Determinants of Bank Stability in Indonesia

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Abstract

This study aims to analyse the determinants of banks' stability in Indonesia, which is very important to ensure that the country's banking system could be more effective in supporting transmission of monetary policy and more resilient in facing financial crisis. To achieve the objective, this study collected a comprehensive dataset from 94 banks in Indonesia, covering both conventional and Islamic banks, during September 2015 - June 2019 period. The data is subsequently analysed by employing dynamic panel data model. The results show that the main factors that positively influenced banks' stability in Indonesia are exchange rate, financial inclusion, asset returns, and credit/financing growth. However, interest rates are found to be negatively influenced the stability. The findings are expected to provide insights for policy makers and market players in ensuring that the banks' stability could be well maintained in Indonesia. The results are also hoped to enrich literature in economics and banking, particularly in emerging markets like Indonesia.

Keywords: finance, financial intermediation, bank stability

JEL Classification: G21

How to Cite:
Kasri, R. A., & Azzahra, C. (2020). Determinants of Bank Stability in Indonesia. Signifikan: Jurnal Ilmu Ekonomi, 9(2), 153-166. doi: http://doi.org/10.15408/sjie.v9i2.15598.
Introduction

The importance of maintaining bank stability is an important topic for policymakers, both in developing and developed countries (Beck et al., 2009). Policymakers and regulators have devoted much effort to reforming banking systems aimed to improve bank stability in response to the global financial crisis (Cihak et al., 2016). Additionally, considering that most economic activity takes place through banking sector, it is important to promote and enhance the effectiveness of monetary policy transmission mechanisms and efficient allocation of funding sources in the economy system (Warjiyo, 2006). With such important roles, the health and stability of banks are two basic things that must be maintained in an economy.

However, in practice, banks instability and failure often occurred. Hence, banking stability has become a significant problem in many countries worldwide. A number of literatures suggested that banks stability/instability can be caused by macroeconomic factors and bank-specific or banks’ fundamentals factors (see, among others, Carretta et al. (2015); Pascual et al. (2015) and Shim (2019)). In this respect, several banks specific factors such as capitalization, bank size, profitability and efficiency are found to be determinants of stability in banking institutions. Furthermore, volatility that occurs in macroeconomic variables such as economic growth, unemployment, interest rates and inflation can also affect banks’ risk which can ultimately affect the stability of banks (Nkusu, 2011; Chaibi and Ftiti, 2015; Ghosh, 2015; Karim et al. (2016)). Good performance of bank fundamental factors supported by stable macroeconomic conditions will certainly improve bank performance and reduce bank risks.

In relation to this, Pascual et al., (2015) investigated the determinants of banks’ stability in Europe. Proxies of bank risks employed are non-performance loans (NPL) and bank’s z-score. The study found that the banks’ stability is influenced by equity to total assets, non-deposit funding to total assets, return on assets, cost to income ratio, bank size, level of industry concentration, GDP growth, inflation and interest rates. Thus, it was concluded that the banks’ stability is determined by banks specific factors and macroeconomic factors. Similar study conducted by Kabir et al., (2015) suggested that the determinants of banks’ stability were bank size, profitability, efficiency and diversification of banks’ income as well as macroeconomic factors such as GDP growth and inflation. More recently, Shim (2019) found that stability amongst commercial banks in America is determined primarily by bank specific factors represented by diversification of loan portfolio, bank size, non-interest share, brokered deposits and core deposits. Additionally, macroeconomic variables such as GDP growth and unemployment rate also influenced the bank’s stability.

In Indonesian, only few studies investigate banks’ stability. One of the few studies has been carried out by Cynthia (2016). The study shows that bank’s fundamental indicators – including liquidity ratio, bank capitalization, capital volatility and bank ownerships - have significant influence on stability of conventional banks in Indonesia from 2004 to 2012. Furthermore, a research conducted by Yusgiantoro et al. (2019) using sample of Indonesian commercial banks during 2010–2015 time period suggested that market power of banks and level of total deposits have a positive influence on stability of conventional banks.
More recently, Rizvi et al. (2019) analysed bank's stability in Indonesia by using samples from conventional and Islamic banks. There was a total of 71 banks in the sample, with 64 conventional and 7 Islamic banks. The study concluded that bank specific factors consisting of bank size, cost to income ratio and diversification of bank products have a negative influence on bank stability in Indonesia.

In addition to using bank specific factors, few other studies also use macroeconomic variables to determine bank stability. A study by Karim et al. (2016) found that stability of banking industry in Indonesia have a long run relationship with macroeconomic factors during 1999-2013 period. It was also found that the stability is positively related to GDP and interest rate, meanwhile the relationship was negative with inflation rate (which is proxied by consumer price index). More recently, Rizvi et al (2019) also shows that GDP growth has significant positive effect on banking stability in Indonesia during the period of 2005-2016.

More recent data shows that the Indonesian banking system appears to be relatively stable in the last few years. These could be seen from the values of several banking indicators, such as CAR and ROA (see Table 1). However, the average Net Interest Margin (NIM) has tended to fall over the last five years. In terms of efficiency, by looking at the values of the ratio of operating costs to operating income (BOPO), it appears that the bank’s efficiency has varied in the last five years albeit there is an indication that they tend to be more inefficient in 2020. Taken together, there is an indication that the banks’ stability has decreased in several aforementioned aspects in the last few years.

| Indicator (Commercial Banks) | Unit | 2015 Q4 | 2016 Q4 | 2017 Q4 | 2018 Q4 | 2019 Q4 | 2020 Q1 |
|-----------------------------|------|---------|---------|---------|---------|---------|---------|
| Capital Adequacy Ratio (CAR) | %    | 21.39   | 22.93   | 23.18   | 22.97   | 23.4    | 22.83   |
| Return on Asset (ROA)       | %    | 2.32    | 2.23    | 2.45    | 2.55    | 2.47    | 2.70    |
| Net Interest Margin (NIM)   | %    | 5.39    | 5.63    | 5.32    | 5.14    | 4.91    | 4.96    |
| Operating Expenses/Operating Income (BOPO) | % | 81.49 | 82.22 | 78.64 | 77.86 | 79.39 | 83.49 |
| Loan to Deposit Ratio (LDR) | %    | 82.48%  | 82.17%  | 82.49%  | 82.28%  | 82.60%  | 80.91%  |
| Total Third-Party Funds Rp Billion | 5,952,279 | 6,570,903 | 7,177,549 | 7,667,803 | 8,280,812 | 8,269,379 |
| Total Credit to Third-Party Rp Billion | 4,909,707 | 5,399,210 | 5,921,039 | 6,308,824 | 6,839,563 | 6,690,966 |
| Total Banking Assets Rp Billion | 6,095,908 | 6,729,799 | 7,387,634 | 7,913,491 | 8,562,974 | 8,385,407 |
| Total Banking Assets to the Financial Sector % | 76.59 | 75.66 | 77.28 | 77.71 | 77.22 | 77.15 |

Source: Indonesian Banking Statistics (Financial Services Authority), 2020
Considering the lack of more recent studies regarding banks’ stability in Indonesia, particularly studies which include both conventional and Islamic banks’ in the data set, as well as the tendency that the banks’ in Indonesia tend to be less stable in the past few years, this study is conducted with the aim to comprehensively analyse the determinant of banks stability in Indonesia. In modelling the banks’ stability, it attempts to capture both bank specific factors and macroeconomic factors, which is very important to ensure that the banking system could be more effective in supporting transmission of monetary policy and more resilient in facing financial crisis. To achieve the objective, this study also uses a comprehensive data set of 94 banks in Indonesia that consist of conventional banks and Islamic banks during September 2015-June 2019 period. The data is estimated using the dynamic panel data model SYS-Generalized Method of Moments (GMM).

To proceed, the paper is structured as follow. After this introductory section, section two explains the methods employed in the study. Section three discusses the findings and analysis of the study. The final section concludes the study and provides several policy implications from the findings and analyses of the study.

**Methods**

Following the aforementioned literature and subsequently in attempt to answering the research objective, this study employs a quantitative research method. Quantitative research can be used in response to relational questions of variables within the research. Quantitative research method can also be used to establish, confirm, or validate relationships and to develop generalizations that contribute to theory (Leedy and Ormrod, 2001). This research method is considered suitable to answer the research question which aims to establish relationships and investigate the factors influencing bank’s stability in Indonesia which is the main focus of this study.

In terms of data, this study uses secondary data with unbalanced panel data structure. The data period is quarterly data, starting from September 2015 to June 2019. The data used includes the data from all 94 commercial banks in Indonesia, which consists of 83 conventional banks and 11 Islamic banks. The data is obtained from the banks’ financial statement during the abovementioned period. Additionally, macroeconomic data is employed in the analysis. The data is taken from official publications of Indonesia Financial Services Authority (OJK), Bank Indonesia, and other official publications.

The panel data is subsequently applied to a dynamic panel data model. The dynamic model is chosen because it is understood that the relationship between economic variables is a relationship that is not fixed. In other words, economic variables are not only determined from current condition of economic variables, but are also determined by time variables in the previous periods (Baltagi, 2005). Therefore, the application of dynamic data models is considered more appropriate to be used in describing the actual conditions in economic analysis.

The estimation model used in this study is the GMM (General Method of Moment) estimator developed for dynamic panel models by Arellano and Bover (1995) and Blundell
and Bond (1998). The use of dynamic data panels can be characterized by lagged from the dependent variable as an explanatory variable (Baltagi, 2005). The used of system-GMM estimator model is considered to be the most appropriate model due to endogeneity problem and possible unobserved individual specific effects that are not included in the model. Furthermore, in this study, the amount of observation time (T) used (i.e. 16 time points) is less than the number of observations (N = 94 banks), so using GMM estimates is considered to be able to produce unbiased and consistent estimates (Roodman, 2009). In this respect, a two-step system-GMM estimation procedure with finite-sample corrected standard errors, as proposed by Windmeijer (2005), is also employed as this method provides less biased coefficient estimates and more robust and efficient than GMM’s one-step system (Roodman, 2009).

Based on the concepts and empirical studies explained earlier, it can be suggested that the determinants of banks’ stability could be categorized into bank specific factors and macroeconomic factors. The banks’ specific factors includes credit or financing growth (CFGrowth)\(^1\), bank size (BSize), efficiency (BOPO), asset return (ROA), capitalization (ETA) and loan loss provision (LLP) (see, among others, Bourkhis and Nabi (2013); Pascual et al., (2015), Chaibi and Fritti (2015), Carretta et al. (2015), Yusgiantoro et al. (2019) and Rizvi et al. (2019)). Meanwhile, the macroeconomic factors include GDP growth (GDPG), inflation (INF), interest rate (IR) and exchange rate (ER), which were previously found to affect banks’ stability (Z-score) by many studies (see studies such as Nkusu, 2011; Chaibi and Fritti, 2015; Ghosh, 2015 and Rizvi et al. (2019)). With this perspective, the following empirical model is proposed:

\[
\ln Z-score_{it} = \alpha_1 \ln Bsz_{it-1} + \alpha_2 \ln Bsz_{it-2} + \beta_1 IB_{it} + \beta_2 CFGrowth_{it} + \\
\beta_3 ROA_{it} + \beta_4 \ln BSize_{it} + \beta_5 CAR_{it} + \beta_6 \ln NIM_{it} + \beta_7 ETA_{it} + \\
\beta_8 BOPO_{it} + \beta_9 LLP_{it} + \beta_{10} GDP_{it} + \beta_{11} ER_{it} + \beta_{12} IR_{it} + \\
\beta_{13} \ln Fl_{it} + \beta_{14} Fl_{it} + \varepsilon_{it} \quad (1)
\]

In equation (1), \(\ln Z\)-score is the dependent variable of this study that is also the proxy of bank’s stability. The use of natural logarithms on the z-score variable is intended to avoid the possibility of high skewness or extreme values in the data (Pascual et al, 2015; Imbierowicz and Rauch, 2014; Carretta et al., 2015). This is considered suitable in accordance with the conditions of the banking data in Indonesia, in which there are some extreme values (outliers) that can reduce robustness of the estimation. The IB variable is the dummy for Islamic banks (IB=1 for Islamic bank and IB = 0 for conventional banks). Furthermore, the use of lagged periods t-1 and t-2 is in accordance with what was initiated by Roodman (2000) in the estimation of dynamic panel data models using Generalized Method of Moments (GMM). The use of lagged z-score periods t-1 and t-2 is adjusted to the use of an appropriate model, where there is significant autocorrelation in the first and second lagged, but in the third lagged and so on it is not significant so it is not suitable for use in the model research.

\(^1\) Credit refers to financing provided by conventional banks, while financing refers to financing provided by Islamic banks.
Table 2 presents summary of the operational variables, which consists of bank z-scores, bank specific factors and macroeconomics variables. It also summarizes the hypotheses of the study. Overall, it is hypothesized that the bank's z-score in the previous period, asset return (ROA), capital adequacy ratio (CAR) and capitalization (ETA) variables are positively influencing banks' stability in Indonesia. Meanwhile, CFGrowth, bank size (BSize), net interest margin/net return (NIM/NR), efficiency (BOPO), and loan loss provision (LLP) are negatively influencing the banks' stability.

| Type of Variable | Name | Variable Definition | Hypothesis | Source of Data |
|------------------|------|---------------------|------------|----------------|
| **Dependent**    | Bank Z score | Logarithm natural of bank z score. Bank z-score: \( \frac{\text{return on asset/equity to asset ratio}}{\text{sd. return on asset}} \) | Lnbzs_{i,t-1} and Lnbzs_{i,t-2} has positive influence (+) | Quarterly Published Financial Reports from the Financial Services Authority (OJK) |
| **Independent**  | Credit and Financing Growth | Growth of total credit and financing \( \frac{\text{difference between total CF}_{t} - \text{total CF}_{t-1}}{\text{total CF}_{t-1}} \) (%) | CFGrowth (-) | Quarterly Published Financial Reports from the Financial Services Authority |
| Bank Size        | Logarithm natural of total asset | LnBSize (-) |
| Return on Asset  | Profit before tax/Average Total Asset (%) | ROA (+) |
| Capital Adequacy Ratio | Minimum Capital Requirements (%) | CAR (+) |
| Net Interest Margin or Net Return | Differences between interest income minus interest costs (%) | NIM/NR (-) |
| Capitalization   | Total Equity/Total Asset (%) | ETA (+) |
| Efficiency       | Operational costs/operational income (%) | BOPO (-) |
| Loan Loss Provision | (Loan loss provision of financial asset / Total asset) | LLP (-) |
| **Macroeconomics variables** | **Economic Growth** | GDP growth rate (%) | GDPG (+) | Bank Indonesia |
| Exchange rate    | Rupiah Exchange Rate against US Dollar (Rp) | ER (-) |
| Interest rate    | Interest rate (%) | IR (-) | BPS |
| Inflation rate   | Inflation rate (%) | Inf (-) |
| Financial Inclusion | Bank Branch/100.000 adult population in Indonesia | FI (+) | Bank Indonesia |
It is also worth to note that prior to estimating the model, several model specifications tests have been conducted to get consistent and efficient parameter estimators. The specification tests used in the GMM model follow two stages, namely (i) Sargan-Hansen test, which is used to determine the validity of instrument variables that exceed the estimated number of parameters (overidentifying restrictions), and (ii) Autocorrelation test, which is employed to see whether there is no autocorrelation in the first and second orders of residuals (Ghosh, 2015). The test used is Arellano-Bond test using AR (1) and AR (2) with the null hypothesis is no autocorrelation (Elitza, 2007). Once the model passed the tests, then the GMM model could be estimated. The results are explained in the next section.

**Results and Discussion**

As explained earlier, before estimating the model, two specification tests are conducted. The results are presented in Table 3.

| No | Type of Test          | Statistical Value | P Value |
|----|----------------------|-------------------|---------|
| 1  | Arrelano Bond Test:  |                   |         |
|    | AR (1)               | -3.54             | 0.000   |
|    | AR (2)               | -0.36             | 0.718   |
| 2  | Sargan/Hansen Test:  |                   |         |
|    | Hansen Test          | 57.80             | 0.238   |

From the results of the specification tests presented in Table 3, it can be seen that the value of AR (1) shows a significant result with p-value of 0.000. This indicates that H0 is rejected, which means that there is a first order serial correlation. Whereas for AR (2), the opposite result is found in which the p-value of AR (2) is 0.718 (p value > 0.05); suggesting that the null hypothesis fails to be rejected. Thus, there is no second order serial correlation in the empirical model. Furthermore, the Hansen p-value test is found to be 0.238 (P value > 0.05), which shows that the null hypothesis could not be rejected. These results imply that there is no over identification of the model, and hence the instruments used in this model is valid. Consequently, the abovementioned model could be further estimated.

Table 4 shows the results of dynamic data panel model of banking stability using SYS-GMM. From the estimation results, it is found that variable Lnbs are negatively influenced by Lnbs (t-2) and positively influenced by Lnbs (t-1). These results indicate that banks’ stability in Indonesia changed very quickly in the short term. Even though in the past two periods the banks were unstable, they could become stable at t = 1 if other independent factors encourage their stability. These factors came from both banks’ internal and external factors, such as Indonesia’s macroeconomic conditions that were also quite volatile but still positive during the research period (as will be elaborated later). In other words, the banks stability today is more determined by the stability of the banks in the previous period.
Empirically, the estimation results are supported by research conducted by Pascual et al. (2015), Carretta, et al. (2015) and Morgan and Pontines (2014) which shows that variable of bank stability in the previous period had a significant effect on the bank stability variable in the future, which in this study was for a period of 3 months. More specifically, an increase in the value of \( t-1 \) by 1 percent will have an effect on an increase in banks \( Z \) score by 0.43 percent in the upcoming quarter. This shows that in the short term period of 3 months, banks that were currently in stable condition, tend to still be in sound and stable condition.

Table 4. Dynamic Data Panel Estimation Results

| Independent Variable: | Coefficient | t Statistic |
|-----------------------|-------------|-------------|
| \( \text{Lnbsz}_{t-1} \) | 0.432*** | 3.52 |
| \( \text{Lnbsz}_{t-2} \) | - 2.502** | -2.00 |
| Dummy Islamic Banks | - 0.018 | -0.02 |
| \( \text{CFGrowth} \) | 0.019** | 2.09 |
| ROA | 0.321* | 1.71 |
| \( \text{LnBSize} \) | 0.151 | 0.72 |
| CAR | 0.034 | 1.27 |
| NIM | - 0.034 | -0.49 |
| ETA | - 4.159 | -1.09 |
| BOPO | 0.024 | 0.78 |
| LLP | 0.017 | 0.19 |
| FI | 0.593* | 1.90 |
| GDPG | - 0.383 | -1.21 |
| ER | 0.000** | 2.45 |
| IR | - 0.123** | -2.07 |
| Inf | 0.087 | 1.13 |

Notes: CFGrowth = Credit and financing growth, ROA = Return on asset, BS = Bank size, CAR = Capital adequacy ratio, NIM = Net interest margin, ETA = Equity to total asset, BOPO = Bank efficiency, dan LLP = Loan loss provision; FI = Financial inclusion, GDPG = GDP growth rate, ER = Exchange rate, IR = Interest rate dan Inf = Inflation; *** significant at 1%, ** significant at 5% dan * significant at 10%.

Furthermore, credit/financing growth (CFGrowth) variable shows a significant positive result at five percent confidence level. This implies that credit and financing growth could increase bank's stability. While this result is different from the finding of Foos et al. (2010), which shows that credit growth will have an impact on increasing credit risk for the next three years, this result is actually possible if increased in credit/financing growth is accompanied
by high profitability and bank capital. As pointed out by Buchory (2015), a decline in bank assets' quality will have an impact on bank stability if not accompanied by high profitability and bank capital. In other words, high profitability and bank capital are the conditions to quality credit/financing growth that subsequently support in ensuring banks’ stability.

As shown in Table 5, over the past 5 years credit and financing have always increased in both conventional and Islamic banks. These were accompanied by an increase in banks’ profits and capital, albeit with varying growth rates. The growth in the volume of loans/credits and financing disbursed by the banks indicates that banks can convert their liabilities into productive assets, which subsequently generated profits. Therefore, it can be concluded that the increase in credit and financing can be followed by good quality of credit and financing growth so it produced increasing profits and thus bank’s capital. These have presumably caused a significant positive effect on bank stability.

Table 5. Credit and Financing Growth, Total Profit and Total Capital by Banks in Indonesia

| Indicator                        | Unit          | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  |
|----------------------------------|---------------|-------|-------|-------|-------|-------|-------|
|                                  |               | Q4    | Q4    | Q4    | Q4    | Q4    | Q1    |
| Conventional Banks:             |               |       |       |       |       |       |       |
| Total Credit to Third-Party      | Rp Trillion   | 5,953 | 6,571 | 7,177 | 7,668 | 8,281 | 8,269 |
| Total profit                     | Rp Trillion   | 104.63| 106.54| 131.16| 150.01| 156.49| 42.83 |
| Total bank capital               | Rp Trillion   | 914.66| 1,052.6| 1,166| 1,269.62| 1,377.56| 1,311.59|
| Islamic Banks:                   |               |       |       |       |       |       |       |
| Total Financing to Third-Party   | Rp Trillion   | 219   | 255   | 293   | 329   | 347   | 346   |
| Total profit                     | Rp Trillion   | 0.98  | 1.43  | 1.7   | 3.81  | 5.60  | 6.48  |
| Total bank capital               | Rp Trillion   | 23.41 | 27.15 | 31.11 | 36.76 | 40.72 | 41.75 |

Source: Indonesian Banking Statistics (Financial Services Authority), 2020

The next variable that has a significant positive influence on the banks’ stability is return on asset (ROA). ROA is a reflection of bank’s profitability, as the value of ROA reflects how banks manage their asset to minimize non-performing asset and improve banking stability. This result is consistent with the findings of Kabir et al., (2015) and Pascual et al., (2015) which states that there is a positive influence between return on assets and banking risk as measured by z-score. Indeed, data shows that ROA of banks’ in Indonesia always show improvement during the research period, which indicate the consistency of Indonesian banks in managing their productive assets to generate high profits. This is in line with the aforementioned trend of increase in credit and financing growth that also occurred during the study period.

Next, there are three macroeconomic variables that empirically have an influence on the banks’ stability, namely financial inclusion, exchange rate and interest rate. It is found that the level of financial inclusion, proxied by the number of banks' branches, has a positive effect on banks’ stability in Indonesia. The result is consistent with the studies conducted by
Neaime and Gaysset (2018) and Albaity et al., (2019) which show the positive influence of financial inclusion on financial stability. Increasing bank services through bank branches will certainly have an impact on the community that has not been reached by the bank’s financial services, particularly in terms of increasing the deposits base for the banks. In addition, closeness of banks’ location to its customers will reduce the information asymmetry, thus will subsequently have an impact on improving bank performance (DeYoung and Torna, 2013). Another area where financial inclusion could foster financial stability is by improving the process of intermediation between savings and investments. A wider customer base for banks could expands their balance sheets to new areas of business and makes them more risk diversified and resilient to withstand unexpected losses. The higher level of financial inclusion, the easier the public access to the most important financial services, i.e. saving, such that increasing bank stability in terms of saving funds will be more easily achieved. In line with these, Table 6 shows the development of financial inclusion in Indonesia that indicated by the growth in the number of bank branches.

### Table 6. Banks’ Branches and Financial Inclusion in Indonesia

| Number of Bank Branches | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   |
|------------------------|--------|--------|--------|--------|--------|--------|
| Conventional Banks     | 28,935 | 30,035 | 30,256 | 30,817 | 31,127 | 31,007 |
| Islamic Banks          | 1,990  | 1,869  | 1,825  | 1,875  | 1,919  | 1,923  |
| Total Bank Branches    | 30,925 | 31,904 | 32,081 | 32,692 | 33,046 | 32,930 |

Source: Indonesian Banking Statistics (Financial Services Authority), 2020

Other macroeconomic variable that have a significant positive influence on bank stability is exchange rate. This result is consistent with Beck et al., (2013) which found that depreciation of local currency can reduce the occurrence of non-performing loans through an increase in the company’s export volume, which will subsequently improve the company’s financial position in paying their obligations (Beck et al, 2013). Moreover, according to Chaibi and Ftiti (2015), an increase in exchange rate could had a negative effect on bank risk. This is presumably because depreciation of local currency seems to improve the ability of people who borrow in foreign currency to service their debts and could increase bank stability.

Interest rate is another macroeconomic variable that has a significant yet negative effect on the banks’ stability. The estimation result suggests that an increase in interest rate by one percent will have an impact on reducing the stability of the banks by 0.12 percent. This is consistent with the finding of Karim et al (2016), which investigates the banking stability in Indonesia during 1999-2013 periods. Similar conclusion also shows by Espinoza and Prasad (2010), which concludes that weakening economic conditions with an indicator of increasing interest rates could increase non-performing loans and hence reduce bank stability. Pascual et al. (2015) and Ghosh (2015) also suggested that, while high interest rates will cause bank margins to increase, it could also head towards bank defaults and affect the banks’ stability.
Overall, the study found that the stability of banks in Indonesia is influenced by bank specific factors and macroeconomic factors. Bank specific factors that have a positive effect on bank stability are credit/financing growth and return on assets. Whereas macroeconomic variables that have a positive effect on bank stability are financial inclusion and exchange rate variables. It was also found that interest rate variable has a negative influence on the banks’ stability during the period of observation.

Conclusions

This study aims to analyse the determinant of banks’ stability in Indonesia, which is very important to ensure that the banking system could be more effective in supporting transmission of monetary policy and more resilient in facing financial crisis. This study therefore collected data from 94 banks in Indonesia, consisting of 83 conventional banks and 11 Islamic banks, during the period of September 2015 to June 2019. The data is subsequently analysed by employing dynamic panel data model. The findings show that the main factors that positively influenced banks’ stability in Indonesia are credit/financing growth, returns on assets, financial inclusion and exchange rate. However, interest rates are found to be negatively influenced the banks’ stability.

The results of the study has several implications for banking stakeholders in Indonesia. First, considering that macroeconomic variables (interest rate, exchange rate and financial inclusions) are the most important determinants of banks’ stability in Indonesia, it is important that the policy makers are committed to ensure stability of the variables such that the banks’ stability could be well maintained in Indonesia. Second, as banks’ specific factors are also influencing the banks’ stability, banking regulators and market players also need to scrutinize these factors. The regulators should implement policies that could increase or at least maintain the growth and quality of credit/financing provided by the banks, so that it could contribute positively towards the stability. Lastly, realizing that this study has several limitations (such as in terms of sample and model), future research could attempt to expand this study by utilizing larger sample, longer time period and better model (for example, by using other measure of banking stability, distinguishing crisis and non-crisis period, comparing conventional banks and islamic banks, etc). Taken together, the implications of the study are expected to provide insights for policy makers, market players as well as enrich literature regarding banks’ stability in Indonesia.

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