Determinant Factors that affect Foreign Banks Profitability: An Evidence from Indonesia

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Abstract

During the financial crisis, foreign banks show their resistance and obtain more profit than all domestic banks, regardless of their ownership structure. Numerous previous studies have found that foreign banks are more profitable and more efficient than domestic banks in emerging markets. Therefore, this study aims to examine the determinant factors that affect foreign banks profitability in Indonesia. This study uses panel data series collected from two sources, i.e. Bank Indonesia (BI) and Otoritas Jasa Moneter (OJS) Institutions for 2014 to 2018. A total of 9 foreign banks operated in Indonesia and selected using purposive sampling. As usual, we applied three common models under panel data analysis, i.e. Pool Least Square, Fixed Effect Model and Random Effect Model. This study found that credit distribution and non-performing loans have a significant negative effect on foreign banks profitability. Meanwhile, the gross domestic product has a significant positive effect on foreign banks profitability. Besides that, the rate of credit interest does not affect foreign banks profitability. The results indicated that foreign banks operating in Indonesia in providing credit must be very prudent because they could reduce profitability and increase the risk of default. It because foreign banks tended to use foreign currencies in giving credit. However, if in good gross domesticity condition, foreign banks' profitability was also good because of the increasing prosperity felt by the Indonesian people, especially market players.

Keywords
Credit interest and distribution, loan, gross domestic product, profitability, foreign banks, Indonesia context

1. Introduction

The banking sector plays an important role in supporting the economy of a country in the globalization era. One of the banking groups is a group of foreign banks operating in a country. A foreign bank is none other than a private commercial bank that opens a representative or branch in another country. As a developing country, Indonesia has become a destination for some of the largest foreign banks as branch representatives or other destinations. Bank Indonesia data shows that around 11 foreign banks are operating in Indonesia. The latest data released by the authorities in 2019, the profitability of foreign banks began to come down, which was indicated by the net interest margin, which tended to decrease in May 2019 by 4.27 percent to 3.11 percent in May 2020. The same thing happened to the return on assets from 3.69 percent to 3.4 percent in May 2019 and slightly decreased in May 2020 (Kontan.co.id).

Profitability is the ability to generate profits over a particular time. It is crucial to every company as a leading indicator for stakeholders for the sustainability of a company. However, there are regulations directed by the financial services authority (Syamni et al. 2018), the rise and fall of company profitability, including banking, is influenced by internal and external factors. According to Widarjono (2018) and Panjaitan (2011), bank profitability is determined by internal factors. These two factors are factors that affect bank profitability. Each country produces different research results on the factors that most influence profitability. Research by Nuhiu et al. (2017) in Kosovo, bank profitability was determined more by internal than external factors. Garcia and Trindade's (2019) research in Angola concluded that not all internal and external factors affected bank profitability. Besides, Abumega (2020) found that all banking profitability in Palestine was determined by internal and external factors.

Based on the description above, profitability is one of the primary indicators for company sustainability. Furthermore, internal and external factors influenced profitability. In the context of this study, which focuses on foreign banking, the variables used in examining the profitability of foreign banks are credit distribution, interest rates, non-performing loans, and gross domestic products because foreign banks do not always follow domestic rules. The factors directly affecting foreign bank services are related to GDP, namely non-performing loans. Thus, this study examined several factors influencing the profitability of foreign banks operating in Indonesia.

2. Literature Review
2.1 The effect of credit distribution on profitability
Credit distribution is one of the banking functions in implementing the principle of intermediation. Banking intermediation is carried out by channeling funds to the public. Credit distribution of financial institutions is the key to earning income. Kumar and Bird (2021) found that quality credit distribution affected bank profitability in India and China. Research by Febrianti (2020), which examined a group of banks in Padang, found that credit distribution affected bank profitability. The same finding by Rijal et al. (2020) also mentioned that credit distribution affected financial profitability at KPRI-UNM in Makassar city.

2.2 The influence of loan interest rates on profitability
In general, the credit interest rate is the price or compensation charged to a customer for a loan based on the regulations set by Otoritas Jasa Keuangan. The loan interest rate is used as a percentage of the dependence given by banks to customers for their loans (Mardani, 2016). However, in following monetary regulations, only local or domestic banks have followed but not foreign banks (Denderski and Paczos, 2021). Regarding the interest rate, empirical research found that the interest rate positively influenced profitability in the financial services industry. Abdurrahman and Çankal (2020) on an insurance agency in Turkey and Almaqtari et al. (2019) found that the interest rate influenced profitability, especially return on assets. Hasan et al. (2020) said that the increase in federal interest rates could increase the profitability of banks. Another study by Syamni et al. (2017) on regional banking found that interest rates affected profitability.

2.3 The influence of non-performing loan on profitability
After distributing credit to (prospective) customers, the banking sector faces risks caused by the possibility of credit payment processing resulting in non-performing loans. The financial risk level for performing loans extended to customers is called a non-performing loan. Several empirical studies of banking companies that have non-performing loans above normal have resulted in decreased profitability. Ercegovac et al. (2020) researched banking in the European Union and indicated that non-performing loans affected bank profitability. Furthermore, Do et al. (2020) said that non-performing loans influenced the profitability of banks in Vietnam. Achyar et al. (2017) focused on Islamic banks in Indonesia, who found that credit risk level or non-performing financing affected profitability.

2.4 The effect of gross domestic products on profitability

Gross Domestic Products (GDP) is a measure of a country's economic indicators. GDP is the value of goods and services produced by a country in a certain period (Erni Umi Hashanah 2012). The improvement in the GDP of a country improves the economic potential that will lead to an increase in all production processes and services, including foreign banking services. Some empirical studies found that GDP affected the profitability of banks. Abdurrahman and Çankal (2020) researched insurance companies in Turkey and found that GDP growth positively influenced profitability. Research in the former Soviet Union by Yüksel et al. (2018) found that GDP growth led to improved banking companies' profitability. Fidanoski et al. (2018) conducted a study in Croatia and concluded that GDP affected profitability. Alharbi, A.T. (2017) also stated the same that GDP affected the profitability of Islamic banking.

3. Methods
3.1 Data Collection
This study used secondary data of financial statements from 11 foreign banks in Indonesia during 2014-2018 taken from the official websites of Bank Indonesia and the financial services authority. The sampling method used was a purposive sampling technique so that only 9 (nine) complete financial statement data were obtained. Based on the data on the bi.go.id website, the data sampled are Bank Of America, N.A, Bank Of China Limited, Citibank N.A.Deutsche Bank Ag., JP. Morgan Chase Bank, N.A., Standard Chartered Bank, The Bangkok Bank Comp. Ltd., MUFG Bank. Ltd., and The Hongkong & Shanghai Banking Corp. Meanwhile, there were no data for The Royal Bank of Scotland N.V and America Express Bank.

3.2 Models
The data analysis method used in this study was a static panel regression model. Static panel data testing was conducted by estimating the Common effect model, Fixed effect model, and Random effect model. After the three estimation models were carried out, the best model was selected from the three models by performing the Chow test and Hausman test. The empirical model of this study was:
$Profit_{it} = \propto + \beta_1 CD_{it} + \beta_2 SBC_{it} + \beta_{31} NPL_{it} + \beta_4 GDP_{it} + \varepsilon_{it}$, dimana:
Profit   = the profitability of each bank proxied by Return on Assets (ROA).
CD   = credit distribution
SBC   = credit interest rates
NPL   = non-performing loan
GDP   = Gross domestic product
$\beta, 1,2,3,4$= Coefficient
$\propto$ = Constant
ε = error-term
i,t   = the name of the sample company, period

4. Results and Discussions
This section described the results of the study including a description of the research variables (mean, median, standard deviation, maximum value, and minimum value). Next, it discussed the test results and the best model selected in this study, and discussed the research results.

4.1 Description of Research Results
This section described the research results of all variables, consisting of average, maximum, minimum, and standard deviation values shown in Table 1 below:

Table 1. Description of research variable data

Variables	Mean	Median	S.D	Max	Min	Obs.
ROA	1.7653	1.6500	1.3307	7.7000	0.0100	
CD	27,047,492	17,174,928	27,847,808	110,506,541	0.0000	45
SBC	6.1200	6.0000	1.2376	7.5000	4.5000	
NPL	4.1658	1.3700	13.1921	88.9100	0.0000	

GDP	5.0320	5.0300	0.0950	5.1700	4.8800

Based on Table 1 above, three variables had good distribution data (Return on Assets, Interest Rates, and Gross Domestic Products) because the average values were higher than the standard deviation values of the data. Meanwhile, credit distribution and non-performing loans did not have good distribution data. It appears on the high average value compared to the standard deviation. Furthermore, in terms of the maximum and minimum values of the six variables used in this study, they had a zero value. It showed that foreign banks did not have particular activities in a certain period, such as credit distribution and non-performing loans with a minimum value of 0% and a maximum of 110,506,541 (million) and 88.91%, respectively. The interest rate and GDP had a minimum value of 4.5% and 4.88%, and a maximum of 7.5% and 5.17%. Finally, the minimum value of return on assets is 1%, and the maximum value is 7.7%.

4.2 Results

This section discussed the regression results where the dependent variable used in this study was profitability proxied by Return on Assets. Meanwhile, the independent variables were Credit distribution, Loan interest rates, Non-performing loans, and Gross domestic products. This study has carried out a classical assumption test, and the results were no violations of the test results violated. Furthermore, before discussing the panel data regression model, the selection of the best model in this study was carried out by using the Chow test and the Hausman test.

The Chow test results showed that the Chi 2 Cross-section value was 8 and was significant at the 1 percent level. It indicated that the selected model was the fixed-effect model and necessary to proceed to the Hausman test. The results of the Hausman test of this study found that the cross-section value was random 4 and not significant. It concluded that the best model in this study was the random effect model (Widarjono, 2013). So, the results using the random effect model in this study was in Table 2 below.

Table 2. Regression Results

Variables	Coefficient	t-statistic	Probability
C	-7.8512	-1.1097	0.2738
CD	-0.3547	-10.4342***	0.0000
SBC	0.1073	1.0628	0.2942
NPL	-0.0372	-5.4310***	0.0000
GDP	2.9546	2.24012**	0.0307
F-Test	34.8463		0.0000
R2	0.7770		
Chow Test	Cross-section Chi 2 =8		0.0000
Hausman Test	Cross-section random = 4		10.000

Note: ***, ** significance levels 1% and 5%.

Based on Table 2 above, the independent variables affecting the profitability of foreign banks consisted of credit distribution (CD), non-performing loans (NPL), and gross domestic products. Meanwhile, the credit interest rate did not affect the profitability of foreign banking companies operating in Indonesia. The model of this study was as follows:

ROA= -7.8512 – 0.3547CD*** + 0.1073 SBC – 0.0372 NPL*** + 2.9546 GDP

Thus the above equation can be explained that: The constant value (C) in this study was -7.8512. It explains that the profitability of banking companies (ROA) will potentially continue to fall if credit distribution, loan interest rates, non-performing loans, and the gross domestic product are constant. The regression coefficient value of credit distribution was -0.3547 with a significant level of 1%. It means that an increase of 10 points causes ROA to fall by 3,547 points. The regression coefficient value for credit interest rates was 0.1073 and is not significant. It means that a 1 point increase in credit interest rates tends to have a positive direction in increasing ROA by 1,073 points. The regression coefficient value for non-performing loans is -0.0372 and was significant at the 1% level, which indicated that every 1 point increase causes ROA to fall by 0.037 points. The gross domestic product coefficient value was 2.9546 with a significance level of 5%, which means that each increase of GDP 1 point causes ROA to increase by

2,954 points. The results of the f-test of this study found a value of 34.8463 and it was significant at the 1% level. It means that all the independent variables used in this study simultaneously affect the profitability of foreign banking companies operating in Indonesia. Finally, the coefficient of determination or R-Square was 0.7770. It concludes that the return on equity level or profitability of foreign banks can be explained by the independent variables (credit distribution, loan interest rates, NPL, and GDP), which can explain the effect of 77.70%. The remaining 22,30% is explained by other factors, such as firm size, DER, NPM out of this study.

4.3 Discussions
Credit distribution on return on assets
The results found that credit distribution affected the return on assets of foreign banking companies operating in Indonesia. The findings were in line with Kumar and Bird (2021) and Rijal et al. (2020). The results indicated that credit distribution by foreign banks operating in Indonesia tended to reduce bank profitability. The decline in profitability was probably due to credit extended by foreign banks using their currencies, where the exchange rate fluctuation was very risky. Besides, foreign banks may not have sufficiently detailed information from customers and related macroeconomics who take loans from these foreign banks, and the banks lose the opportunity to earn profits.

Credit interest rates on return on assets
This study foud that credit interest rates did not influence return on assets in foreign banks in Indonesia. This finding was inconsistent with Abdurrahman and Çankal (2020), Hasan et al. (2020), and Syamni et al. (2017) that credit interest rates had a positive effect on ROA because foreign banks provided credit below or within the range of Indonesian bank certificates, and some even provided a credit of at least 4.5% and a maximum of 7.5%. Denderski and Paczos (2021) revealed the same results that foreign banks did not follow the regulations made by the domestic policymakers of a country but followed the country direction where the bank originated.

Non-performing loans on return on assets
This study found that non-performing loans affected the return on assets of foreign banks operating in Indonesia. This finding is consistent with research by Ercegovac et al. (2020), Do et al. (2020), and Achyar et al. (2017), which stated that non-performing loans negatively influenced return on assets. These findings indicated that higher non-performing loans to banks led to worsening the quality of bank credit and non-performing loans. For this reason, banking management must be professional and very prudent in managing credit to erode the level of bank profitability.

Gross domestic products on return on assets
The results found that gross domestic product positively and significantly influenced return on assets at foreign banks in Indonesia. The findings were the same as the research of Çankal (2020), Yüksel et al. (2018), Fidanoski et al. (2018), and Alharbi (2017) that gross domestic product positively influenced return on assets. This finding indicated that an increase in the gross domestic product of a country where foreign banks operate had the potential to increase the profitability of foreign banks because banks using foreign banking services become more active in the intermediation function of foreign banks.

5. Conclusions
This study described the factors that influence the profitability of foreign banks operating in Indonesia. This study used credit distribution, interest rates, non-performing loans, and gross domestic product tested on the profitability of foreign banking companies operating in Indonesia. Based on data analysis, credit distribution and non-performing loans had a negative effect on the profitability of foreign banks. Meanwhile, gross domestic products had a positive and significant effect on the profitability of foreign banks.

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