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Bank Competition on Credit Risk and Profitability Moderated by Foreign Bank Penetration: Cases on Indonesian Banking

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Abstract

This research examines and analyzes the Effect of Bank Competition on Credit Risk and Profitability Moderated by Foreign Bank Penetration (Study on Indonesian Banking). The population in this research is all commercial banks registered in the Indonesian Banking Directory issued by the Financial Services Authority (OJK). The sample for this research consisted of 105 banks. The model in this research is commercial banks commercial banks and conventional foreign banks, which are foreign bank units in Indonesia. The data analysis technique was carried out using panel data regression analysis tools with the help of e-views13 software. The results show that banking competition has no significant relationship with banking risk. As assessed by the Lerner index, competition has a positive and meaningful connection to banking profitability. Foreign bank penetration can moderate the relationship between competition and profitability. Foreign bank penetration cannot reconcile the relationship between competition and banking risk.

1. Introduction

Foreign bank penetration is the condition of foreign banks entering a country through the process of opening correspondent banks, representative offices, agents, and branches of said banks to facilitate international transaction services. If foreign banks enter developed countries, foreign bank penetration will lead to better resource allocation, higher competition, and efficiency, the possibility of a financial crisis will be slight, public confidence in the banking sector will increase, and access to international capital will increase. Easy. On the other hand, if foreign banks enter developing countries, it will cause risks such as loss of market share for domestic banks, instability of the

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domestic deposit base, rationing of credit to small companies, loss of profitability for domestic banks, foreign domination and control of the banking system, volatility in domestic financial markets, and deteriorating ability of the domestic financial system to respond to significant internal and external shocks (Aburime, 2009).

Foreign banks are interested in entering Indonesia because the Indonesian market has enormous potential with the high profits that can be obtained from the banking market in Indonesia. This is reflected in the relatively high net interest margin (profit from interest) of banks in Indonesia, so it can be one of the triggering factors for many foreign banks entering Indonesia by acquiring domestic banks from foreign banks (Wiyanti, 2019). Since the financial crisis that hit the world in 1998, banking conditions in Indonesia have also changed very rapidly. Government policy in the form of banking regulations through Government Regulation No. 29/1999, especially Article 3, which is supported by Presidential Regulation (Perpres) No. 77/2007, which permits total ownership of Bank shares by foreign citizens and foreign legal entities obtained through direct purchase or the stock exchange up to 99 percent of the number of shares concerned.

Loose banking regulations in Indonesia cause a high increase in foreign bank penetration. Indonesian banking regulations allow up to 99% foreign ownership in national banking, even though international rules implemented by the World Trade Organization (WTO) only set a figure of 45 percent for foreign ownership in a country. Domination by foreign parties, foreign ownership with the criteria of foreign share ownership of more than 50% already controls 38.10% of the number of banks in Indonesia. Furthermore, there are 3 (three) 4 (four) state-owned banks, which are government banks with a foreign ownership composition of more than 30% and below 50%, namely PT Bank Rakyat Indonesia (Persero) Tbk, PT Bank Mandiri (Persero) Tbk, and PT Bank Negara Indonesia (Persero) Tbk. In Indonesia, banks with foreign ownership are divided into three groups, namely (i) those operating as branch offices (referred to as foreign banks); (ii) as a subsidiary, either through a joint venture with a domestic bank (called a mixed bank) or through mergers and acquisitions with domestic banks that occurred in the post-1997 crisis period (divestment program); and (iii) as a representative office (Hadad et al., 2004). The entry of foreign banks into the Indonesian banking industry has impacted increasingly tight levels of competition in the national banking industry (Jeon et al., 2011). The presence of foreign banks also increases competition and efficiency in the domestic banking industry by reducing intermediary and operational costs (Claessens & Van Horen, 2012).

Competition is a situation that describes the conditions of competition between several companies in an industry that are trying to compete for something that all parties desire. According to Kocabay, (2009), bank competition is a competition process between banks in winning business, which aims to increase market share and gain greater profits. The entry of foreign banks with increasingly tight competition can pose risks for foreign and domestic banks (Jeon et al., 2011). The penetration of foreign banks, along with increased bank competition, has had various impacts, especially on bank risks, one of which is credit risk (Natsir et al., 2019).

Research by Claessens & Van Horen, (2012) states that foreign bank penetration will increase competition in increasingly competitive banking, which can create risks in banking. To secure market share, domestic banks follow foreign competitors to improve services through advanced technology and employee training (Xu, 2011), which can increase operational costs and cause high risks if domestic banks fail in these efforts. NPL from foreign banks from 2020 to 2021 has a lower NPL than BPD Banks, Bank Persero, and Private Banks owned by national shares, which have an average NPL of 2%, even though during the pandemic year, private banks owned by foreign shares had higher

NPLs. High, but during the average era in 2022, foreign-owned private banks have lower NPLs than Bank Persero. Foreign banks have low NPL ratios because foreign bank management is still controlled and influenced by their parent banks, which are large banks that have experience and strategies in carrying out banking business activities in various countries. Therefore, foreign banks will tend to set high standards in providing credit to debtors and implementing credit distribution strategies, including determining credit interest rates and handling credit risk (Yuyetta & Siallagan, 2016). Apart from influencing credit risk, foreign bank penetration also creates banking competition, influencing banking profitability.

The research results of (Kobeissi & Sun, 2010) state that foreign ownership positively and significantly influences profitability. The arrival of foreign banks is expected to increase healthy competition in the domestic banking sector and ultimately increase banking profitability. Foreign banks in Indonesia can increase domestic banks' profitability and not harm domestic banks' financial performance). Previous research from (Lee & Luo, 2015) shows that foreign bank penetration can positively impact bank competition and further increase banking risk. Furthermore, foreign bank penetration also has a significant positive relationship with profitability; domestic banks can adapt the management skills of foreign banks, which have good quality, to increase profitability. In contrast to research conducted by (Natsir et al., 2019) states that foreign bank penetration as measured by the number of foreign banks hurts credit risk, this is because the higher the number of foreign banks, the relatively lower bank interest rates, so that the risk credit will decrease. In this case, because the Bank will be more careful in monitoring credit provision, the Bank's management control will be more robust, which, in the end, will reduce credit risk.

2. Research Hypothesis

The Effect of Bank Competition on Credit Risk

Competition fragility theory argues that increasingly fierce competition will reduce the Bank's ability to generate profits and encourage Banks to take greater risks in order to achieve higher profits. The research that forms the basis of this theoretical argument is research by Keeley (1990) and (Wibowo & Prasetyo Siantoro, 2018), which states that a less concentrated banking market is the main cause of the financial crisis also stated that there is an influence between bank competition on credit risk. From the description above, the first hypothesis is formulated as follows:

H1: Increased Bank Competition Will Increase Credit Risk

The Effect of Competition on Profitability

In markets with low levels of competition, banks can enjoy monopoly profits. The low intensity of bank competition can be shown by the large market power possessed by the bank. Banks with large market power can set the highest possible credit interest rates and the lowest possible deposit interest rates to increase the bank's profitability. This explanation is in line with (Cui et al., 2019) who found a positive relationship between market power as measured by the Lerner index and ROA. So it can be concluded that high intensity competition can reduce bank profitability. In other words, the greater the Lerner index, the higher the bank's profitability. Research by Roman and Dănuleţiu (2013) ; (Jaehyon, 2019) (Batlajery, 2016); (Sheng & Liu, 2010) stated that there is an influence between competition and banking profitability. Thus the following hypothesis is proposed:

H2: Increased Competition will increase Profitability

The Effect of Bank Competition and Profitability with Foreign Bank Penetration as a Moderating Variable

(Kobeissi & Sun, (2010) show that a positive and significant relationship between foreign ownership and increased competition will lead to a positive relationship between competition and Profitability as an indicator of a bank's financial performance. Research conducted by Boldrin and Levine (2009) in Panjaitan (2017) found that the entry of foreign banks can increase the profitability margin of domestic banks in the United States, and liquidity has a more significant multiplier effect on the return on domestic bank assets. The presence of foreign banks does not harm the financial performance of domestic banks. Research by (Astari, 2021), (Ernst & Young, 2013) found that there was a relationship between bank competition and Profitability which was moderated by foreign bank penetration. Thus, the following hypothesis is proposed:

H4: Increased Bank Competition in Moderating Foreign Bank Penetration will Increase Profitability

Conceptual Framework of the Research

The conceptual framework for this research was prepared by connecting the results of previous research with theoretical studies so that the problems in this research can be formulated in a problem statement, which is then transformed into a research conceptual model that is shown to answer the research hypothesis. So, in this research, a conceptual development emerged consisting of exogenous variables (Foreign Bank Competition), moderating variables (Bank Penetration), and endogenous variables (Credit Risk and Profitability).

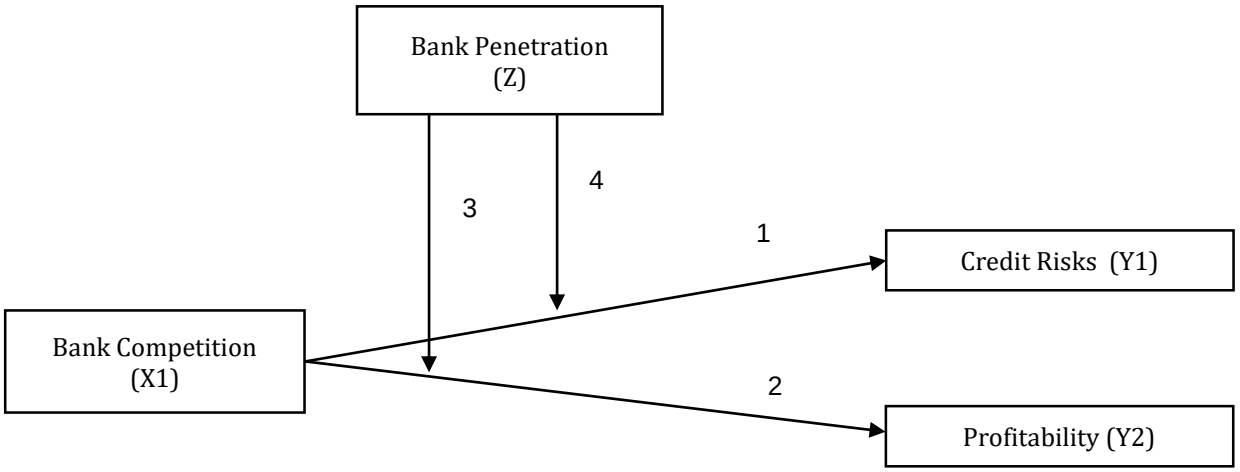


Figure 1. Conceptual Framework of the Research

3. Materials and Methods

The population in this research is all commercial banks registered in the Indonesian Banking Directory issued by the Financial Services Authority (OJK). The sample for this research consisted of

105 banks. The sample in this research is Commercial Banks and conventional foreign Banks, foreign Bank units in Indonesia, referring to the Decree of the Directors of Bank Indonesia No. 32/37/KEP/DIR dated 12 May 1999, which was issued by the Financial Services Authority (OJK) during 2018-2022 and is still actively operating during that time. The data analysis method uses descriptive statistics and inferential analysis consisting of data quality testing, classical assumption testing, and computer-assisted hypothesis testing via Microsoft Excel and E-views13 programs. The analytical tool used in this research uses panel data regression.

3. Results and Discussions

The development of foreign bank penetration in Indonesia for the Book 1 Bank group, there is no foreign bank penetration; this is because, in Book 1, there are no foreign banks in that category. Meanwhile, from year to year, Book 2, Book 3, and Book 4 experienced fluctuations seen from the foreign bank penetration measurement tool, namely FBA. The picture below shows the level of foreign bank penetration of the Book 1, Book 2, Book 3, and Book 4 bank groups in Indonesia from 2018 to 2022.

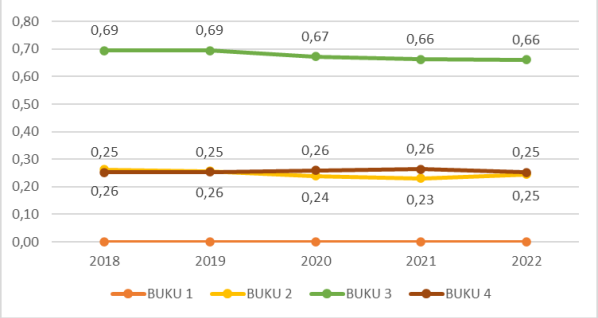


Figure 1: Foreign Bank Penetration

The highest foreign bank penetration was in book 3, namely in 2018 and 2019 with a value of 0.69, in 2020-2022 there was a decline to 0.66. Book 4 is in second place where there is foreign bank penetration, the highest value is 0.26 from 2020-2022 compared to 2018-219, namely 0.249. Furthermore, book 2 is ranked number 3 with the highest value in the 2018-2019 period with a value of 0.26 and in the 2020-2022 period it decreased to 0.24. Lastly, in book 1 there is no foreign bank penetration because there are no foreign banks in the book 1 bank category.

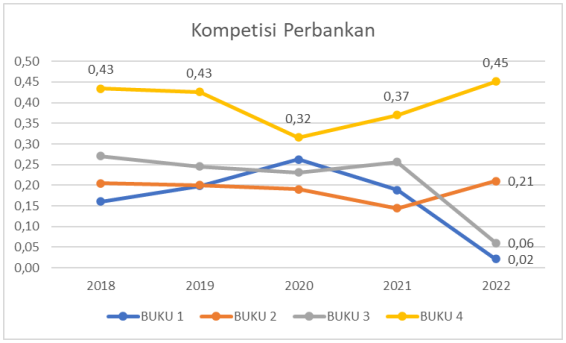


Figure 2: Banking Competition

Banking Competition from 2018-2022. The highest banking competition is in book 1 because it has the smallest learner index value with the 2021-2022 period which has the highest competition compared to the 2018-2020 period. Banking competition in book 2 is the second highest, book 2 also has higher competition in the 2020-2022 period compared to the 2018-2019 period. Furthermore, banking competition in Book 3 is number 2 smallest, the 2020-2022 period has the highest competition compared to the 2018-2019 period. The smallest banking competition is in Book 4 banks because they have the highest learner index value. Banking competition in the 2020-2022 period has the highest competition compared to the 2018-2019 period in Book 4.

Table 1. Statistical values from Hypothesis Testing

NPL Effect				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Lerner	-0.008531	0.013051	-0.653685	0.5136
C	0.036258	0.005652	6.414.666	0.0000
R-square	0.081648			
ROA Effect				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Lerner	0.030534	0.002359	1.294.288	0.0000
C	0.006632	0.001022	6.491.298	0.0000
R-Square	0.242598			

Source: 13 Processed Data

It is known that the regression coefficient value of banking competition on credit risk is -0.0085, which is harmful. This means that banking competition hurts the price of credit risk. It is known that the Prob value is 0.513, namely > 0.05 significance level, so competition hurts credit risk but is not significant. It is known that the regression coefficient value of banking competition on credit risk is 0.0305, which is positive. This means that competition has a positive effect on profitability. It is known that the Prob value is 0.0000, namely > 0.05 significance level, then banking competition has a positive impact on profitability, and the effect is significant.

In the moderation test between foreign bank penetration and the relationship between banking competition and credit risk, the probability value is 0.8273 > α 0.05. It is insignificant, meaning that foreign bank penetration cannot moderate (strengthen or weaken) the relationship between competition and credit risk. In the moderation test between foreign bank penetration on the relationship between banking competition and profitability, the probability value is 0.00 > α 0.05, which means significant, meaning that foreign bank penetration can moderate the relationship between competition and profitability.

Discussion

The Effect of Banking Competition on Credit Risk

This research shows that banking competition has a negative and insignificant effect on credit risk (NPL), so the hypothesis of a positive and significant influence of competition on credit risk is not supported or rejected. There is no significant effect of competition on banking risk because credit risk is not only caused by banking competition. This means that banking competition does not influence credit risk; although it can have an impact, it has quite a minor influence on banking credit risk. As described by the Lerner Index, banking competition has a negative relationship with Non-Performing

Loans (NPL). Because the meaning of the interpretation of the Lerner Index itself is the opposite of bank competition, where a decreasing or small Lerner Index variable indicates increasing competition, this means that there is a positive relationship between bank competition variables and credit risk. On the other hand, a decrease in the Lerner Index value will increase the NPL value, which means credit risk will increase. Banks with high market power tend to have lower NPL ratios (Clark et al., 2018; (S. C. Chen & Lin, 2019; Diallo, 2015; Dushku, 2016).

The results of this research, which found that the influence of competition on credit risk is not significant but has a negative effect, are not by the competition agility theory from Keeley (1990), which states that increased banking competition causes an increase in bank fragility (J. Chen & Zhu, 2019; Diallo, 2015; Dushku, 2016). The essence of competition theory describes the relationship between the market system and bank risk-taking. As a result of competition, banks are encouraged to take more risks, which means bank risks may increase, including bank credit risks. The results of this research are research conducted by several previous researchers, such as Nuralyza et al. (2022), I. et al. (2019), (Ridho & Susanti, 2019), (Molina-Azorin et al., 2021; Safitri, 2023) (Moudud-Ul-Huq et al., 2023) stated that there is a negative influence between banking competition and banking risk.

The Effect of Banking Competition on Profitability

The competition variable (Lerner Index) has a significant and positive influence on profitability (ROA), and it can be concluded that the hypothesis is accepted. This shows that the higher the Lerner index, the lower the competition and the greater the profitability (ROA) for banking companies because low, competitive conditions enable banking companies to diversify their business, differentiate products, compete through promotions, advertising, encourage efficiency, increase assets, and also increase capitalization levels and increase credit distribution and other banking programs.

This research supports the competition theory from Keeley (1990). This view argues that low bank competition will increase market power and profit margins. The competitive environment forces banks to increase their profits. The low intensity of bank competition can be shown by the significant market power possessed by the bank. Banks with immense market power can set the highest possible credit interest rates and the lowest possible deposit interest rates to increase bank profitability. This explanation aligns, who found a positive relationship between market power as measured by the Lerner index and ROA. It can be concluded that high-intensity competition can reduce bank profitability. In other words, the greater the Lerner index, the higher the bank's profitability. This research is research by (Iqbal & Molyneux, 2016); (Mustalahti et al., 2020) stated that there is a positive influence between competition and banking profitability.

Moderation of Foreign Bank Penetration on the Effect of Banking Competition on Risk

The Moderated Regression Analysis (MRA) test results in this study show that foreign bank penetration cannot moderate (weaken/strengthen) the influence of competition on credit risk where the probability value is greater than the significance level value. This shows that if considered a stand-alone independent variable, foreign bank penetration has a negative relationship with NPL but is insignificant. Furthermore, the association becomes insignificant when foreign bank penetration interacts with Competition or the Lerner Index. In other words, foreign bank penetration cannot moderate the relationship between Competition (Lerner Index) and Risk or Non-Performing Loans (NPL).

This research results differ from the competition theory from Keeley (1990), which states that increasing banking competition causes bank fragility (J. Chen & Zhu, 2019; Diallo, 2015; Dushku,

2016). The essence of competition theory describes the relationship between the market system and bank risk-taking. As a result of competition, banks are encouraged to take more risks, which means bank risks may increase, including bank credit risks. The research results show that foreign bank penetration cannot moderate the influence of competition on credit risk. This research aligns with (Nuralyza et al., 2022; Sudono et al., 2020) whose research results show that foreign bank penetration cannot moderate the influence between competition and credit risk. (Wang et al., 2018) in his research, shows that in developed countries, foreign bank penetration increases competition but reduces competition in developing countries. (Natsir et al., 2019) also found that increasing the number of foreign banks can reduce credit risk in emerging markets or countries. Reducing credit risk means local banks have control in selecting debtors with the potential for smooth and non-current credit payments.

Moderation of Foreign Bank Penetration on the Effect of Banking Competition on Profitability

The Moderated Regression Analysis (MRA) test results in this study show that foreign bank penetration can moderate (weaken/strengthen) the influence of competition on profitability where the probability value is smaller than the significance level value. The type of moderation of foreign bank penetration on the influence of banking competition on profitability is all moderation or quasi-moderation because foreign bank penetration has a negative effect (negative coefficient value) on the relationship between competition and domestic bank profitability partially, which means that if there is a lack of foreign bank presence in Indonesia it can increasing the Lerner index, which means that reduced competition can increase profitability, and vice versa. This research supports the competition theory from Keeley (1990). This view argues that low bank competition will increase market power and profit margins. This is due to three factors: franchise value, bank regulation and supervision, and portfolio diversification. Large banks try to maintain franchise value. Franchise value is the level of profit obtained by bank owners from future operational activities (Northcott, 2004).

This research aligns with research (Usman et al., 2018), which states that foreign bank penetration hurts banking competition in ASEN countries, meaning that a lack of penetration will increase the Lerner Index so that competition will decrease, thereby increasing profitability. The presence of foreign banks in Indonesia can increase domestic banks' profitability and not harm domestic banks' financial performance (Suanda, 2020). This research is in line with Panjaitan's (2017) results, which show that although foreign bank penetration exists, local bank profitability still increases. Foreign banks entering the banking industry prefer mergers, acquisitions, and consolidation between banks, especially after the implementation of API (after the 1997/98 crisis).

4. Conclusion

Banking competition does not have a significant relationship to banking risk. As assessed by the lerner index, competition has a positive and significant relationship to banking profitability. Foreign bank penetration can moderate the relationship between competition and profitability. Foreign bank penetration cannot moderate the relationship between competition and banking risk. Recommendations for Future Research future research is expected to examine the period after COVID-19 occurs when economic conditions are more stable. Future researchers are expected to examine other variables such as banking regulations, financial stability, macroeconomics, and other variables related to the variables in this research, which can provide long-term solutions to various interested parties in creating various policies. Each bank must anticipate competition. For this reason,

banking in Indonesia must determine the right strategy to remain competitive at the national and international levels. For less competitive banks, first, strengthen their banking fundamentals by strengthening bank capital to manage business and risks. One way is through mergers and consolidation.

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