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The Effects of Ownership Structure on Bank Profitability

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***Abstract*—This study aims to examine the effects of ownership structure on the profitability of banks in Indonesia. The structure of bank ownership is divided into three categories, namely government, private domestic, and foreign ownership. Bank profitability is measured by Return on Assets (ROA) and Return on Equity (ROE). This research uses bank size as a control variable. We use explanatory survey for this study. The sampling technique used is the purposive sampling method. We use secondary data obtained from the Indonesian Financial Services Authority and annual reports from each bank. We then analyze the data using panel regression testing with common effect modeling. The results show that private domestic and foreign ownership have statistically significant positive effects on bank profitability, while government ownership has a statistically significant negative effect on bank profitability.**

Keywords—ownership structure; banking; profitability

I. INTRODUCTION

Developing countries continue to show higher economic growth rates compared to developed countries. Financial liberation and economic reforms, among other things, have created numerous new opportunities for domestic and foreign investors to capitalize on. Banking sectors in emerging economies play a pivotal role in the success or failure of major investments and economic initiatives, especially in Indonesia, where the banking sector is a dominant force in financial industry. Therefore, the banking sectors in emerging economies are important and interesting grounds for research. Ownership of banks in emerging economies are especially important due to the highly concentrated nature of bank ownership in such countries, meaning bank shareholders have a higher degree of power compared to bank shareholders in developed nations, where ownership is typically more dispersed [1].

One prominent strand of the literature examines the difference in performance between three major types of bank ownership (state-owned, domestic private or foreign). Previous studies have examined the effect of different types of ownership on banking profitability with mixed and often conflicting results. The several studies examined the performance of government-owned banks relative to private banks and found no significant evidence that private-owned banks performed better than government-owned banks [2]. Another study found that foreign-owned banks had better performance than private domestic banks in terms of profitability, cost efficiency and bank competitiveness [3]. The comparative studies of the performance of 181 banks in various countries in Europe and evaluated the impact of various bank ownership models and ownership concentration on profitability, cost efficiency and bank risks. The results show that different types of ownership have different impacts on banking performance [4].

Previous studies on bank ownership and performance in the emerging economies similarly shows mixed findings [5]. The effect of bank ownership types on the performance of banks in Southeast Asia (Malaysia, Indonesia, Thailand, Philippines, and Korea). Their research results support foreign ownership and state that government ownership has a negative effect on bank performance. The relationship between ownership structure and bank performance in Malaysia and found that government ownership had a large influence on changes in bank performance [6]. Foreign ownership does not have a significant influence on bank performance. Another study examined the effects of government ownership, foreign ownership, and ownership concentration on bank performance found that government ownership has a negative effect on bank profitability. The results of this study also show that foreign ownership actually negatively affects the bank's profitability [7].

Due to the differences in the political, economic and regulatory environment between developed and developing countries, as well as the empirical literature on the influence of ownership types and concentration of ownership that provides different and conflicting research results from each country, this paper attempts to provide further evidence and hopefully shed some light on the impact of ownership structure on the profitability of banks in the context of an emerging country, in this case, Indonesia.

II. LITERATURE REVIEW

A. Government Ownership

The government as the owner or majority shareholder of a bank has the right to direct and control the activities of the bank in accordance with the social and political objectives it wants to achieve, potentially creating conflict with bank management. Political bureaucrats have goals that are often borne out of political interests but are contrary to the

improvement of social welfare and the maximization of corporate value [8].

Banks with government ownership are often associated with poor performance such as low profitability, inefficiency, slow productivity and growth as well as greater risks faced by banks.

The compared of the performance between state-owned banks and private-owned banks in Argentina and found that state-owned banks had lower long-term performance than private banks [9]. Similar in developed and developing countries and found that there was no significant difference between the profitability of state banks and domestic private banks in developed countries [10]. But in developing countries it was it was found that state-owned banks tend to have lower profitability compared to domestic private banks.

In Europe it was found that mutual banks and government banks showed lower profitability than private banks, even though mutual banks and government banks had lower operating costs [4].

The studied the effect of bank ownership structures on bank performance in the Chinese banking industry it was show that government-owned commercial banks are less profitable, less efficient, and have worse asset quality than private domestic commercial banks and foreign joint-venture banks [11].

B. Foreign Ownership

Regional and country-level studies focusing on high-income countries mostly suggest that domestic banks outperform foreign banks in particular in the United States [12,13]. In contrast, the majority of studies focusing on developing countries finds that foreign-owned banks perform better than other types of banks in terms of cost and profit efficiency [1].

Foreign shareholders and owners face what is called the liabilities of foreignness, which includes additional operating costs in overseas markets and difficulties in adopting norms and practices in host country [14]. The additional costs due to liabilities of foreignness can cause foreign banks to have poorer profitability. However, 'global advantage hypothesis' states that foreign banks might benefit from more advanced technologies, better skilled labor force, better risk management, superior information gathering capabilities and greater transparency [15]. This can help foreign banks to exploit bank-specific advantages and overcome the liabilities of foreignness in their host countries [16].

The studied of the relationship between bank ownership and bank performance in developed and developing countries and found that foreign-owned banks tend to have higher profitability and lower operating costs compared to domestic private banks and state-owned banks [10].

The other research show that foreign-owned banks have better profitability than domestic banks when foreign owners come from countries with high income; regulations in the host country are relatively weak; foreign shareholders have majority ownership and a high market share [17]. The same thing also in Hungarian and Ghana banking sector during its transition and found that foreign banks or banks with high foreign ownership had higher performance and lower inefficiencies [18,19].

C. Private Domestic Ownership

Private domestic ownership is a shareholding of a company that is majority owned by local institutions or institutions (insurance companies, banks, and other institutional companies) [20]. Domestic institutions have a home field advantage [12]. Home field advantage arises because of the organization's economy and high operating and monitoring costs for foreign banks. Foreign institutions may lack local information about the host country market which increases difficulties in maintaining deposit relationships with domestic clients or lending relationships with small and medium-sized companies. Therefore, domestic banks have their own advantages compared to foreign banks.

The effects of changes in bank governance on bank performance in commercial banks and found that private ownership led to superior productivity performance and profit efficiency compared to government ownership [5].

The relationship between bank ownership and efficiency in the Chinese banking industry and found that privatization of state banks significantly improved the bank's performance and that in China private domestic banks were superior to state banks and foreign-owned banks [21,22]. And in India it was found that private domestic banks in the Indian banking industry tend to have higher financial performance than state-owned commercial banks [23].

III. METHODOLOGY

The method used in this study is explanatory survey. Consistent with prior literature, the population of this research are conventional commercial banks for the period of 2013-2017. This research uses purposive sampling method to determine the sample for this research. The criteria for selecting the sample under study are as follows: (a) Banks must issue financial statements continuously during the period of 2013-2017, (b) Banks must remain in operation during the period of 2013-2017. Thus the sample used in this research are 101 banks. Ownership and financial data are obtained from the Financial Services Authority of Indonesia and each banks' annual reports. The analysis technique used is panel least squared regression analysis.

This study follows research conducted by Kalluru in using two proxies for bank profitability, namely Return on Assets (ROA) and Return on Equity (ROE) [24].

$$ROA = \frac{Net\ Profit}{Total\ Assets} x100\% \quad (1)$$

$$ROE = \frac{Net\ Profit}{Total\ Equity} x100\% \quad (2)$$

The models used in this study to measure the effects of ownership structure on bank profitability are as follows:

$$ROA = \alpha + \beta_1 OWNERSHIP + \beta_2 SIZE + e \quad (3)'$$

$$ROE = \alpha + \beta_1 OWNERSHIP + \beta_2 SIZE + e \quad (4)'$$

OWNERSHIP is bank ownership structure which is divided into three categories, namely foreign ownership (FOROWN), government ownership (GOVOWN), and private domestic ownership (DOMOWN). SIZE is the control variable, the size of banks.

Foreign, government, and private domestic ownership are measured by the following ratio:

$$FOROWN = \frac{\sum shares\ owned\ by\ foreign\ investors}{\sum shares\ outstanding} x100\% \quad (5)'$$

$$GOVOWN = \frac{\sum shares\ owned\ by\ the\ government}{\sum shares\ outstanding} x100\% \quad (6)'$$

$$DOMOWN = \frac{\sum shares\ owned\ by\ pvt.domestic\ investors}{\sum shares\ outstanding} x100\% \quad (7)'$$

This study uses one control variable, namely bank size which is measured by the natural log of total assets.

$$SIZE = Ln\ Total\ assets \quad (8)$$

Bank size was chosen because large banks can utilize larger economies of scale and so tends to be more profitable [25].

IV. Results and Discussion

Table I shows the results of the panel least regression test that examined the effect of various ownership structures along with bank size as control variables on bank profitability, measured by ROA.

The regression coefficients of the study showed varying signs, positive and negative. A positive coefficient indicates the unidirectional effect of the independent variable to the dependent variable, whereas a negative coefficient indicates the opposite effect of the independent variable to the dependent variable.

Based on table I, foreign ownership has positive, significant effect on bank profitability with a coefficient value of 0.434977. This means that an increase in foreign ownership can increase banks' ROA by 0.434977. Private domestic ownership has a positive, significant effect on bank profitability with a coefficient value of 1.184705, indicating that an increase in private domestic ownership can increase banks' ROA by 1.184705. Government ownership has a positive, non-significant effect on bank profitability with a coefficient value of 0.109647, indicating that an increase in government ownership can increase banks' ROA by 0.109647. The size of the firm has a positive, significant effect on bank profitability with a coefficient value of 0.203441.

TABLE I. Results of Panel Least Regresions (ROA)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FOROWN	0.434977	0.088490	4.915529	0.0000
GOVOWN	0.109647	0.062475	1.755061	0.0793
DOMOWN	1.184705	0.083094	14.25748	0.0000
SIZE	0.203441	0.026514	7.672973	0.0000
R-squared	0.340271	Mean dependent var		1.564191
Adjusted R squared	0.330005	S.D. dependent var		2.278151
S.E of regression	1.864740	Akaike info criterion		4.099465
Sum squared resid	23687.07	Schwarz criterion		4.205274
Log likelihood	-14075.10	Hannan-Quinn criter.		4.135964
F-statistic	33.14572	Durbin-Watson stat		0.074788
Prob (F-statistic)	0.000000			

A coefficient of determination test was done to determine the proportion of the variance in the dependent variable that is predictable from the independent variable. Based on table I, a coefficient of determination (R Square) value of 0.34 or 34% was obtained for the model. Regression results show that the independent and control variables were able to explain 34% of the variance ROA as a proxy for bank profitability and the remaining 66% is influenced by other variables not examined by this research.

TABLE II. Results of Panel Least Regresions (ROE)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FOROWN	47.95872	3.936558	12.18291	0.0000
GOVOWN	-32.62341	9.415665	-3.464802	0.0005
DOMOWN	17.39728	0.971990	17.89862	0.0000
SIZE	4.207000	0.550796	7.336145	0.0000
R-squared	0.106072	Mean dependent var		1.564191
Adjusted R squared	0.092365	S.D. dependent var		2.278151
S.E of regression	53.17570	Akaike info criterion		4.099465
Sum squared resid	19547578	Schwarz criterion		4.205274
Log likelihood	-37801.72	Hannan-Quinn criter.		4.135964
F-statistic	7.738566	Durbin-Watson stat		0.074788
Prob (F-statistic)	0.000000			

Table II shows the results of the panel least regression test that examined the effect of various ownership structures along with bank size as control variables on bank profitability, measured by ROE.

Based on table II, foreign ownership has a positive, significant effect on bank profitability as measured by ROE with a coefficient value of 47.95872, indicating that an increase in foreign ownership will increase banks' ROE by 47.95872. Private domestic ownership has a positive, significant effect on bank profitability with a coefficient value of 17.39728, indicating that an increase in private domestic ownership will increase banks' ROE by 17.39728. Government ownership has

a negative, significant effect on bank profitability with a coefficient value of -32.62341, indicating that an increase in government ownership will actually lower banks' ROE by -32.62341. The size of the firm has a positive, significant effect on bank profitability with a coefficient value of 4.207000.

A coefficient of determination test was done to determine the proportion of the variance in the dependent variable that is predictable from the independent variable. Based on table II, a coefficient of determination (R Square) value of 0.106072 or 10.6% was obtained for the model. Regression results show that the independent and control variables were able to explain 10.6% of the variance ROE as a proxy for bank profitability and the remaining 89.4% is influenced by other variables not examined by this research.

Regression results show that government ownership negatively affects bank profitability as measured by ROE. This result is consistent with prior studies done by Micco, Panizza and Yanez and by Fathi and El-Bannan which both state that government ownership shows statistically significant negative effect on bank profitability [10,26]. The poor financial performance of governmental banks can be attributed to the fact that government banks are social welfare-maximizing organizations that focus on economic and social growth. Pursing economic development might force public banks to engage in less profitable and riskier activities in order to motivate the business cycle and resolve financial market failures [27].

From the regression results explained above we can see that private domestic ownership has a statistically significant positive effect on bank profitability. This result is in line with a previous study done by Mamatzakis, Zhang, and Wang which found that banks with higher numbers of private domestic shareholders tend to perform significantly better and are more profitable [28].

The results of this study shows that foreign ownership has a statistically significant positive effect on bank profitability. Taken as a whole, foreign ownership is the most profitable type of ownership. This result is consistent with prior studies done by Haque and Shahid and by Berger, Clarke, Cull, Udell, and Klapper which both state that banks with higher numbers of foreign shareholders are operated more profitably and that in developing countries, foreign banks tend to be more profitable than their domestic counterparts [7,21]. This is in line with the global advantage theory, which states that foreign banks might benefit from more advanced technologies, better skilled labor force, better risk management, superior information gathering capabilities and greater transparency [15].

Lastly the control variable size has a positive, significant effect on bank profitability, meaning larger banks tend to be more profitable than smaller ones due to increasing return to scale. This is consistent with Haque and Shahid [7] and Fathi and El-Bannan [26], which state that large banks can better take advantage of existing economies of scale to achieve higher levels of profitability.

V. Conclusions

This study examines the relationship between ownership structure and bank profitability in commercial conventional banks in Indonesia for the period of 2013-2017. Based on the results of our analysis this research finds that foreign ownership has a statistically significant positive effect on bank profitability as measured by ROA and ROE. Private domestic ownership has a positive, significant effect on bank profitability as measured by ROA and ROE. Government ownership has a positive, non-significant effect on bank profitability as measured by ROA but a statistically significant negative effect on bank profitability as measured by ROE. The size of the firm has a positive, significant effect on bank profitability as measured by ROA and ROE. In terms of profitability, taken as a whole foreign ownership is the most profitable type of bank ownership compared to domestic ownership, both public and private.

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