

# Panel Regression of Cashflow Operation and Efficiency Ratio to Profitability: Empirical Study of Banking in Indonesia

Irawan

Universitas Pembangunan Panca Budi, Department of Management, Faculty of Social Sciences Medan, North Sumatera, Indonesia

## ABSTRACT

This study aimed to find out (1) the impact of cash flow operations on commercial banks ROA in Indonesia for the period 2014-2017, (2) the impact of BOPO on commercial banks ROA in Indonesia for the period 2014-2017, (3) the impact of DER on the ROA of commercial banks in Indonesia the period 2014-2017, (4) the impact of cash flow operation, BOPO, and DER on the ROA of commercial banks in Indonesia for the period 2014-2017. The present study type is an associative quantitative study. The population of this research is commercial banks in Indonesia for the period 2014-2017 which are listed on the Indonesian Stock Exchange. The sample was taken using purposive sampling technique which was obtained by 30 public bank companies in Indonesia using quarterly period data, which research data were analyzed totalling 480 data.

The data collection method used is documentation. The data analysis techniques used are panel data regression analysis statistics. Based on the model selection test using chow and thirist test, the best model is determined by fixed effect model. Hypothesis testing using t-test, concluded that cash flow operation is related positive but not significantly to ROA, BOPO is related negative and significantly to ROA, DER is related positive and significantly to ROA. Based on the F-test it was concluded that simultaneous cash flow operation, BOPO, and DER had a significant impact on the ROA of Indonesian commercial banks in 2014-2017. The banking company should minimize its operating expenses and maximize its operating income. This is because lowering BOPO will significantly increase ROA. Companies are advised to minimize their expenditures and as

not to increase DER and to create credit that can be used as an operating income for the bank. Therefore, as more and more third-party savings can be channelled into credit then the bank will get more returns.

**Keywords:** CashFlow Operation, BOPO, DER, ROA, Panel Regression

## INTRODUCTION

Banking in Indonesia has a strategic role and its absolute presence in economic development as a financial institution, serves as a financial intermediary, which is the intermediary between the surplus fund and the deficit fund. National banking can be modern banking with quality services and products. Moreover, the bank's growth, both in terms of volume, business volume, and credit derived from accumulated community funds has undergone rapid growth and led to intense competition.

Each bank should strive to constantly improve its performance in order to maintain its viability. Today, in order to achieve optimum performance, banking in Indonesia is faced with various problems including high levels of inflation and bad credit. The higher inflation rate than the savings rate has led to the bank having a negative spread. Even high levels of bad credit have hindered the ability of banks to generate interest rates that are the main source of banking. In addition, banking should also be able to cope with the competition.

In the midst of intense competition, each bank should raise funds for its activities and redistribute it to the public in an effective manner. Activities that people do are mostly related to money that ultimately involves banking on their activities. This shows that banking has an active role in people's daily lives. In practice the bank should be able to attract the customer's desire to invest by setting a high interest rate, while on the other hand it is a cost that the bank has to pay. Therefore, every bank sets the right policy for it to achieve efficiency and to achieve good performance. With good performance the bank will be able to withstand such intense competition and deliver the best profit.

Performance that is a benchmark for the success of a banking business is that the financial condition of a company over a period of time depends on the fundraising and cash flow aspects that are usually measured by indicators of capital adequacy, liquidity and profitability. These explanations indicate that financial performance is a key factor in supporting the growth of bank capitalization. The confidence of customers and investors to demand that every bank should have good

financial performance, as the better the performance of a bank, the greater the security of the funds being invested.

The financial performance of a bank is useful information for making decisions on both the internal and corporate aspects of the company. One way to evaluate a bank's financial performance is to analyze the bank's financial statements that reflect the overall financial condition of the bank, and from the financial statements it will identify the advantages and disadvantages of the bank concerned. The analysis of financial statements can be done by comparing the current financial statements to the previous period's financial statements. By comparing the two, it is possible to see the position of each post in the financial statements from one period to the next, thus facilitating the assessment of the financial performance of the bank. In addition to comparing the posts in the financial statements, this analysis can be done by comparing the financial ratios of different periods. Performance appraisals are also done by comparing them to competitors' companies. The comparative results will be analyzed to finally assess the financial performance of the bank concerned.

### Bank Financial Data

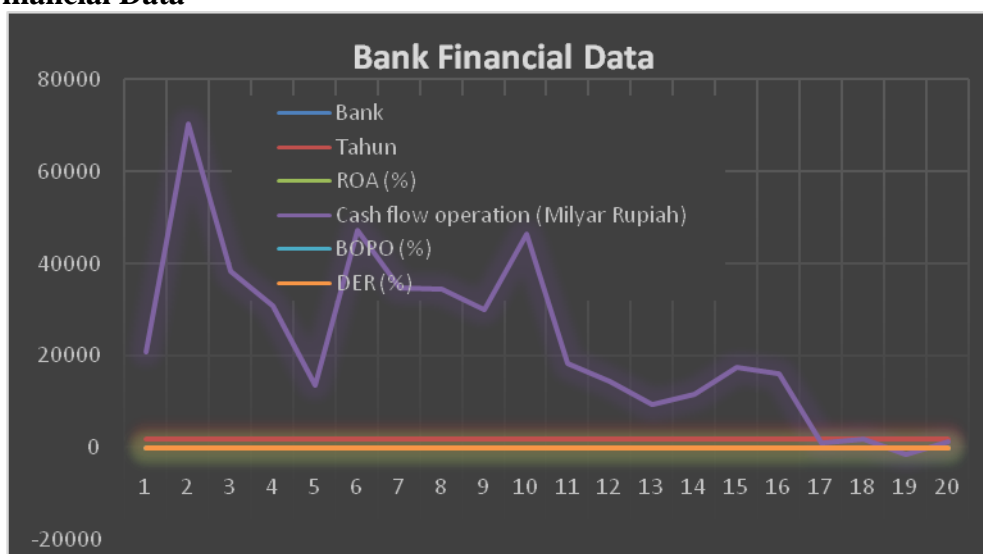


Figure 1. Reports on ROA, Cash Flow Operation, BOPO and DER

The picture shows the trend of financial data in particular free cash flow

operations declining in the last quarter. This condition shows that the financial

performance of banking quarterly reflects the phenomenon of instability. The results of this financial performance assessment will be useful for decision making by stakeholders. Every bank should always strive to achieve good performance amidst intense competition. One is that we are always striving to improve our financial performance by performing activities effectively and efficiently, this is expected to generate optimal profitability.

### **Literature Review and Hypotheses Development**

Numerous studies have highlighted the financial performance (Pidu, Y. M, 2015; Muhammadiyah and Jamil, M.A 2015; Putri, A. 2010; Anto, J. 2012; Sasongko, H. 2016). A recent study by Pidu, Y. M (2015) evaluates the effect of Current Ratio (CR), DER, and BOPO on ROA of Cooperatives in Bolango District. The F test results show that all independent variables simultaneously is related to ROA, which t-test results show that DER and BOPO, both has influence on ROA.

The study by Muhammadiyah and Jamil, M.A(2015) highlight the influence of CR, Debt To Equity Ratio, Total Asset Turnover and ROA on Dividend Payout Ratio on the Consumer Goods Industry Sector listed on the Indonesian Stock Exchange. The partial results indicated Current Ratio has insignificant effect on the Dividend Payout Ratio (DPR) and the significance value was greater than 0.05. Other scholar such as Putri, A (2010) examines the impact of CAR, NPL, BOPO, NIM and LDR on ROA on a public bank listed on the Indonesian Stock Exchange from 2005-2009. Her study results indicate that simultaneous CAR, NPL, BOPO, NIM, and LDR had a strong influence on ROA and in partial CAR, NIM, NPL, and BOPO had a significant effect on ROA, whereas LDR had insignificant effect on ROA.

The study by Anto, J (2012) evaluate the influence of CR, DER, Receivable Turnover and Sales Growth on ROA at manufacturing companies in BEI from

2008-2012. The study concludes that CR, DER and Receivable Turnover are related to ROA, while in partial, Sales Growth has insignificant on ROA. However, simultaneously, CR, DER, Receivable Turnover and Sales Growth have significant effect on ROA. Other scholar (Sasongko, H, 2016) concluded that proven operating cash flow, investment cash flow and funding cash flow have insignificant effect on profitability (ROA) on PT Mayora Indah, Tbk.

### **The influence of Cash Flow Operations on ROA**

Definition of cash flow from operating activities, according to PSAK No. 2, 2015, operating activities are the main income activities of the entity's revenue and other activities that are not investment activities and funding activities. Therefore, these cash flows are generally derived from transactions and other events that affect net profit or loss that will have an impact on the company's return. Activities that are a major source of corporate income and other non-investment and financing activities. As such, operating activities are activities related to the company's efforts to produce the product as well as all efforts to sell the product. This means that all activities related to the effort to earn an operating profit are included in this group. Therefore, in this activity several key activities are included.

a) Sales of company products, i.e. cash sales of all products that are sources of company income. For trading companies, what the company sells and sells is merchandise. For manufacturing companies, the goods manufactured and sold are merchandise. While for service companies, the companies that are sold are services. Sales of these products and services will generate revenue for the company.

b) Revenue from sources outside the main business, i.e. income outside sales of the company's products. In this case, sales outside the company's main product will result in cash receipts for the company.

c) Payment of labor, that is, payment of wages for workers directly involved in the production process. Payment of labor costs is a cash disbursement activity for the company.

d) Receivables receivables, i.e. receipts originating from credit sales made by the company. In this case, the resulting receivables from the sale of credit so that when the receivables are paid it will provide receivables for the company.

e) Payment of overhead expenses, i.e. payments that fall into cash disbursements, except for depreciation of machinery, depreciation of factory warehouses and so on. The payment of overhead expenses is also a payment of all production costs other than labor costs and raw materials. The items included in this group are manufacturing costs, all supporting expenses, and supporting labor costs.

f) Payment of marketing expenses, namely cash disbursement activities for the company. Payment of marketing expenses also pays for all activities that distribute company products from the company's warehouse to the customer's hands.

g) Purchase of raw materials / merchandise, which is included in the cash disbursement activity for the company if purchases of raw materials or merchandise are made in cash. Purchasing raw materials is the activity of purchasing the main ingredients of a product produced by a manufacturing company. Whereas merchandise purchases are goods purchased by trading companies for resale.

The operational definition of the present study, CFO describes the cash inflows and outflows in detail for a certain period. Based on the explanation and previous research (Sasongko, H. 2016), the conclusion is that operating cash flow, investment cash flow and funding cash flow have insignificant effect on profitability (ROA) at PT. Mayora Indah, Tbk

### **The influence of BOPO on ROA**

Zainal (2013; a p131) states that the definition of BOPO is operational costs of

operating income is the ratio used to measure the level of efficiency and the ability of banks to carry out their operations, the efficiency of the company in reducing operational costs and increasing operational income will affect the increase or decrease in return the company itself.

Banks that have the high BOPO ratio value indicate that the bank is not operating efficiently because the high value of this ratio shows the large amount of operational costs that must be incurred by banks to obtain operating income. A high amount of operating costs will reduce the amount of profit to be obtained because operating costs or expenses act as a deduction factor in the income statement. Based on Bank Indonesia Circular Letter No.6 / 23 / DPNP dated May 13, 2004, the rating categories to be obtained by banks from the amount of BOPO owned are as follows.

**Table 1. Bank Ratings Based on BOPO Ratios**

Rating	Category	Magnitude of BOPO Value
1	Very healthy	50 – 75 %
2	Healthy	76 – 93 %
3	Healthy enough	94 – 96 %
4	Unwell	96 – 100 %
5	Not healthy	>100 %

Source: SEBI No.6/23/DPNP dated May 13, 2004

The operational definition of this study, BOPOs to measures the level of operational efficiency of a bank and related to prior study (Putri, A, 2010) on the analysis of the effect of CAR, NPL, BOPO, NIM, and LDR on ROA in public banks listed on the Indonesia Stock Exchange in 2005 -2009, it was concluded that partially CAR, NIM, NPL, and BOPO has a significant effect on ROA.

### **The influence of DER on ROA**

DER (Debt Equity Ratio) is a ratio that measures how far the company's ability is financed by debt, this can be seen by the higher ratio that reflects the symptoms that are not good for the company. An increase in debt will usually affect the size of the net income available to shareholders including dividends received because the obligation to repay debt takes precedence over dividend

distribution. Kasmir (2016; p.157) states that the debt to equity ratio is the ratio used to assess debt with equity. This ratio is useful to find out the amount of funds provided by the creditor with the owner of the company or to find out the amount of capital that is used as collateral for money.

Prior research (Anto, J, 2012) regarding the influence of CR, DER, Receivable Turnover and Sales Growth on Return On Assets in manufacturing companies on the Stock Exchange in 2008-2012, it was concluded that the CR, DER and Receivable Turnover partially had influenced towards ROA. The operational definition of the present study, DER is to measure the proportion of debt to capital.

Accordingly, the author proposes the hypotheses are as follow.

H1- Cash Flow Operations is positively related to ROA of Commercial Banks in Indonesia.

H2: BOPO is positively related to ROA of Commercial Banks in Indonesia.

H3: DER is positively related to ROA of Commercial Banks in Indonesia.

H4: Overall independent variables (CFO, BOPO and DER) have a simultaneous influence on ROA of Commercial Banks in Indonesia

## **METHODOLOGY**

### **Data and estimation method**

The author used a quantitative research approach that is associative, which analyzes the research data using inferential statistics used to determine the degree of relationship between CFO, BOPO and DER to DER. With a population of 45 banks that were go-public and listed on the Indonesian Stock Exchange (BEI) from 2014 to 2017, the author then used the purposive sampling method for this study. There were 30 sample banking companies and during the 12 quarters from 2014 to 2017 met the criteria as a result of 480 observational data.

### **Model specification**

With a panel data regression model which combines time series and cross section data to highlight how CFO, BOPO, and DER have an effect on ROA of commercial bank companies in Indonesia during the period 2014 - 2017 quarterly, the author acknowledges that it is appropriate to use panel data analysis.

The model of the current study is.  $Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + e_{it}$

The CEM model is similar to the ordinary simple regression model, in which cross section and time series data are combined in the form of panel data and then the data is regressed using the OLS method. Although combining data will provide more observational data, which in turn results of regression will tend to be better than a regression that uses only cross section or time series data. However, by combining data we cannot see differences between individuals, or between times. This is certainly not appropriate for the purpose of using panel data. In addition, based on the equation below, it can be seen that the intercept and slope do not change either between individuals or between time. To solve this problem, there are two techniques commonly used to model the panel data, the fixed effect model and the random effect model. The fixed effect model (FEM), modeling assumptions that produce a constant for each individual (i) and time (t) are less realistic. In the FEM, we can overcome this, because this method allows changes in  $\alpha$  on each i and t. While the random effect method (REM) differences in individual characteristics and time are accommodated in the error of the model. Considering there are two components that have contributed to the formation of errors, namely individual and time, then random error in REM also needs to be made into errors for individual components, time component errors and combined errors.

The consideration that REM has fewer parameters results in greater degrees of freedom compared to FEM which has fewer parameters and smaller degrees of freedom. However FEM also has several



advantages, which can distinguish between individual and time effects. FEM also does not need to assume that error components do not correlate with independent variables that may be difficult to meet.

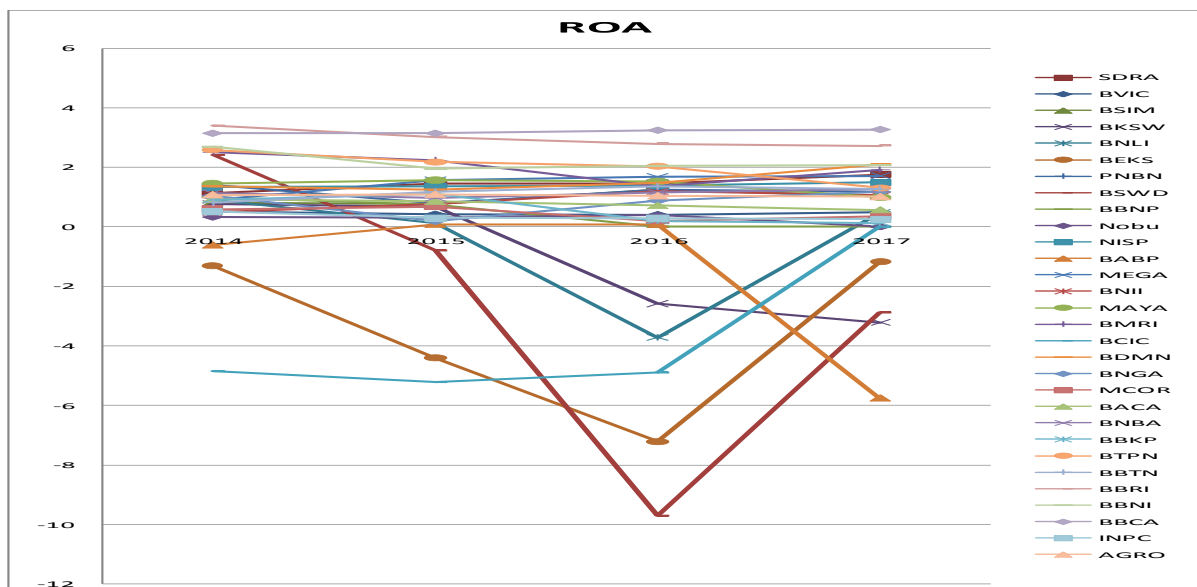
The choice between REM or FEM can be done with consideration of the purpose of the analysis or it is possible that the data used as the basis of the model, can only be processed by one method due to various mathematical technical issues that are beyond calculation.

In this study, the Chow test was performed to test between the common effect model (CEM) and the fixed effect model (FEM). Similarly to the Hausman test, Basically this test was used to see the consistency of the predictions with OLS. Given that REM is estimated using these methods, in this test panel data modeling it

is necessary to determine whether the fixed effect method (FEM) or the random effect method (REM) is selected. After finding out which model was most appropriate to use in this study, the author then performed hypothesis testing using t-tests and F-tests.

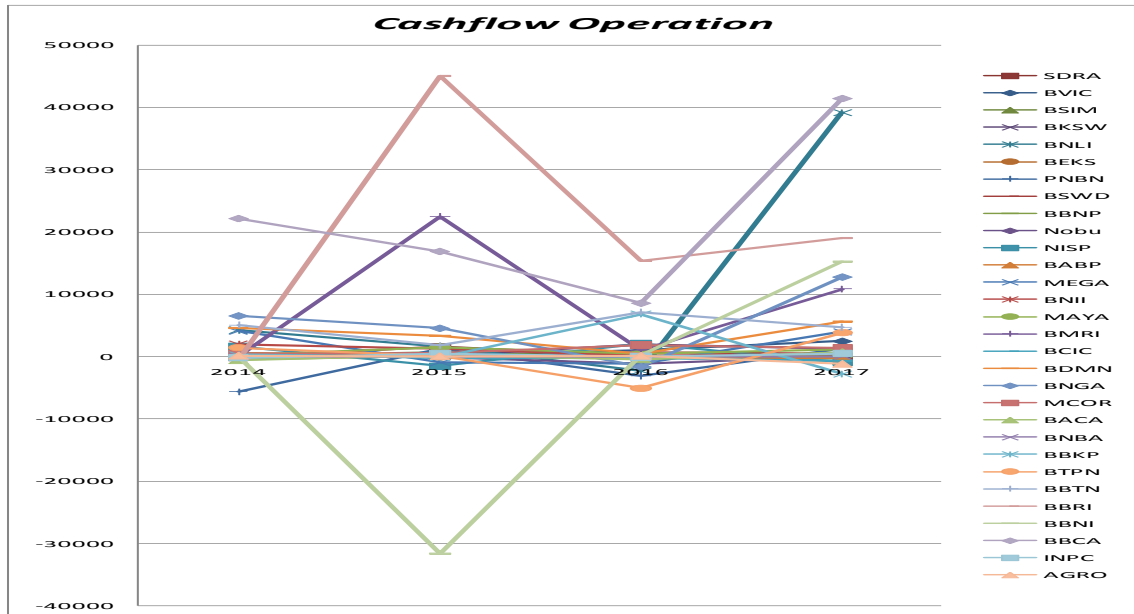
## RESULTS

The data processing in this study is using Eviews8 software tool which has been well tested in explaining the relationship between independent and dependent variables. As explained in the previous section, the variables used in this study were ROA as the dependent variable, while the independent variables used were CFO, BOPO, DER. Using the company data from 2014 to 2017 the following is an explanation of the variables used in this study.



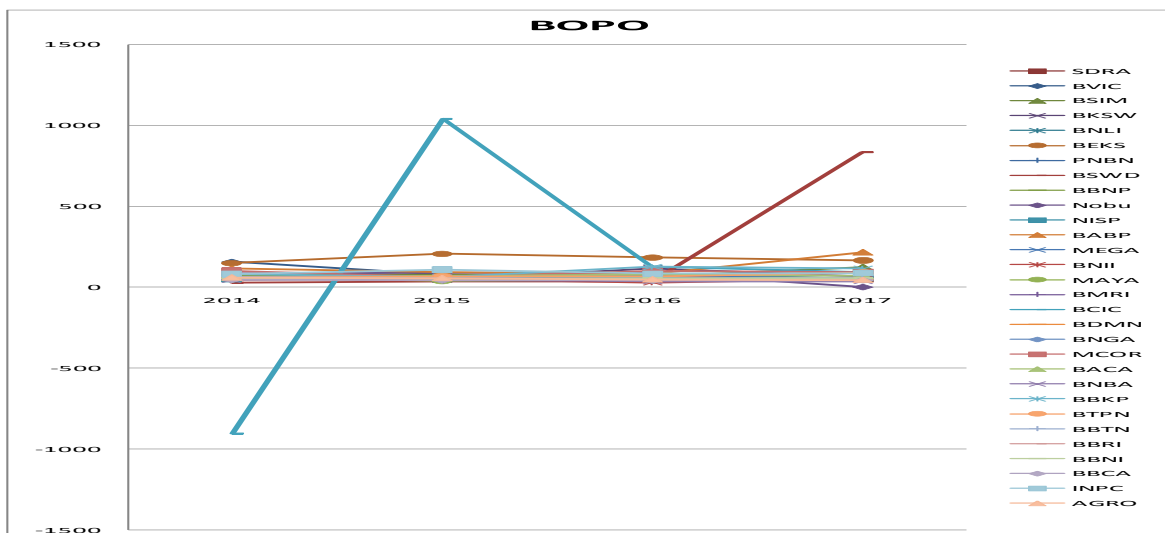
Source: Data Processing  
Figure. 2: ROA

Return on Asset is a ratio that measures how much a bank can generate overall profit. From the figure above, the highest ROA value was 3.875913%, for BRI Bank in the first quarter of 2014. The lowest value for ROA was -10.69330% which was for Bank of India in Indonesia in the third quarter of 2016. Average value for ROA was 0.674218%. This means that during the study period the average sample bank had a profit of 0.674218%. The author concludes the bank's level of effectiveness for profit management.



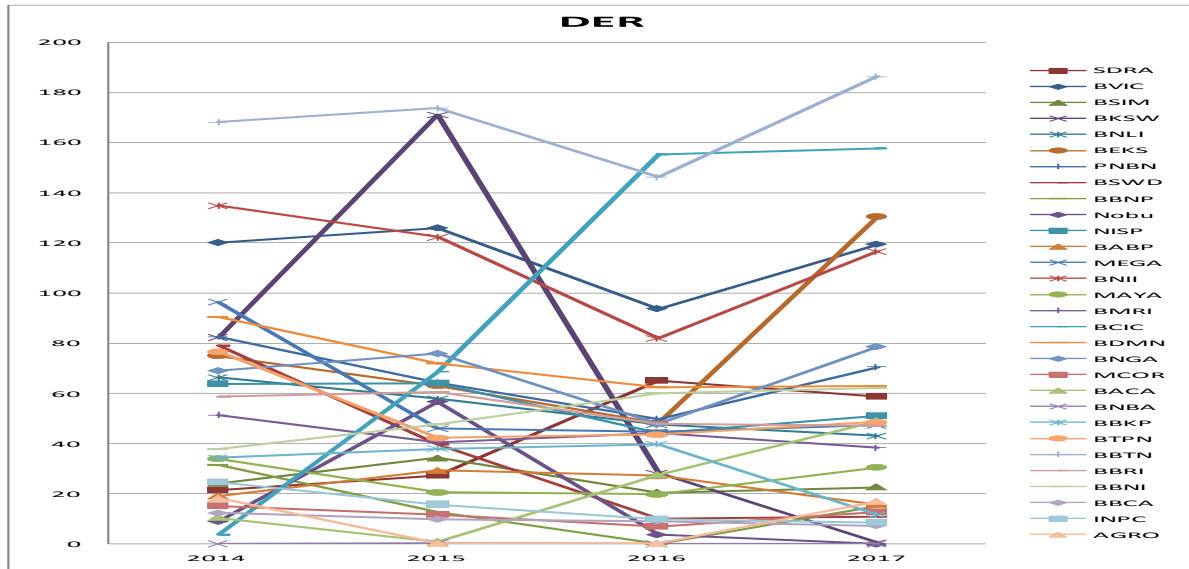
Source: Data Processing  
Figure. 3: CFO

CFO represents the cycle of cash flow and outflow that a company receives over a period of time. It is known that the highest value for CFO in the figure above was 45012.10 billion for BRI Bank in the fourth quarter of 2015, and the lowest value for CFO was -34589.01 billion for BCA Bank in the third quarter of 2017. The average value for cashflow operation was 1221, 908 billion, meanwhile, during the research period the average bank had a profit of 1221,908 billion.



Source: Data Processing  
Figure. 4: BOPO

BOPO is the ratio of efficiency used by a bank's management in controlling and measuring Operating Costs to Operating Income. It was noted that the highest value of BOPO was 1160,500% for Bank J Trust Indonesia in the third quarter of 2014, while the lowest value of BOPO was 903.9000% for Bank J Trust Indonesia in the fourth quarter of 2014. The average value for BOPO was 71.19105%. That during the study period the average bank sampled had a efficiency level of 71.19105%. This indicates that the level of efficiency of the associated banks is still low, as the operating costs incurred are not efficient.



Source: Data Processing  
Figure. 4: DER

DER is a ratio that measures the extent to which a company is financially able to finance its debt, which can be seen as the higher this ratio reflects the less favorable the company is. It is known that the highest value for DER was 300.3245% for Banten BPD Bank in the second quarter of 2016, and the lowest for DER was 0.000000% for Bank Nobu in the second quarter of 2017. The average value for DER was 50.99068%. This means that during the study period the average sample bank had a efficiency level of 50,99068%. The result indicates that the DER level of a company is still under control.

Panel data analysis was used to test the effect of CFO, BOPO, and DER on ROA on commercial bank companies in Indonesia during the period 2014 -2017 quarterly, thus using Data Panel with the following analysis model.

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + e_{it}$$

This data panel method has space and time dimension and thus the estimation

of variables and calculation results will provide a broader empirical analysis. Panel data minimizes the bias generated by individual or company aggregation due to the increased data units.

### Common Effect Model

Common Effect approach as the simplest model, where the approach ignores the time and space dimensions that are owned by panel data. The approach is carried out by combining time series data and cross sections without seeing the difference between time and individuals, and it is assumed that data between companies is the same in a certain period of time. Combining these results in more observational data, thus the regression results tend to be better than regressions that use cross section or time series data only. The method commonly used in this approach is the Ordinary Least Square (OLS) or Common OLS model to estimate this panel data model. The following are the results of the analysis using the common effect model method.

Table 2. Common Effect Model Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CASHFLOWOPERATION?	6.35E-05	1.50E-05	4.245361	0.0000
BOPO?	-0.004098	0.000874	-4.687914	0.0000
DER?	0.009478	0.001584	5.982542	0.0000

Source: Output Eviews Statistics V.8



### Fixed Effect Model

The assumption that model making is constant for each individual (i) and time (t) is less realistic. The fixed-effects method (FEM) can solve this, as it allows for a change in  $\alpha$  at each i and t. Here are the test results using the fixed effect model.

**Table 3.Fixed Effect Model Test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.326413	0.145062	2.250161	0.0249
CASHFLOWOPERATION?	5.86E-07	1.04E-05	0.056162	0.9552
BOPO?	-0.002397	0.000639	-3.749253	0.0002
DER?	0.010154	0.002486	4.083760	0.0001
Fixed Effects (Cross)				
_SDRA--C	0.799573			
_BVIC--C	-0.736507			
_BSIM--C	0.609040			
_BKSW--C	-1.457851			
_BNLI--C	-1.278104			
_BEKS--C	-3.911885			
_PNBN--C	0.241907			
_BSWD--C	-2.393117			
_BBNP--C	0.144380			
_NOBU--C	-0.092826			
_NISP--C	0.584574			
_BABP--C	-1.129906			
_MEGA--C	0.773076			
_BNII--C	-0.555612			
_MAYA--C	1.078227			
_BMRI--C	1.244818			
_BCIC--C	-5.175981			
_BDMN--C	0.616385			
_BNGA--C	0.060757			
_MCOR--C	0.267888			
_BACA--C	0.534820			
_BNBA--C	0.913145			
_BBKP--C	0.283771			
_BTPN--C	1.597236			
_BBTN--C	-0.753420			
_BBRI--C	2.505739			
_BBNI--C	1.568263			
_BBCA--C	2.838027			
_INPC--C	0.074990			
_AGRO--C	0.748595			

Source: Output Eviews Statistics V.8

### Random Effect Model

The research on REM was done using the error variable. When in FEM, individual or time differences are reflected through the intercept, then in REM the difference is accommodated by error. This technique calculates that errors may correlate across time series and cross sections. An error variable was used to solve the problem of using dummy variables in FEM which ultimately reduced parameter efficiency. The following are test results using the random effect model.

**Table 4.Random Effect Model Test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.626475	0.178132	3.516920	0.0005
CASHFLOWOPERATION?	1.12E-05	1.02E-05	1.094064	0.2745
BOPO?	-0.003296	0.000631	-5.221511	0.0000
DER?	0.005270	0.002067	2.549953	0.0111

Source: Output Eviews Statistics V.8

### Panel Data Method Selection

The choice between REM or FEM with consideration of the purpose of the analysis or the possibility of data being used

as the basis for modeling, can only be done by one method due to various mathematical technical issues that go beyond calculations. As for the conclusion is (a) if in the panel

data the amount of time series data is greater than the amount of cross section data, then it is recommended to use FEM; (b) if in the panel data the amount of time series data is less than the amount of cross section data, then it is recommended to use REM.

### Chow Tests

The Chow test was performed to test between CEM and FEM. The basis of the Chow test evaluation is based on the probability value for the chi-square cross section. If the value is  $> 0.05$  then the model selected is CEM, and if the value is  $< 0.05$  then the selected is FEM. The following is a comparison between CEM and FEM using the Chow test.

**Table 5. Chow Test Results**

Redundant Fixed Effects Tests			
Pool: DATA			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	21.566964	(29,447)	0.0000
Cross-section Chi-square	420.064774	29	0.0000

Source: Output Eviews Statistics V.8

The result of the Chow test in the table above can be found that the probability of F is 0,0000, since the probability of F is smaller than 0.05 then H0 is rejected. Therefore, the model selected is the Fixed Effect Model (FEM).

### Hausman Tests

Hausman test to assess the consistency of the predictions with OLS. Given that REM was estimated using the method, in panel data modeling, the test was used to evaluate the feasibility of using panel models.

The test is performed to determine the method selected, whether FEM or REM. The hypothesis is as follows.

$H_0 =$  REM is better than FEM

$H_1 =$  FEM is better than REM

The basis for rejecting H0 is to use Chi Square statistical considerations. If Chi Square statistics  $>$  Chi Square table then H0 is rejected (Model used is FEM), and H1 is accepted (Model used is REM). The following is a comparison of REM and FEM using the Hausman test.

**Table 6. Hausman Test Results**

Correlated Random Effects - Hausman Test			
Pool: DATA			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	106.501566	3	0.0000

Source: Output Eviews Statistics V.8

Hausman's test results in the table above, known as Chi Square (statistic) is 106.501566, with probability of 0.0000, whereas Chi Square (table) with df-3 at significance level  $\alpha$  (5%) is 7, 81, then the value of Chi Square. (statistics) is  $106.501566 >$  the Chi Square value (table) is 7.81, then  $H_0$  is rejected. Therefore, the model selected is FEM.

**Table 7. Summary of Model Comparison Results**

No	Type of testing	Test Value/ Probability Value	Table Value / Significance Level	Comparison Criteria	Selected Model
1	Chow	0,0000	0,05	the probability value of F is less than 0.05 then $H_0$ is rejected	FEM
2	Hausman	106.501566	7,81	the value of Chi Square. (statistics) is $(106.501566) >$ the value of Chi Square (table) is (7.81), the conclusion is $H_0$ is rejected	FEM

Based on the results of the Hausman test, it was found that the comparison of results between REM and FEM in this study was more accurate using FEM according to the above summary criteria. Additionally the results of the Chow test found that the comparison between CEM and FEM in this study was more accurate using FEM according to the criteria in the table above.

### Hypothesis Tests

#### Partial effect test (T-test)

**Table 8. T-test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.326413	0.145062	2.250161	0.0249
CASHFLOWOPERATION?	5.86E-07	1.04E-05	0.056162	0.9552
BOPO?	-0.002397	0.000639	-3.749253	0.0002
DER?	0.010154	0.002486	4.083760	0.0001

Source: Output Eviews Statistics V.8

The table above shows the probability value for the CFO variable of 0.9552, this value is higher than the research probability value of 0.05. It can be concluded that CFO has an influence on ROA but is insignificant. The probability value of BOPO and DER are 0,0002 and 0,0001, respectively. This value is smaller than the research probability value of 0.05, it can be stated, statistically the influence of BOPO and DER is significant on ROA.

### Simultaneous effecttest (F-Test)

**Table 9.F-test Results**

R-squared	0.639214	Mean dependent var	0.674218
Adjusted R-squared	0.613386	S.D. dependent var	2.057912
S.E. of regression	1.279574	Akaike info criterion	3.397204
Sum squared resid	731.8775	Schwarz criterion	3.684152
Log likelihood	-782.3290	Hannan-Quinn criter.	3.509997
F-statistic	24.74884	Durbin-Watson stat	0.509235
Prob(F-statistic)	0.000000		

Source: Output Eviews Statistics V.8

Based on the table above it can be seen the Probability F value of 0.000000. This value is smaller than the probability value in the study that is 0.05, it can be stated that CFO, BOPO and DER as a whole have a significant effect on ROA.

### The coefficient of determination

The coefficient of determination aims to measure how far the model's ability to explain the variation of the dependent variable simultaneously. The results of the coefficient of determination are shown in the following table.

**Table10. The coefficient of determination test result**

Cross-section fixed (dummy variables)			
R-squared	0.639214	Mean dependent var	0.674218
Adjusted R-squared	0.613386	S.D. dependent var	2.057912
S.E. of regression	1.279574	Akaike info criterion	3.397204
Sum squared resid	731.8775	Schwarz criterion	3.684152
Log likelihood	-782.3290	Hannan-Quinn criter.	3.509997
F-statistic	24.74884	Durbin-Watson stat	0.509235
Prob(F-statistic)	0.000000		

Source: Output Eviews Statistics V.8

## DISCUSSION AND CONCLUSION

### The effect of the ratio of CFO to ROA

CFOs have positive coefficients on ROA and insignificant influence values. Simple logic means that with the added value of cash flow operation it will also increase the value of ROA but insignificantly. That is in line with the financial condition of a company, if the operating cash flow is increased then the likelihood of the company's ROA will increase as long as the company can offset its operating costs.

Operating activities are the principal revenue generating companies and other non-investment activities and financing activities. Cash flows from operating activities are primarily derived from the entity's main revenue generation activities (Syakur, 2015; Sasongko, H, 2016).

Generally, cash flows are derived from transactions and other events that affect the determination of profit or loss. But revenue from operating activities does not necessarily increase ROA significantly as it depends on how well the company improves its efficiency in operations. The

increase in operating cash revenues has led to an increase in corporate profits which has led to an increase in dividends which is one of the drawbacks of the ROA ratio of banking companies in Indonesia.

### **The effect of the ratio of BOPO to ROA**

The value of the BOPO regression coefficient is negatively related to ROA and its effect size is significant. This means that decreasing BOPO will significantly increase ROA. This is in line with the financial condition of a company such as a banking company that if the company is able to push BOPO then its ROA value will likely increase significantly.

In an earlier study (Putri. A, 2010) has proven that BOPO has a strong significant impact on ROA. The author recognizes that BOPO as the efficiency ratio used to measure bank management's ability to control operating costs over operating income. The impact of these smaller ratios means that the operational costs incurred by the relevant banks are less efficient and therefore less likely to be bankrupt (Frianto, 2012).

### **The effect of the ratio of DER to ROA**

The DER regression coefficient value is positively related to ROA and its effect size is significant. This means that with DER support it will significantly increase ROA. This is in line with the finances of companies that are able to pay off their larger savings and will be able to increase their credit, increasing their revenue will also significantly increase their ROA. This is aligned by Anto. J (2012) who summarized that DER has an effect on ROA. Debt to equity ratio (DER) is the ratio used to assess debt with equity. This ratio is sought by comparing all debt, including current debt and all equity. This ratio states that the higher this ratio, means less self-capital compared to debt (Hanafi, 2012). The bank itself is a company that manages debt in the form of third party deposits into loans that are distributed to the public. The impact is that if more and more third party

deposits can be channeled into credit, the bank will get more returns as well.

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