Financial Distress
Capital Adequacy Ratio (CAR) is a negative and significant influence on financial distress, which means that the higher CAR is followed by a decrease in financial distress. This is because CAR is a power of bank capital in bearing risky assets. Therefore with this high ratio will affect the decline in financial distress which is a condition where the initial stage of bankruptcy. With a significant relationship between CAR and financial distress, the CAR ratio can be used as an early warning system to prevent financial distress from occurring in banks. The results of this study are not consistent with Ismawati (2015) which states that CAR does not affect financial distress.

Effect of Return on Assets (ROA) on Financial Distress
Return on Assets (ROA) has a negative and significant effect on financial distress, which means that an increase in ROA is followed by a decrease in financial distress. ROA is a bank's strength in generating profits with existing assets, so that if a high ROA ratio is followed by a decrease in financial distress. Banks that still have sufficient capital to take risks and have sufficient liquidity and are followed by good load management efficiency, the ROA ratio has an impact on financial distress. Therefore with this high ratio will affect the decline in financial distress which is a condition where the initial stage of bankruptcy. The results of this study are supported by the research of Ismawati (2015) and Baskoro (2014) which states that ROA affects financial distress.

Effect of Return on Equity (ROE) on Financial Distress
Return on Equity (ROE) has a negative and significant influence on the level of financial distress. Low ROE shows companies cannot use equity to generate profits, and increasingly complicate company finances in internal funding sources for investment, so that it can lead to financial distress or probability of bankruptcy. The results of this study support Baskoro (2014) which states that ROE has a significant effect on financial distress. However, it is not in line with the research conducted by Ismawati (2015) which states that ROE does not affect financial distress.

Effect of Financing to Deposit Ratio (FDR) on Financial Distress
 Financing to Deposit Ratio (FDR) has a positive and significant effect on financial distress, which means that the higher the FDR is followed by increasing financial distress. This is because the FDR is a ratio that shows the bank liquidity that is the result of the funds channeled and the funds collected successfully. The higher this ratio explains the lower the bank's liquidity. Therefore the high ratio will affect the increase in financial distress which is a condition where the initial stage of bankruptcy. With a significant relationship between FDR and financial distress, the FDR ratio can be used as an Early Warning System to prevent financial distress from Islamic Commercial Banks. The results of this research are supported by Kurniasari's research (2013) which states that FDR affects financial distress.

Company Net Operating Margin (NOM) on Financial Distress
Net operating margin has a negative and significant effect on financial distress, which means that the higher net operating margin is followed by a decrease in financial distress. NOM can be used as a factor to predict the occurrence of financial distress of a bank. The NOM ratio is used to determine the ability of productive assets to generate profits. The greater the NOM ratio, the higher the return on earning assets managed by banks, so the possibility of financial distress in banks is very small. The results of this study are supported by Sabir et al. (2012) which states that net operating margin affects financial distress.

Effect of Operational Expenses on Operating Income (BOPO) on Financial Distress
Operational Expenses on Operational Income (BOPO) have a positive and significant effect on financial distress, which means that the higher BOPO is followed by increasing financial distress. This

is because BOPO is a ratio that shows how much the operating expenses incurred by the bank on the operating income generated by the bank. Therefore the high ratio will affect the increase in financial distress which is a condition where the initial stage of bankruptcy. With a significant relationship between BOPO and financial distress, so the BOPO ratio can be used as an Early Warning System to prevent financial distress in Islamic Commercial Banks. The results of this study are consistent with Kurniasari (2013) and Yulianto and Sulistyowati (2012) which state that BOPO affects financial distress. But it is different from Ismawati (2015), who said that BOPO does not have a positive effect on financial distress.

CONCLUSION AND SUGGESTION

This study analyzes financial performance, capital ratio (CAR) profitability ratio (ROA, ROE), liquidity ratio (FDR), and efficiency ratio (NOM and BOPO) influencing Islamic financial bank distress in Indonesia. Data were obtained from 13 Sharia public banks or 65 research samples registered on the Indonesia Stock Exchange in 2013-2017 (5 periods). With statistical test tools using descriptive analysts and logistic regression analysts (logistic regression). The results showed that CAR had a negative and significant effect on financial distress. ROA has a negative and significant effect on financial distress. ROE has a negative and significant effect on financial distress. FDR has a positive and significant effect on financial distress. NOM has a negative and significant effect on financial distress. BOPO has a positive and significant effect on financial distress.

The results of the study are expected to be able to contribute to Islamic bank actors in detecting financial distress, namely useful information to provide information on early warning systems (EWS) for managers of Islamic Commercial Banks. Especially in terms of financial planning for the management of Islamic banks in general.

The limitations of this study are the first element of management that is not included in the component of the independent variable because the data in the study is using.

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