Performance and Contribution of Japanese and Non-Japanese Financial Institutions in Developing Economies: An Empirical Research in Indonesia

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Abstract

Paper purpose is to analysis the value generated by the Japanese and Non Japanese financial institutions in Indonesia banking from 2013-2018. The paper concentrated on the 16 foreign banks contained of seven affiliates of Japanese banks and nine affiliates of Asian Non-Japanese Banks. The shareholders' origination will be the independent parameter, and the main financial measurements are the capital structure, credit risk, efficiency, profitability, and firm size, will be the dependent parameter. This paper used non-parametric Mann Whitney Test, besides parametric by Regression of Dummy Variable. The empirical outcomes indicate that there are variances in capital structure, credit risk, efficiency, and firm size. There is no significant variance in profitability ratio. Japanese banks are more noticeable in terms of firm size and well in efficiency ratio and loan to deposit ratio. However, Japanese banks have a higher non-performing credit. The outcomes are significant at a = 1% for capital structure and efficiency ratio.

Kinerja dan Kontribusi Institusi Keuangan Jepang dan Non-Jepang di Negara Berkembang: Sebuah Penelitian Empiris di Indonesia

Abstrak

Penelitian ini bertujuan untuk mempelajari nilai yang diciptakan oleh bank-bank Jepang dan bank Non-Jepang yang berinvestasi di Indonesia dari tahun 2013-2018. Penelitian meneliti 16 bank asing yang terdiri dari 7 bank anak bank Jepang dan 9 bank anak perbankan Asia non-Jepang. Status pemegang saham adalah variabel independen dan ratio keuangan merupakan struktur modal, risiko kredit, efisiensi, profitabilitas, dan ukuran perusahaan. Penelitian ini mempergunakan non-parametrik Mann Whitney dan parametrik dengan regresi variabel dummy. Hasil penelitian empiris menunjukkan bahwa terdapat perbedaan dalam struktur modal, risiko kredit, efisiensi dan ukuran perusahaan. Tidak terdapat perbedaan yang signifikan pada rasio profitabilitas. Bank Jepang lebih unggul dalam ukuran perusahaan, efisiensi dan rasio pinjaman terhadap deposito. Sedangkan Bank Jepang juga memiliiki rasio non-performing loan yang lebih tinggi. Hasil penelitian pada nilai signifikan a = 1% untuk struktur modal dan efisiensi.

JEL Classification: F21, G23, G34

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INTRODUCTION

When Asia faced a financial crisis from 1997 to 1998, few nations were also devastated by banking and financial crisis. One of the countries experiencing the banking crisis in 1998 in Indonesia. The crisis forced 16 banks to be liquidated, and 54 banks to be under the supervision of the Badan Penyehatan Perbankan Indonesia (BPPN/IBRA).

Many investors acquired banks in Indonesia after the banking restructuring period from 1999 to 2002. Major banks in Southeast Asia, such as Overseas-Chinese Banking Corporation, Commerce International Merchant Bankers, DBS, UOB, and Maybank, opted to invest in Indonesia, as shown in Table 1. Other foreign banks, such as Woori Bank, China Construction Bank, J Trust Bank, Industrial and Commercial Bank of China, State Bank of India, and Shinhan Bank, also invested in Indonesia. In a direct and indirect manner, foreign investors made a substantial investment in The Indonesia's banking industry.

Sumitomo, Mizuho, and BTMU are few of the major banks that have been operating in Indonesia. Indonesia's banking industry competition is overgrowing due to the presence of foreign banks, which is very good for the customers. Compared to the banking industry before the 1998's crisis, banking performance has also improved significantly. The Banking industry has experienced 63% asset growth in the last 5 years, as shown in Figure1. Castaldi et al (2019) found that related corporate business is only beneficial when the foreign subsidiary is domiciled in a state considered by a feeble organization, and when the parent is in the manufacturing industry. The best shareholding proportion of foreign ownership is 20,16% (Yang et al, 2019).

Table 1. Bank Acquisition List

No.	Target	Acquired By	Country
1	Bank Mutiara	J. Trust Bank	Japan
2	Bank Danamon	Bank of Tokyo Mitsubishi UFJ Group	Japan
3	Bank Tabungan dan Pensi-unan Nasional	Sumitomo Group	Japan
4	Bank Nusantara Parahyangan	Bank of Tokyo Mitsubishi Group	Japan
5	Bank Bima	KEB Hana Bank	South Korea
6	Bank Woori Bersaudara	Woori Financial Group	South Korea
7	Bank Metro Express	Shinhan Bank	South Korea
8	Bank Permata/Bank Universal	Standard Chartered Bank	Britain/Hongkong
9	Bank Niaga/Lippo Bank	Commerce International Merchant Bankers	Malaysia
10	Bank Buana Indonesia	UOB	Singapore
11	Bank Dinar	APRO Financial Group	South Korea
12	Bank International Indonesia	Maybank	Malaysia
13	Bank Ekonomi Raharja	Hongkong Shanghai Banking Corporation	Hongkong/United Kingdom
14	Nederlandsch Indische Spaar En Deposito Bank	Overseas-Chinese Banking Corporation	Singapore
15	Bank Tamara	China Trust Bank	Taiwan China
16	Bank Andara	APRO Financial Group	South Korea
17	Bank Halim	Industrial and Commercial Bank of China	People's Republic of China

Source: Yearly Report Publications

Figure 1. Banking Asset (2013-2018)
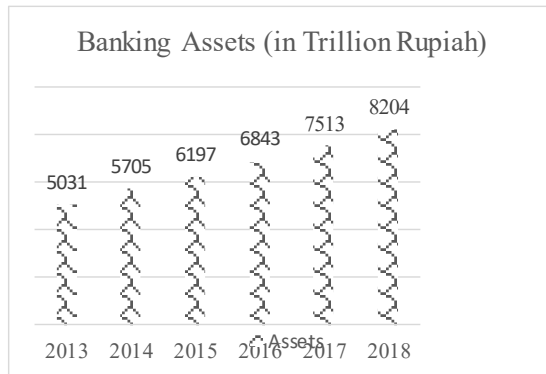
Source: www.ojk.go.id

Fang et al. (2019) demonstrated that bank with foreign shareholding is meaningfully related by superior informativeness in bank share value. Exposure to the office networks of foreign banks is related to enhanced profitability at local banks, better efficiency, and improved non-interest revenue (Luo et al., 2015). These interactions are most noticeable for joint-stock domestic banks, seemingly as their ownership arrangement fosters information transmission (Luo et al., 2015).

Research on foreign shareholders' value creation is still unusual, particularly in the banking industry of developing countries like Indonesia. Foreign acquired banks are related to a rise in the revenue created from non-interest businesses in the fifth year resulting in their acquisitions, presenting the introduction of innovative approaches (Polovina & Peasnell, 2015).

Next, Liang et al (2015) provide significant implications for countries that want the FDI in retail business and for companies that need to capitalize on a global retail business. The first phase is constrained by the level of non-performing credits created in a prior dated. In the second phase, the bank managers use the first phase intermediate outputs to create suitable outputs of loans and securities investments and an undesirable output of non-performing credits (Fukuyama & Weber, 2015).

Marketing competencies are the furthermost analytical driver of production, followed by industry forces, accurately, competitive rival-

ry and power of merchants, and market positioning (Takata, 2016).

Meanwhile, risk reduction through corporate social responsibilities activities is more important to create long-term value for Japanese companies (Suto & Takehara, 2016).

Next, the results show that labor does not influence the Gross Domestic Product growth and capital influence the output positively, under the condition that there is a high rate of foreign bank penetration. (Ghosh, 2016).

Moreover, Nguyen (2019) discovered that diversification influences the profitability, high diversification, and high risk of commercial banks negatively. Haris et al (2019) found that there are indifferent results in terms of government changes, but the government transition has a negative impact on performance.

Next, Okere et al (2019) discovered that banks should employ an appropriate number of senior foreign managements on their board with diverse skills and abundant experience to improve banking performance.

This research will examine the value created by the stockholders in Indonesia's banking industry from 2013 to 2018. The performance measurement will be based on ownership prominence and key financial performances.

Hypothesis Development

In this study, the main research questions are: (1) Do Japanese banks have any significant impact on Indonesia's banking capital structure compared to Other Non-Japanese banks? (2) Do Japanese banks have any significant impact on Indonesia's banking credit risk compared to Other Non-Japanese banks? (3) Do Japanese banks have any significant impact on Indonesia's banking efficiency compared to Other Non-Japanese banks? (4) Do Japanese banks have any significant impact on Indonesia's profitability compared to Other Non-Japanese bank? And (5) Do Japanese banks have any significant impact on Indonesia's banking size compared to Other Non-Japanese banks?

The foreign banks outperform the domestic banks in ROA, CA, and ROE. The fo-

reign banks are more profitable than their local counterparts during the period of the research (Alnaa et al., 2016). Based on this argument, the formulation of hypothesis is :

H1: Japanese banks have any significant impact on Indonesia's banking capital structure compared to Other Non-Japanese banks.

The first phase is constrained by the level of non-performing credits created in a prior dated. In the second phase, the bank managers use the first phase intermediate outputs to create suitable outputs of loans and securities investments and an undesirable output of non-performing credits (Fukuyama & Weber, 2015).

Chen et al (2019) concluded that capital regulation stringency and restriction on bank's activities can reduce the risk factor level successfully. This also applies to the policy implication for foreign investors and regulatory authorities. Banks with foreign ownership exhibit considerably better performance compared to the local-owned banks because banks with better risk management systems have better corporate governance. (Jolevska et al., 2018).

Based on this argument, the formulation of hypothesis is :

H2: Japanese banks have any significant impact on Indonesia's banking credit risk compared to Other Non-Japanese banks.

Moreover, Yang et al (2019) found that Australian banks possess the highest level of technical efficiency compared to the Indonesian banks, which possess the lowest average of technical efficiency.

To recapitalize the distressed banks, capital injection from the government is a feasible way to enhance the interest margin and profitability survival of the banks. (Lin et al., 2019). State-owned banks practice the highest inefficiency of 14.08%. Islamic banks and State-owned banks face technical inefficiency, mainly due to the scale inefficiency. In contrast, the technical inefficiency of conventional private commercial banks is mainly caused by pure technical inefficiency. (Nabi et al, 2019).

Based on this argument, the formulation of hypothesis is :

H3: Japanese banks have any significant impact on Indonesia's banking efficiency compared to Other Non-Japanese banks.

There is a significant difference in profitability and board composition between local and foreign-owned banks. Local banks have higher income and profits. (Mori & Towo, 2017). Haris et al (2019) discovered an inverted U-shaped relationship between bank profitability and board size. They found that a board with more than 8-9 members tend to decrease the profitability of the bank. Alexakis et al (2019) found that Islamic financial institutions have worse cost and profit results but are on par with the revenue performance compared to the conventional banks. Based on this argument, the formulation of hypothesis is :

H4: Japanese banks have any significant impact on Indonesia's profitability compared to Other Non-Japanese bank.

Johan et al (2012) showed that firm size is one of key variabbles in determinants performance of acquisition in Indonesia financial markets. Based on this argument, the formulation of hypothesis is :

H5: Japanese banks have any significant impact on Indonesia's banking size compared to Other Non-Japanese banks.

METHOD

There are five significant ratios selected as the research variables, namely the capital structure, credit risk, efficiency, profit ratio, and firm size. This research analyzes the firm size as one of the key measurements. In the financial service industry, firm size is one of the most important drivers of growth. The higher the asset, the higher the will be. There is also a quote in the banking industry saying that ''Too big too fail in

banking". Based on the previous researches, the hypothesis is the shareholders will influence capital structure, credit risk, efficiency, profit, and firm of banking positively.

This study added a specific measurement for the effect of Japanese ownership on bank performance. The effect of ownership status is to measure the effect of ownership (Japanese vs. Asian Non-Japanese) to determine capital structure, credit risk, efficiency, profitability, and firm size.

This study used the parametric test model developed from the dummy regression model (Vander-Vennet, 2002; Johan, 2018). This research uses six measurements on capital structure, credit risk, efficiency, profit ratio, and firm size. The variables above are developed into five measurement ratio groups with six research variables.

To measure the financial performance, Japanese owned banks, and Asian Non-Japanese owned banks are labeled differently (DO = dummy). DO code for Japanese shareholders is 1, while the DO code for the Other or Asian Non-Japanese shareholders is 0. Ratio of capital structure, credit risk, efficiency, profit ratio, and firm size are used to study financial performances. Every financial indicator is tested parametrically and non-parametrically.

Parametric tests are conducted through dummy regression towards each variable by the following equation:

$$Y_{it} = a + b_1 DV_{it} + \varepsilon \qquad (1)$$

Note :
Y_{it} = Capital Adequacy Ratio, Loan to Deposit Ratio, Non-Performing Loan and Expense to Income, Return on Equity, Firm Size.
DV = Dummy ownership, 1 for Japanese bank and 0 for Asian Non-Japanese bank.

Non-parametric test model in this study uses the model developed by Johan et al (2012) and Vander-Vennet (2002). This research model will focus on the difference in performance between the two groups of independent and paired samples. This test purpose is to measure the characteristics of the two groups of independent samples. Mann Whitney test is alternative testing method of the t-test without restriction. This test can be applied on a different numbers of samples

Non-parametric test is conducted with the Mann Whitney Test Using $\alpha = 5\%$. Based on the p-value and t-statistics value, variables with significant differences between the independent and integrated companies will be noticeable.

The research found that there are no differences in financial performance between Japanese banks and Asian Non-Japanese banks.

Financial indicators of this research are the capital structure, credit risk, efficiency,

Table 2. Research Hypotheses and References

Hypothesis	Variables	Japanese Banks and Other Non-Japanese Banks	References
H1	Capital Structure Ratio	No Differences	Alnaa, et al (2016)
H2	Credit Risk Ratio	No Differences	Jolevska, et al (2018)
H3	Efficiency Ratio	No Differences	Nabi, et al (2019), Alnaa, et al (2016),
H4	Profitability Ratio	No Differences	Alnaa, et al (2016), Mori & Towo (2017), Jolevska, et al (2018), Polovina & Peasnell (2015).
H5	Firm Size	No Differences	Johan, Siregar, Santoso & Maulana (2012).

profit ratio and firm size. Based on the prior studies, the hypotheses of this research are as mentioned in Table 2. This study collected secondary information which were collected from official publications by the institutions.

Table 3. Research Variables

Variables	Measurements
Capital Structure Ratio	Loan to Debt Ratio, Capital Adequacy Ratio
Credit Risk	Non-Performing Loans – Gross (NPL)
Efficiency Ratio	Expense to Income Ratio
Profitability Ratio	Return on Equity
Firm Size	FSi = ln (Total Assets), ESi = ln (Equity)
Stockholder Status	Japanese and Asian Non-Japanese Ownership

The statistics are panel data which consists of time-series and cross-section numbers collected from 2013 to 2018. The samples are the banks which had issued their yearly financial statements during the research period.

The samples are 7 Japanese banks and 9 Asian Non-Japanese Banks. All banks are registered under the Financial Service Authority (FSA) (Otoritas Jasa Keuangan, 2018). The formulation of the variables are explained in Table 3.

RESULTS AND DISCUSSION

Descriptive Statistics

The lowest Capital Adequacy Ratio (CAR) of the banks is at 1.415%, and the highest is at 10%. There are few banks that almost reach the minimum level of CAR allowed by the regulator. On average, the loan to debt ratio is 4x, with the lowest at 0.67x, and the highest at 72x.

The bank with the lowest rate of Non-Performing Loan is at 0.017%, and the highest is at 96%. On average, the banks' Non-Performing Loan is at 3.89%. The Non-Performing Loan in average is still lower than the limit regulated by the Central Bank.

The cost to income ratio indicates the efficiency of a bank. The lowest cost to income ratio is at 20,78%, while the highest cost to income ratio is at 210,92%. The cost to income ratio in average is at 198%.

The average Return on Equity is -147%. The highest Return on Equity found in this research is 22,79%, and the lowest is -1452%%. Negative Return on Equity ratio is attributed to the bank's losses.

According to the Parametric and Non-Parametric test results, Japanese banks and Other Non-Japanese banks have a significant Loan to Debt ratio difference. The Loan to Debt ratio is statistically significant at a = 1%. The Japanese banks show a higher LDR compared to the Asian non-Japanese Banks Majority of foreign banks will have a stronger capital structure to expand their business to the international market. However, there are no differences found in the Capital Adequacy Ratio. The CA ratio differs from the research result of Polovina and Peasnell (2015).

Japanese banks and Asian Non-Japanese banks show a significant difference in their Non-Performing Loan rate. Japanese banks have a higher NPL rate. Generally, foreign banks need more time to adjust to the local market behavior before they could manage the market risk. The result is in line with the research results of Jolevsa, et al. (2018).

Based on the Mann Whiteny test, there is no significant difference in expense to income ratio. However, Dummy Variable Regression found a difference in the expense to income ratio, significant at a = 1%. The results are in line with Alnaa et al (2016) and Nabi et al (2019).

Based on the Non-Parametric approach, there was no significant difference found in firm size. However, Dummy Variables Regression found significant differences in firm size. The firm size obtains statistical value at a = 5%. Japanese banks perform better than Asia Non-Japanese banks. The majority of the foreign banks in

Table 3. Research Variables

Variables	Measurements
Capital Structure Ratio	Loan to Debt Ratio, Capital Adequacy Ratio
Credit Risk	Non-Performing Loans – Gross (NPL)
Efficiency Ratio	Expense to Income Ratio
Profitability Ratio	Return on Equity
Firm Size	$FS_i = \ln (\text{Total Assets})$, $ES_i = \ln (\text{Equity})$
Stockholder Status	Japanese and Asian Non-Japanese Ownership

Indonesia face the same market conditions. Therefore the is no difference found in the firm size. The result differs from Johan et al (2012), which found differences in size between the local and foreign financial institutions. There are no significant differences found in the profitability ratio. All banks have similar profitability ratio, especially their Return on Equity. The results are in line with the research results of Polovina and Peasnell (2015) and Alnaa et al (2016). However, it differs from Mori and Towo (2017).

Tabel 4. Descriptive Statistics

No.	Variables	N	Minimum	Maximum	Mean	St. Deviation
1	Loan to Debt Ratio	96	.67261	72.22780	4.08290	9.23629
2	Capital Adequacy Ratio	96	.01415	1.00000	.27235	.22229
3	Non-Performing Loan (Gross)	96	.00017	.96000	.03897	.10077
4	Expense to Income Ratio	96	.20782	21.0920	1.9895	3.41099
5	Return on Equity	96	-145.2255	.2279	-1.4763	14.8267
6	Total Assets/Firm Size	96	13.5961	18.9721	17.0433	1.3021

Tabel 5. Research Results

No.	Variables	Non -Parametric Test (Mann Whitney)		Parametric Test (Dummy Variable Regression)	
1	Loan to Debt Ratio	-2.999	***	2.812	***
2	Capital Adequacy Ratio	-0.694		-0.131	
3	Non-Performing Loan (Gross)	-2.319	**	1.914	**
4	Expense to Income Ratio	-0.096		3.102	***
5	Return on Equity	-1.839		-1.148	
6	Total Assets/Firm Size	-1.566		2.157	**

CONCLUSION AND RECOMMENDATION

This paper analyzes investigates whether there is any significant difference in performance between Japanese banks and Asian Non-Japanese banks in Indonesia. It concludes that there are significant differences in capital structure, credit risk, efficiency, and firm size, with profitability being the only exception. In capital structure, efficiency ratio and firm size, the Japanese are performing better than Asian Non-Japanese banks.

However, in credit risk, Japanese banks have higher credit risk / non-performing loans than the Asian Non-Japanese banks in Indonesia. The research variables could be expanded to management control, macroeconomics, and regulatory. The research results will be very crucial for the regulators to openness for foreign investment. The period of the research could also be extended.

One of the few limitations of this research is the samples are only the banks in Indonesia. There are only 6 micro variables as the determinant variables. Therefore, these limitations may hamper the simplification of the results. Further research may add samples from other countries, especially in the Asia Pacific region. Furthermore, other variables should be studied in the research, such as macro variables, country risk, political environment, and regulatory issues.

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