The Magnitude of Market Power between SCBs and SBUs: the Root Cause of Stagnancy of the Growth in Islamic Banking Industry and Spin-off Policy as its Solution

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ABSTRACT

This research aims to explore the magnitude of market power's effect on the two types of Islamic banks consisting of Sharia Commercial Banks (SCBs) and Sharia Business Units (SBUs) and analyze the spin-off policy. Time-series data, obtained from the banks' monthly financial statements, were used, and the Lerner index under the level of price and cost was utilized. Independent samples t-test and correlation test were employed as additional tests to analyze data. The starting point of the finding discloses that the mean difference of market power on two types of Islamic banking is significant. It indicates that the type of Islamic banks in Indonesia creates a disparity in the market power between SCBs and SBUs where SCBs show low power, otherwise SBUs is in high power value. A high-power magnitude gained by SBUs continues to be absorbed by the conventional bank as its parents. This process leads the growth of conventional banks to increase greater in the banking industry, while the growth of Islamic banks is stagnant. The additional finding discloses that when the SBU undertakes the spin-off, Islamic banking in Indonesia tends to capture a greater power in the national banking industry.

Keywords: *Islamic Banking, Market Power, SBU, SCB, Spin-off*

A. INTRODUCTION

The banking industry has to be regulated by law with the purpose of maintaining financial stability and the effectiveness of the monetary policy. The banking regulation is related to market power (De Genaro et al., 2021). In Indonesia, the regulation regarding the Islamic banking industry has been described in Law No. 21 of 2008 regarding Islamic Banking (Bank Indonesia, 2008) covering

the elements of building system, corporate governance, prudential principle, risk management, *fatwa* authority, Islamic banks' committee and supervisors, so that it will be expected to enhance the market power of the Islamic banking in the banking industry. Until the end of 2019, there were 14 SCBs and 20 conventional banks having SBUs. SCB is a self-incorporated bank providing services under Islamic principles, while SBU is a working unit of conventional bank undertaking activities in accordance with Islamic principles. Over the last five years, the growth rate of SCBs has been much higher than SBUs. The initial data analysis processed from Financial Services Authority is presented in Table 1.

Table 1. Performances in Profitability and Total Assets

	Performances in Profitability				
	2014	2015	2016	2017	2018
SCBs	0.42	0.49	0.63	0.63	1.28
SBUs	1.97	1.81	1.77	2.47	2.24
	Total Assets				
	2014	2015	2016	2017	2018
SCBs	204.961	213.423	254.184	288.027	316.691
SBUs	67.383	82.839	102.320	136.154	160.636
	The Rate of Growth of Total Assets				
	2014-2015	2015-2016		2016-2017	2017-2018
SCBs	4.12%	19%		13.3%	9.9%
SBUs	26.9%	23.5%		33%	17.9%

Source: Processed Data

Based on Table 1, SBU has higher profitability over the period of 2017 and 2018 i.e. 2.47% and 2.24% as compared to SCB, which is 0.63% and 1.28% in 2017 and 2018 respectively. It may be inferred that SBU is more efficient than SCB in managing its assets to earn profit. In total assets, SCB shows greater asset size than SBU, but its rate of increase in growth of total assets is slower This phenomenon raises the question, what is wrong with SCB? Whereas SCBs are operating for longer time than the SBUs. Understanding the phenomenon of the performance and the rate of growth on total assets between SCB and SBU, the distinction in the market power generated by the two types of Islamic banks should be explored, which is an interesting case to test and analyze.

As reported by Financial Services Authority (OJK, 2019a), the existence of market share of Islamic banking is stagnant under 10% in the national banking industry. It has also lack of product features, inefficient operation, and less Islamic culture on work relationship so that spin-off option should be implemented as a mandate from established regulation (Rongiyati, 2015; Umam, 2010) and could be prospective path for leading the increase of the growth of Islamic banking (Rustam, 2011). The root causes of the stagnancy of the growth in Indonesia may be non-optimal absorption of power generated by Islamic banks, and spin-off policy can prove effective to optimize it. Spin-off policy could be a way to lead the SBU's management to be at more ease to operate the business without any intervention from conventional banks. This research comes up to conduct empirical exploration on market power and to test the spin-off policy.

Furthermore, this research would be more significant for highlighting the Regulation of Bank Indonesia No.11/10/PBI/2009 on the enactment of Law No. 21 of 2008 regarding Sharia Banking. Under its Article 68 Paragraph 1, the SBUs, having 50% ownership in the total assets of parent entity, or having fifteen (15) years of operational history, are required to compulsory switch to SCB starting from 2023. Only few months are remaining to start this process. The process of spin-off should be carried out timely in order that the business of Islamic banking becomes more prosperous in the future. The increasing number of Islamic banking in Indonesia tends to encourage the competition. When the SBU is in one legal entity under a conventional banking, the result may retard the rate of development of SCB and it could only be the underpinning of business on the development of its parent. Thus, the separation of SBU from holding bank should be executed. It must have proper policy to overcome the stagnation of growth in Islamic banking. The number of the Islamic units in conventional banks at the end of 2019 was 20 units. When all units undertake spin-off, market power obtained by SCB may increase. Therefore, the objective of this research is to analyze the market power gained by SBU and SCB, and further to test their significance by spinning off their power through correlation between market powers.

Studies related to market power and performance comparisons between Islamic and conventional banks have excessively been conducted by prior researchers (Abedifar et al., 2016; Abid et al., 2019; Alam et al., 2019; Ariss, 2010; Awwad, 2018; Harkati et al., 2020; Khattak et al, 2021; Mala et al., 2018; Meslier et al., 2017; Mirzaei, 2011; Musa et al., 2020 and Risfandy et al., 2020). They have compared market power between Islamic and conventional banks. However, the two entities are not necessary to be

compared. The reason is that the market share obtained by conventional banking in Indonesia is clearly higher in the national banking industry, while the existence of Islamic banking is still in a process to capture market power. On the other hand, to the best of the knowledge of the researcher, so far there has not been any study investigating market power between Sharia Commercial Banks (SCBs) and Sharia Business Units (SBUs) of conventional banks. The possible reason for this is that they are always considered as the same entities enabling no distinction on market power.

Overall, the issues of this research include market power of Islamic banking in Indonesia between SCBs and SBUs and spin-off policy. Thus, the findings of this research provide two contributions. First, the result of this research can provide the literature in terms of concept of market power in Islamic banking. The magnitude of market power obtained by SBUs in the Islamic banking tends to be absorbed by conventional banks as the parents. Although both are in one market segment working under Islamic principles, their market powers empirically cause a gap. Second, the finding of this research can be a means to answer the root causes of the stagnancy of the growth. It gives a feedback on the Regulation of Bank Indonesia No. 11/10/PBI/2009 concerning spin-off of conventional banks holding the units which it implies that the said regulation should be immediately enforced without delaying it to the future.

The remainder of this research is organized as follows. The following section presents research method as well as results and discussion. Conclusion is presented in the last section containing the inference of the study, the policy implication, and the directions for future studies.

B. THEORITICAL
Market Power Theory

Competition is not only a part of interpersonal or inter-groups social relationship where the persons or groups will compete each other, for example in winning a game, but the competition is also related to business to gain profit. In developing business, firm seeks to improve the quantity and quality of goods and services. In the banking industry, the provision of services is an area of business where profit is derived from the difference in interest on loans and savings. In Islamic banking, the interest is prohibited. Banks should charge prices under Islamic principles. It is recognized as a form of profit-loss sharing based banking

The types of business competition are determined by the level of market share(Abbas & Arizah, 2019). For instance, in oligopoly, each company has a high market share to affect the price. In the banking sector, competition will lower the rate of interest on loan thereby reducing the probability of default riskf owned by

the debtor. Therefore, the growth in Islamic banking could affect positively on the competition with the conventional banking (Wahid, 2017). Market power can be utilized by Islamic banks amidst the competition to affect the price of products and services. Therefore, there is a need to explore the market power of the Islamic banks. The greater the market these Islamic banks have, the greater the profit they earn.

Berger (1995) implied that Structure Conduct Performance (SCP) is a tenet of market power disclosing that a market structure can influence a conduct of competition with the purpose of increasing the profit through Price above Marginal Cost (P>MC). It can occur due to greater market conditions. In market power related to the concentration, banks with a greater concentration of market would be easy to stand out in the market industry resulting in their being able to avoid market fluctuations. The Lerner Index tends to be employed to assess market share with regards to the intensity of competition (Căpraru et al., 2020). The index is the best approach to measure market share individually and so useful for evaluating banking performance (Leon, 2014). The Lerner Index assumes that the maximum profit would be obtained at a marginal cost value below the price. The value reaching 1 indicates a high market power and to be in the monopoly structure as stated in the literature formulated by Lerner (1934).

Islamic Banking

Islamic banking in Indonesia, known as Sharia Banking, is typically classified into Sharia Commercial Bank-SCB, Sharia Business Unit-SBU, and Sharia Rural Bank-SRB (Abbas, 2019). SCB and SBU are banks with operational activities providing financial cash-flow services, while SRB is not allowed to do so. In other words, rural banks in the sense of operational mechanism differ with commercial banks. They do not involve directly in payment system and have restricted operational area. Under Islamic principles, SCB and SBU are encouraged to undertake business activities and prohibited from conducting direct stock trading activities as well as involving in the insurance business except as an agent.

For establishing an entity, the requirements refer to Regulation of Bank Indonesia No. 11/3/PBI/2009 for SCB and No. 11/10/PBI/2009 for SBU. There is difference in the amount of the beginning capital required by the central bank. For SCB the beginning capital is one trillion rupiah, and the required capital is at least one hundred billion rupiah for the SBU. The beginning capital owned by SCB is the amount of funds invested by the owners to establish it, while working capital for the SBU is funded by conventional bank being its parent entity. Thus,

the distinction in terms of the establishment of SCB and SBU is the payment of the beginning capital and the working capital. In addition, SCB should have at least three members of the board of commissioners and at most equal to the number of members of the board of directors. The specific requirement for members of the director board is that they should not own shares exceeding 25% and must undergo a fit and proper test before being appointed as a member of director board, while the requirement for the board of commissioners is that at least 50% of the total members should be independent commissioners. For SBU, the executive management is directly appointed by conventional banks as its parent entity, who can also concurrently serve in the parent entity. Therefore, some fundamental distinctions based on Regulation of Bank Indonesia No. 11/3/PBI/2009 are as follows:

1. SCB is a bank owned by Indonesia citizens/ Legal Entities/local government, while SBU is owned and established by conventional bank.
2. The beginning capital of establishing SCB is one trillion rupiah, while for the SBU it is one hundred billion rupiah in cash.
3. SBU has the corporate governance under the control of the conventional bank being its holding bank, where its directors have extra responsibility of governing SBUs.

Referring to the definition of SCB and SBU under Law No. 21 of 2008 regarding Islamic Banking, SCB is a bank established independently or a part of spin-off built by conventional banks, while SBU is an Islamic bank facilitated by its parent conventional banks. In addition, SCB should not be transformed into conventional bank, but conventional bank could be converted into Islamic bank through the spin-off policy.

Conventional banks having a plan to conduct their activities based on Islamic principles must establish the SBU after previously obtaining approval from the Financial Services Authority. Under Law No. 21 of 2008 regarding Islamic Banking, SBU with its own assets approximately 50% of total assets should undertake spin-off and change into SCB, or relinquish through spin-off at least after 15 years since the enactment of the Law No. 21 of 2008, and are given time for preparation until 2023. In principle, the business activities undertaken by SBU are the same as SCB. The role and activities of SBU and SCB are same serving as financial institution providing a great variety of financial services by accepting deposits from the public and mobilizing the fund to productive sectors under Islamic rules.

Furthermore, the bank executives should increase the performance in each period so that Islamic banking could enhance the growth in the national banking industry. Based on the Financial Services Authority(OJK, 2019b, 2019a), the performance of Islamic banking continues to increase every year in a small range. In the latest data over the period of 2016 to 2018, the profitability ratio of SBU (ROA) showed higher growth than SCB, while the ratio of non-performing financing (NPF) decreased.

Table 2. The Comparison of Performances between SCB and SBU

	SCB			SBU		
	2016	2017	2018	2016	2017	2018
ROA%	0.63	0.63	1.28	1.77	2.47	2.24
NPF %	4.42	4.76	3.26	3.49	2.11	2.15
NPF Net %	2.17	2.57	1.95	1.79	1.24	1.39
LIQUIDITY%	22.54	29.75	27.22	34.23	28.37	25.37
SHORT-TERM ASSET	45,669	65,551	63,815	26,152	30,253	33,043
SHORT-TERM LIABILITY	202,655	220,373	234,414	76,398	106,627	130,234
BOPO %	96.22	94.91	89.18	82.85	74.15	75.38

Source: Financial Services Authority (OJK, 2019)

Since profitability has the positive effect on market power (De Genaro et al., 2021), banking financial performance should be elaborated. As shown in Table 2, the financial performance of ROA indicates that the higher the profitability, the better the performance of Islamic banking, while the NPF increases, the quality of financing is considered poor. In contrast to the liquidity ratio, SCB fluctuates in paying the short-term liabilities, but SBU went up for the last three years from 2016 to 2018. At the operational efficiency ratio (BOPO) describing operating expenses to operating income, SCB showed a very less efficient than SBU. It means the higher the BOPO ratio, the less efficient the Islamic banking in performing business.

Islamic banks empirically obtain lower exposure to portfolio risk compared to conventional banks (Lee et al., 2020). The policy of *spin-off* empirically has the effect on the financial performance (Aggarwal & Garg, 2019; Hussien et al., 2019; Nasuha, 2016). It led to the increase in the financial performance. Relevant

research in terms of financial performance of SBU during the spin-off was conducted by Kuncoro & Yulianto (2018) that financial performances at pre and post spin-off period have been found to have the main difference that the performance of profitability declines the value approximately 0.01% and aligns with the finding of Poerwokoesoemo (2016). The implementation of spin-off leading to a momentarily small drop in the level of financial performance would be a trend in the short-term and it was inevitable.

C. METHODOLOGY
Sample and Data

The type of this research was quantitative in nature by collecting data from a sample of two Islamic banks listed on Financial Services Authority consisting of SCB and SBU. Research data were a time series using monthly financial statements over the period of January 2015 to December 2020 published by Financial Services Authority with 72 observations.

Data Analysis

Market power was analyzed based on the level of price and cost measured using output price and marginal cost through Lerner Index. Majority of the researchers on market power in banking industry utilized Lerner Index for determining the banking power (Duong, 2021; Grandi & Ninou Bozou, 2018; Islam et al., 2020; Mahayana & Chalid, 2021; Nguyen, 2019; Plastun et al., 2018). It has been a popular composite benchmark of banking market power (Shaffer & Spierdijk, 2020) This research also adopts the index suitable for the model of the research. The Lerner Index is obtained using the difference between output price and marginal cost compared to the output price itself. The formula of the index is outlined as follows:

$$Lerner_{it} = \frac{P\text{-}MC}{P}$$

Where P is output price proxied using Islamic banking profitability through net income divided by average total assets and MC is marginal cost measured using the ratio of total cost to total output multiplied by the coefficient of derivatives on equation of trans log function of Total Cost (lnTC) as formulated by Berger et al. (2009).

$$MC_{it} = \frac{TC}{Q}\left(\alpha_0 + \alpha_I \ln Q_{it} + \sum_{j=1}^{3} \beta_0 \, ln\, W_j\right)$$

For obtaining the value of $\ln TC_{it}$, its equation could be estimated using the following formula:

$$\ln TC_{it} = \alpha_0 + \alpha_I \ln Q_{it} + \alpha_2 \frac{I}{2}[\ln Q]^2 + \sum_{j=I}^{3} \beta_0 \ln (W_j) + + \sum_{j=I}^{3} \sum_{k=I}^{3} \beta_I \ln W_j \ln$$

$$W_k + \sum_{j=I}^{3} \beta_2 \ln Q \ln W_J + \varepsilon$$

Where TC_{it} is total cost calculated using a function of output and three prices of input composed of price of labor (W1), price of deposit (W2), and price of capital (W3).

Table 3. Lerner Index

Panel A. Lerner Indicator		
P_{it} (*Price*)	=	Ratio of total income to total average assets (Profitability)
TC_{it} (*Total Cost*)	=	Total bank's expenses
Q_{it} (*Total Output*)	=	Total assets
MC_{it}(*Marginal Cost*)	=	Ratio of TC to Q multiplied by the function of equation of lnTC
Panel B. Total Output Indicator		
W_1(*Price of Labour*)	=	Ratio of total personal expenses to total assets
W_d (*price of deposits*)	=	Ratio of bonus and yield expense to total funds
W_k (*price of capital*)	=	Ratio of total operating expenses (administrative and other operating expense) to total assets

Having obtained the magnitude of market power through the index, the next step is to conduct independent sample t-test using the Mann-Whitney test with the purpose of finding the significance on the difference of market power generated between SCB and SBU. The latest data analysis was Pearson correlation test to find the level of the power generated by SBU when correlated with SCB.

Overall, the analysis stages of this research actually followed the established purposes so there were two analysis techniques used including of independent sample t-test with purpose of analysis market power between SCB and SBU and correlation test employed to examine the power of spin-off policy. When independent sample t-test was obtained significance at the 0.01 level, the result showed that market power between SCB and SBU is different and it indicates an emerging gap on market power between SCB and SBU. In the correlation test, Pearson correlation was used to test the spin-off policy. The result should obtain significant value and showed the correlation values. Hair et al. (2014) stated the correlation power will show no correlation with the value less than 0.21, weak power between 0.21-0.40, sufficient power between 0.41-0.60, strong power between 0.81-1.00. When the value obtained strong correlation, the result indicated that SBU correlates with SCB, and the spin-off policy can be implemented effectively.

D. RESULTS AND DISCUSSION
Equation model Estimation of Market Power

The regression of Translog cost function was tested to find simultaneous effects of output and three prices of input. Before estimating the functions, time series data should be checked to determine the fitness of model of equation. The initial assumption for time series data is stationary. In Table 4, data were tested using Augmented Dicky-Fuller (ADF) Unit Root. Variables in the equation model showed stationary data at level and at first difference. SBUs have the probability value of lnQ, $\frac{1}{2}[lnQ]^2$, and $lnw_2 lnw_2$ at first difference, while SCBs only have lnQ, and $\frac{1}{2}[lnQ]^2$.

Table 4. Stationary Data Check

	ADF Unit Root Test			
Variable	Sharia Business Units (SBUs)		Sharia Commercial Banks (SCBs)	
LnTC	-4.482971***	At Level	-4.287***	At Level
LnQ	-4.966726***	At First Difference	-7.154***	At First Difference
$\frac{1}{2}[lnQ]^2$	-3.934039***	At First Difference	-10.996***	At First Difference
$ln(W_1)$	-4.435199***	At Level	-4.375***	At Level

$\ln(W_2)$	-4.539832***	At Level		-4.245***	At Level
$\ln(W_3)$	-4.376561***	At Level		-4.064***	At Level
$\ln W_1 \ln W_1$	-4.596395***	At Level		-4.365***	At Level
$\ln W_1 \ln W_2$	-4.176391***	At Level		-4.391***	At Level
$\ln W_1 \ln W_3$	-4.366057***	At Level		-4.549***	At Level
$\ln W_2 \ln W_3$	-4.457038***	At Level		-4.248***	At Level
$\ln W_2 \ln W_2$	-7.870294***	At Difference	First	-4.328***	At Level
$\ln W_3 \ln W_3$	-4.526675***	At Level		-4.262***	At Level
$\ln Q \ln W_1$	-4.233281***	At Level		-4.387***	At Level
$\ln Q \ln W_2$	-4.286367***	At Level		-4.041***	At Level
$\ln Q \ln W_3$	-3.960758***	At Level		-3.574***	At Level

Source: Processed Data

After data obtained stationarity at level and first difference, we further tested equation model of Translog cost function to find short and long run effects. ARDL model was used to see short and long run causality relationship (Gujarati, 2004). It was useful for short time series stationary data at mixed level containing the estimation of linear regression model in analysing long-term relationship involving a cointegration test between time series variables (Studenmund, 2017). The result of ARDL test is shown in Table 5. *Adjusted R Square* in the regression model on SCB was 99% for both SCB (Panel A) and SBU (Panel B), respectively. Co-integration test was further run to determine whether there is a long-term stability relationship between variables (Engle & Granger, 2015). We used bound testing cointegration with ARDL approach (Pesaran et al., 2001). As shown in Table 5, SCBs and SBUs obtained 6.026 and 63.860 respectively with significance level at 1%. Besides, the value of co-integration was -0.210 in SCBs and -0.507 in SBUs significant at 1% level. It shows the negative and significant speeds of adjustment coefficient indicating that there are cointegrated relationships between the variables.

Tabel 5. Short Run Effects

Panel A. SCBs			
ARDL Test – AIC			
Variable	Coefficient	t-statistic	Prob.
lnTC (-1)	0.789	8.769	0.000
LnQ	-0.002	-0.234	0.816

Variable	Coefficient	t-statistic	Prob.
$\frac{1}{2}[\ln Q]^2$	0.008	1.650	0.109
$\ln(W_1)$	0.039	0.037	0.970
$\ln W_1(-1)$	1.993	2.735	0.010
$\ln(W_2)$	1.376	2.128	0.042
$\ln(W_3)$	0.878	-4.016	0.004
$\ln W_1 \ln W_1$	-0.002	-0.035	0.971
$\ln W_2 \ln W_2$	-0.048	-1.555	0.131
$\ln W_3 \ln W_3$	0.239	1.734	0.093
$\ln W_1 \ln W_2$	0.138	1.289	0.207
$\ln W_1 \ln W_2(-1)$	0.114	5.361	0.000
$\ln W_1 \ln W_3$	-0.118	-1.194	0.242
$\ln W_1 \ln W_3(-1)$	-0.045	-1.738	0.093
$\ln W_2 \ln W_3$	-0.164	-1.158	0.256
$\ln Q \ln W_1$	0.053	0.739	0.465
$\ln Q \ln W_1(-1)$	-0.172	-3.416	0.002
$\ln Q \ln W_2$	-0.160	-3.266	0.002
$\ln Q \ln W_2(-1)$	0.222	4.917	0.000
$\ln Q \ln W_3$	-0.289	-1.411	0.169
$\ln Q \ln W_3(-1)$	0.202	2.116	0.040
C	2.626	1.746	0.091
ConIntEq (-1)*	-0.210	-38.373	0.000
R-Squared	0.999	Log likelihood	194.626
Adjusted R-Squared	0.999	F-Bound test	Value
		F-statistic	6.026***

Panel B. SBUs			
ARDL Test – AIC			
Variable	Coefficient	t-statistic	Prob.
LnTC	0.492	5.786	0.000
LnQ	-0.120	-1.561	0.127
$\frac{1}{2}[\ln Q]^2$	0.011	2.891	0.006
$\ln(W_1)$	-0.467	-1.344	0.187
$\ln W_1(-1)$	-0.559	-4.951	0.000
$\ln(W_2)$	-0.864	3.266	0.002

$\ln(W_3)$	0.150	0.424	0.674
$\ln W_1 \ln W_1$	0.134	4.795	0.000
$\ln W_2 \ln W_2$	-0.015	0.882	0.383
$\ln W_3 \ln W_3$	0.316	3.898	0.000
$\ln W_1 \ln W_2$	0.022	0.522	0.604
$\ln W_1 \ln W_3$	-0.603	-5.040	0.000
$\ln W_1 \ln W_3(-1)$	0.065	5.738	0.00
$\ln W_2 \ln W_3$	0.007	0.530	0.598
$\ln Q \ln W_1$	-0.024	-1.432	0.162
$\ln Q \ln W_1(-1)$	0.036	5.438	0.000
$\ln Q \ln W_2$	-0.035	-3.945	0.000
$\ln Q \ln W_3$	0.194	0.997	0.325
C	1.647	1.379	0.176
ConIntEq (-1)*	-0.507	-38.373	0.000
R-Squared	0.999	Log likelihood	167.784
Adjusted R-Squared	0.999	F-Bound test	Value
		F-statistic	63.860***

Source: Processed Data

In Table 6, the result of run effect test was also processed using Ordinary Least Square. It obtained *Adjusted R Square* value of 98% for SCB and 99% for SBU. In the test of simultaneous significance, F-statistic showed the value of 2352.442 for SCB and 6743.207 for SBU at the 0.01 level respectively. This result indicates that total output and input simultaneously could affect total cost. A high fitness shown by Adjusted R Square and F-statistic in short and long-term regressions indicates that the accuracy of market power model designed in the model is good.

Table 6. Long Run Effect Test

Panel A. SCBs			
Regressor	LnTC		
	Coef.	t- statistic	Prob
Constant	9.521	5.311	0.000
LnQ	0.007	0.317	0.752

Regressor	Coef.	t-statistic	Prob.
$\frac{1}{2}[\ln Q]^2$	0.025	1.593	0.119
$\ln(W_1)$	-4.472	-3.552	0.001
$\ln(W_2)$	3.176	3.348	0.001
$\ln(W_3)$	1.036	1.239	0.222
$\ln W_1 \ln W_1$	-0.066	-0.840	0.405
$\ln W_1 \ln W_2$	-0.102	-0.988	0.328
$\ln W_1 \ln W_3$	0.271	2.312	0.026
$\ln W_2 \ln W_3$	0.302	1.252	0.217
$\ln W_2 \ln W_2$	-0.036	-0.471	0.064
$\ln W_3 \ln W_3$	-0.450	-2.315	0.025
$\ln Q \ln W_1$	0.329	3.502	0.001
$\ln Q \ln W_2$	-0.241	-3.375	0.001
$\ln Q \ln W_3$	0.649	2.768	0.008

R square = 0.998   Adjusted R Square =0.998   Statistic =2352.442***

Panel B. SBUs

Regressor	LnTC		
	Coef.	t-statistic	Prob.
Constant	5.965	5.454	0.000
LnQ	-0.086	-0.935	0.355
$\frac{1}{2}[\ln Q]^2$	0.029	11.361	0.000
$\ln(W_1)$	-1.167	-3.168	0.003
$\ln(W_2)$	1.012	3.834	0.000
$\ln(W_3)$	1.280	0.299	0.000
$\ln W_1 \ln W_1$	0.102	3.104	0.003
$\ln W_1 \ln W_2$	-0.005	-0.305	0.761
$\ln W_1 \ln W_3$	-0.275	-2.331	0.025
$\ln W_2 \ln W_3$	0.030	0.016	0.072
$\ln W_2 \ln W_2$	-0.009	-1.138	0.261
$\ln W_3 \ln W_3$	0.191	2.002	0.052
$\ln Q \ln W_1$	0.048	3.416	0.001
$\ln Q \ln W_2$	-0.042	-3.888	0.000

ln Qln W$_3$	-0.282	1.703	0.096
R square = 0.999 = 0.999	Adjusted R Square	F Statistic =6743.207***	
Significance Level at 1%, 5%, 10%.			
translog logarithm dependent variable (lnTC) and independent variables (lnQ, lnWj-W₁,W₂,W₃)			
Dependent Variable	TC$_{it}$ (*Total Co*st)		
Independent Variable	Q$_{it}$ (*Total Output*)		
	W₁(*Price of Labour*)		
	W$_d$ (*price of deposits*)		
	W$_k$ (*price of capital*)		

After estimating the function of lnTC and providing a better fitness to data, Lerner Index was utilized to generate the market power of SCB and SBU. The mean value of P obtained by SCB shown in Table 7 was only 0.928 implying that it is almost three times higher than the mean value of P obtained by SBU approximately 2.250. At Marginal Cost (MC) measured using total cost to total input including price of labor (W₁), price of deposit (W₂), and price of capital (W₃), SCB obtained the value of 0.403, while SBU was 0.250. These results reflect the lack of efficiency of SCB in performing.

Table 7. The Estimation Result of Mean Value of Lerner Index

Sharia Commercial Banks (SCBs)					Sharia Business Units (SBUs)				
(P)	TC	Q	MC	Lerner Index	(P)	TC	Q	MC	Lerner Index
0.928	11.549	278.684	0.403	0.382	2.250	2021.917	124.722	0.250	0.884

Source: Processed Data

As a result, Lerner index obtained by SCB and SBU was 0.382 and 0.884 respectively. For some period of time, the SCB's index showed negative values. The factor was that the growth of SCB obtains the loss resulting in the quality of Price less than Total Cost (P<TC).

Table 8. Descriptive Statistics of Market Power

	Min	Max	Mean
Sharia Commercial Banks (SCBs)	-1.75	0.95	0.382

Sharia Business Units (SBUs)	0.77	0.99	0.884

Source: Processed Data

Furthermore, the index has been presented into descriptive statistics in Table 8. It shows the minimum, maximum, and mean values. Over the period of 2015 to 2019, the lowest value of Lerner index's SCB reached -1.75 indicating market power below zero that SCB couldn't seize the power in the market because of a decline in the quality of banking performance. During the observation period, the SBU obtained high market power with a minimum value of Lerner index of 0.73 and a maximum value of 0.99. At the minimum value, its market power reached the index more than 0.50, while the maximum value was close to one. It indicates SBU has strong power to exist in the market share of Islamic banking. By the power, SBU could lead the increase of the performance. The SBU has shown the growth with very good profitability performance resulting in the quality of Price exceeding Marginal Cost (P>MC). At the mean value, the SBU has market power of 0.88, while SCBs has a low market power of 0.36. It indicates its weakness to capture the power in the market share.

Thus, the mean value of market power obtained by SCB has been lower than SBU. In this result, is there a significant difference of market power in the two types of Islamic banking? This research further seeks to conduct a statistical test to find out the level of significance through independent sample t-test. The result of the test is shown in Table 9.

Table 9. Independent sample t-test

	Market Power
Mann-Whitney U test	194.500
Wilcoxon W	1679.500
Z	-7.767
Asymp. Sig. (2-tailed)	0.000

Source: Processed Data

Independent sample t-test showed the value at the 0.01 level indicating significant statistical difference of the mean of maket power between SCB and SBU. The result of the difference implied that the market power obtained by SCB is lower than SBU.

Correlation between SCB and SBU Market Power

The next analysis was a correlation test. It aims at testing whether the power of correlation is weak or strong when market power of SBU is correlated with SCB. This research conducted a correlation test of the effect of power generated when the entire SBU switched to SCB. This test was designed to respond to stakeholders' assumption implying that spin-off policy is the best way to overcome the stagnancy of Islamic banking growth.

<p align="center">Table 10. Correlation Test</p>

		SBU
SCB	Pearson Correlation	0.711
	Sig.	0.000
	N	72

<p align="center">Source: Processed Data</p>

The correlation coefficient showed a significant value of 0.711 at the 0.01 level as presented in Table 10. The value coefficient in the range of 0.61 – 0.80 is categorized strong correlation (Goldstein et al., 1976; Hair et al., 2014). Therefore, if spin-off policy is imposed, the relationship between SCB and SBU will provide a strong positive correlation.

The Disparate Market Power Magnitude as the Root Cause of Stagnancy and Spin-off Policy as its Solution

Market power has been analyzed based on price and cost where its proxy involves the profitability as presented in Table 7. A disparate market power is created between SCB and SBU. The result shows that SCB and SBU were 0.382 and 0.884 respectively. The value of SBU is twice as high as the value of SCB. It indicates that the type of Islamic banks in Indonesia creates a gap on the market power between SCBs and SBUs where SCBs show low power, otherwise SBUs is in high power value. As a result of testing market power, both types of Islamic banking have experienced the distinction and this process is the root cause of why the growth of Islamic banking industry is stagnant under 10% from total national banking industry.

When banks are able to seize the power in the market, performance potential tends to rise in its profitability. SBU obtained the power with a high mean value. As the Lerner index is close to one, under the tenet of market theory, no competitive

market occurs. In terms of competition, the higher the value of the index reveals that the SBU operates under low competition because of its being in a strong market share. In SCB, low market power tends to have high competitiveness in the Islamic banking market industry.

In the analysis of correlation test shown in Table 10, the value obtained 71.1% indicating strong correlation. The result means that SBU correlates with SCB, and the spin-off policy can be implemented effectively. Thus, the result of this finding proves that the spin-off carried out by SBU will lead SCB into a strong power and boost the level of Islamic banking growth in the market so that SCB can obtain a greater power resulting in an enhancement in the level of power. By implementing spin-off policy, SBU will switch into SCB having the effect that all the managements in Islamic banking will become more relaxed without any intervention by conventional banks in performing and expanding the business activity.

The finding of this research aligns with justification of the aim of spin-off policy (Rongiyati, 2015) that the SBU would grow less optimal in Islamic banking industry and spin-off could be used as a means to lead the growth. SBU can absorb the power leading the level of its performance growth to go up. The market power owned by SBU increases due to the subsidy of infrastructure on facilities taken from the conventional bank so that its power in the market shows amplification in performing. For instance, bank offices are still facilitated by the parent. There is not much budget for spending on the building provision. In addition, the quality of human resources would differ where conventional culture is still attached to the management in SBU so that the governance of SBU is fully controlled by its parent.

E. CONCLUSION

This research highlights the market power magnitude and the spin-off testing. In the analysis of market power, the level of growth of Islamic banks in Indonesia is influenced by the power in SCB and SBU. This research documents that there is a gap of market power between SCB and SBU where their market powers show a significant difference. SBUs have gained average higher power than SCBs in the market. Unfortunately, the increasing magnitude of market power obtained by SBUs in the Islamic banking for years tends to be absorbed by conventional banks as their parents. The existence of SBU with a greater power has been the underpinning for its parent. The level of its power is switched to conventional banks. It could make conventional banks gain and absorb a greater market share in the market industry. This process is the root cause of the stagnancy of the growth in Islamic banking industry. However, in the analysis of spin-off

policy, when SBUs undertake spin-off, the number of SCB increases and re-seize market power from conventional banks. This occurrence tends to lead Islamic banking to increase its level of market power. As analysed in this research, the impact of switching SBU into SCB was tested by correlation test. The result of the test shows a strong and significant value indicating that the magnitude of market power could go up when spin-off policy gets to work because SCB would absorb market power of business units owned by conventional banks. In other words, when SBU undertakes spin-off, its magnitude of market power is also converted into SCB resulting in the optimization of their growth level in the banking industry.

The findings of this research as a whole imply that although their market shares are in the same market segment under Islamic principles, market power obtained by SCB and SBU creates a gap in supporting the growth in Islamic banking. This result is addressed to the policy makers through spin-off. This policy certainly allows healthy competition as well as relatively equivalent financing quality between banks. Therefore, spin-off policy implementation has really been very necessary to encourage the growth of Islamic banking. The authority should continue to enforce Regulation of Bank Indonesia No. 11/10/PBI/2009 where conventional banking actors holding the units don't comply with the regulation. They should not be allowed to have any SBUs. Finally, future studies will be more interesting when the implementation of spin-off would be fully executed. The identification of market power at pre and post period of spin-off would greatly contribute to the body of knowledge in the Islamic economic and finance areas. The current study will be more useful in designing model by the researchers, who will undertake research after 2023.

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