Analysis of Operational Efficiency Rate on Sharia Bank in Indonesia Based on Core Capital Bank

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Abstrak

Penelitian ini bertujuan untuk menunjukkan perkembangan bank syariah di Indonesia yang perlu adanya perbaikan untuk menata ulang struktur laporan keuangan. Settling dihadirkan dengan membentuk efisiensi antara sisi input dan sisi output perbankan syariah. Metode yang digunakan dalam penelitian ini adalah Data Envelopment Analysis (DEA), dengan membandingkan bentuk efisiensi antara sisi input dan sisi output perbankan syariah. Berdasarkan hasil analisis, tingkat efisiensi Bank Syariah di Indonesia dinilai masih belum efisien atau belum optimal dalam mengelola sumber dayanya.

The decrease in the total assets of sharia Bank within the past year, showed the development of sharia bank in Indonesia that there should be improvements to reorganize the structure of financial statements. Settling is presented by forming an efficiency between the input side and the output side of Islamic banking. The method used in this research is the Data Envelopment Analysis (DEA), by comparing the shape of the efficiency between the input side and the output side of Islamic banking. Based on the analysis results, the efficiency level of Islamic Bank in Indonesia is still considered inefficient or not optimal in managing its resources.

1. Introduction

Islamic financial system in Indonesia which consists of sharia bank and other Islamic financial institutions is a unity of interrelated in influencing the growth of Islamic finance industry in Indonesia. Interconnectedness of the Islamic finance industries can be seen from the condition when the number of Islamic banks is always increased and competitive market conditions will affect the level of third-party funds (DPK) and the financing provided (Cahyaningsih, 2017; Luo, 2014). The development of Islamic bank is illustrated by the growth of its assets, development of assets decreased in the year 2013-2015 is inversely proportional to the growing number of service offices respectively Islamic banking (Aldiga, 2018). There was a decreasing in the total assets of commercial sharia bank during the period of the last year, so that the necessary repairs to fix the structure of financial statements that seemed ideal commercial sharia bank (Indonesia, 2013). Settling is presented in the form of efficiency between the input side and the output side of Islamic banking. Inputs used in this research is total assets, deposits, and total assets. In the other hand output used in this research is financing and operating income.

2. Method

The data used in this research are secondary data in the form of quarterly data is from March 2013 until December 2015. Secondary data used in this research is the data of the financial report of sharia bank in Indonesia. This type of research is quantitative research with non- parametric approach. Non-parametric approach is used with the approach of Data Envelopment Analysis (DEA) to measure the efficiency of Islamic Banks. The sampling method used is purposive sampling. The sample in this research is a nationwide Islamic Bank registered in Bank Indonesia on years of observation that in the First Quarter until Fourth Quarter 2013 up to 2015. Among them included eleven Islamic Banks in Indonesia, which is Muamalat Indonesia Bank (BMI) Sharia Mandiri Bank (BSM), Bank Sharia Mega Indonesia (BMS), Bank Bukopin Sharia (BBS), Bank Rakyat Indonesia Sharia (BRIS), Bank Panin Sharia (BPS), Bank Jabar Banten Sharia (BJBS), Bank

Victoria Sharia (BVS), BNI Sharia (BNIS), Maybank Sharia (MBS) and BCA Sharia (BCAS).

In this research, the selection of input and output variables in measuring the level of efficiency using Data Envelopment Analysis (DEA) approach intemediations performed by Firdaus & Hosen, (2013), Ftiti *et al.*, (2013), and Hidayat, (2011) in which the input variables (X) used in this research includes the Third-Party Funds or DPK (X1), Total Assets (X2), and Labor Costs (X3). Meanwhile, the output variable (Y) is used Financing (Y1) and Operating Income (Y2). Input and output variables used in this research are presented in Table 01 below:

Table 01. Identification Variable Input and Output

Variable Input	Information	Source
X1 (Third Party Funds)	Giro *Wa'diah*, *Wa'diah* Savings, *Mudharabah* Savings and Deposit *Mudharabah*	Balance Sheet
X2 (Total Assets)	Total Assets owned	Balance Sheet
X3 (Labor Costs)	Personnel costs	Profit / Loss Report
Variable Output		
Y1 (Financing)	*Murabaha* financing, *Salam*, *Istishna'*, *Qardh* financing, and *I'jarah*	Balance Sheet
Y2 (Operating Income)	Operating Income and Other Operating Income	Profit / Loss Report

Source: Adapted by The Author, 2023

3. Results and Discussion

Based on the results of the calculation of the level of efficiency with DEA approach as an attachment, result calculation efficiency level of each Islamic Bank during the research period, both technical efficiency CRS, VRS, and the efficiency scale.

**Table 02. Bank Which Achieved Optimum
Efficiencyin The First Quarter of 2013 - Fourth
Quarter of 2015**

Period	CRS	VRS	Efficiency Scale
KI-2013	BPS, MBS	BPS, BVS, MBS	BPS, BJBS, MBS
KII-2013	-	BPS, BVS	-
KIII-2013	MBS	BMS, MBS	MBS
KIV-2013	BMS, BCAS	BMS, BMI, BCAS, BRIS, BSM	BMS, BCAS
KI-2014	MBS	BMI, BPS, BSM, MBS	MBS
KII-2014	BPS	BMI, BPS	BPS
KIII-2014	BMS, BPS, MBS	BMS, BMI, BPS, BVS, MBS	BMS, BPS, MBS
KIV-2014	BMS, BPS, MBS	BMS, BMI, BPS, BVS, BSM, MBS	BMS, BPS, MBS
KI-2015	BBS, BPS, MBS	BBS, BMI, BPS, BVS, MBS	BBS, BPS, MBS
KII-2015	BVS, MBS	BPS, MBS, BVS, BSM	BVS, MBS
KIII-2015	MBS	MBS	MBS
KIV-2015	BBS, BMS, BJBS	BBS, BMS, BJBS, BPS, BVS, BSM	BBS, BMS, BJBS

Source: Adapted by The Author, 2023

To facilitate the analysis of the results of efficiency calculations, the following Table 02 which it describes Islamic bank efficiencies in the period. Table 02 also shows that the number of bank used efficient techniques CRS numbered fewer than commercial sharia bank inefficient. While using the techniques of the VRS, the number of banks amounted to more efficient compared with inefficient banks. Figure 01 shows the development level of efficiency of Islamic Bank have a fluctuating trend of the levels of efficiency commercial sharia bank per individual. During the research period the first quarter of 2013 to the fourth quarter of 2015, the highest average value of Islamic Bank located in the fourth quarter of 2014

with a score of 90.69 and the lowest efficiency value contained in the second quarter of 2013 with a score of 82.05. The measurement results can be concluded that the Islamic Bank in Indonesia is still considered inefficient or not optimal in managing its resources.

Figure 01. Efficiency Entire Islamic Banks (Average Hose First Quarter 2013 -Fourth Quarter 2015)

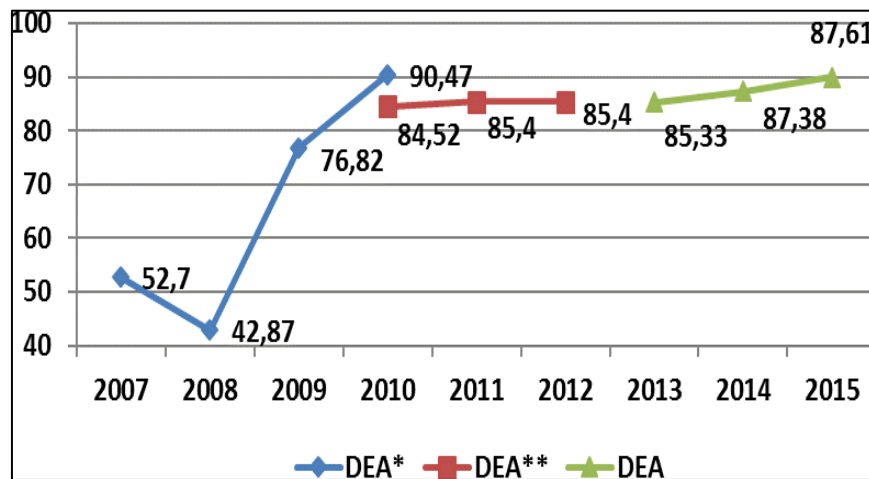Source: Secondary Data (Processed), 2023

The results of the measurement of the efficiency of Islamic Banks in the first quarter of 2013 until the fourth quarter of 2015 illustrated by Table 03, shows a trend fluctuated, no Islamic Bank which has a score of efficiency stable of any time measurement. In addition, based on measurements of efficiency can be seen some banks that had scores of 100 or can be said to be able to optimize its resources to get the maximum output. As for Islamic Bank which is used efficient techniques (CCR), Bank Panin Sharia and Maybank Sharia in the first quarter of 2013, Maybank Sharia in the third quarter of 2013, Bank Mega Sharia and BCA Sharia in the 4th quarter of 2013, Maybank Sharia the first quarter of 2014, Bank Panin Sharia in the second quarter of 2014, Bank Mega Sharia, Bank Panin Sharia, and Maybank Sharia in the third quarter of 2014 and the fourth quarter of 2014, Bank Bukopin Sharia, Bank Panin Sharia, and Maybank Sharia in the first quarter 2015, Victoria Islamic Bank and Maybank Sharia in the second quarter 2015, Maybank Sharia in the third quarter 2015, and Bank Bukopin Sharia, Bank Mega Sharia, Bank Jabar-Banten Sharia in the fourth quarter, 2015.

Table 03. Comparison of The Average Islamic Banks in The First Quarter of 2013-The Fourth Quarter of 2015

Bank	2013	2014	2015
BMI	87.45	87.16	83.53
BSM	89.46	83.63	76.72
BMS	94.43	91.41	91.91
BBS	86.68	88.00	95.18
BRIS	85.23	83.60	75.81
BPS	92.42	98.02	98.21
BVS	68.54	83.85	87.70
BJBS	81.21	86.75	95.72
BNIS	76.30	80.23	79.14
BCAS	82.39	79.75	87.06
MBS	94.50	98.73	94.91

Source: Adapted by The Author, 2023

Figure 02. Efficiency Roadmap Islamic Bank Years 2007-2015

Source: Secondary Data (Processed), 2023

Achievement of the average level of efficiency at each Islamic Bank during the research period. Through Table 03 shows that the banks with an average level of efficiency that is very well demonstrated by Maybank Sharia, Bank Panin Sharia and Bank Mega Sharia. Maybank Sharia newly established in 2010 performed at an average efficiency is high when compared to Commercial Bank Sharia which had already stood. Maybank Sharia able to achieve efficiency score of 100 as much as 8 times in a period of observation and are not able to be reached by other commercial sharia bank. Not only that, Bank Panin Sharia which have an efficiency average

of 92.42 and Bank Mega Sharia amounted to 94.43, respectively gain efficiency score of 100 on the fifth and four times in the period of observation. While the rest, Bank Sharia Bukopin has average efficiency rate 86.68, and gain efficiency score of 100 on the second time, then Bank BCA Sharia only get one score efficiencies 100.

Here is a roadmap efficiency of Islamic Bank in 2007 until 2015. A research conducted Ascarya (2006) using a 10 commercial Islamic banks, and in 2013-2015 shows the data obtained from this research. Figure 02 shows the level of efficiency of Islamic Bank from 2007 until 2015. The difference in the level of efficiency occurs due to differences in the number of BUS observed. Nonetheless, the rise significantly in 2010 as the Commercial Bank Sharia began to grow by leaps and bounds of characterized by the growth BUS 5 new Islamic Bank. In research conducted by Firdaus in 2010-2012, the level of efficiency efficiency rate has stable movement. Continued on this research in 2013 and 2015, the efficiency of Islamic Bank showed an increase in the last three years (Nidaussalam, 2016).

4. Conclusion

This research provides some of the findings regarding the efficiency of Islamic Bank in Indonesia in the first quarter of 2013 until the fourth quarter of 2015, namely. The average of efficiency levels looks so well demonstrated by Maybank Sharia, Bank Panin Sharia and Bank Mega Sharia. Maybank Sharia newly established in 2010 performed at an average efficiency is high when compared to Commercial Bank Sharia which had already stood. Maybank Sharia able to achieve efficiency score of 100 as much as 8 times in a period of observation and are not able to be reached by another Islamic Bank. Not only that, but Bank also Panin sharia which have an efficiency average of 92.42 and Bank Mega Sharia amounted to 94.43, respectively gain efficiency score of 100 on the fifth and four times in the period of observation. While the rest, Bank Sharia Bukopin has average 86.68, and gain efficiency score of 100 on the second time, then Bank BCA Sharia only get one score of 100. While the efficiency of other banks that are in state inefficiency. Bank that has the lowest level of inefficiency is the Victoria Islamic

Bank. However, during the research period, some banks are in a state of inefficiency has a trendline that is moving up.

In the first quarter of 2013 until the fourth quarter of 2015 is only part of the total BUS in Indonesia which have optimal efficiency levels in some quarter. The average value of the efficiency of Islamic Banks that have not been able to achieve optimal efficiency vary. To improve the efficiency stage Muamalat Indonesia needs to increase output by 13.96%, Bank Sharia Mandiri amounting to 17.47%, Bank Mega Sharia amounted to 7.42%, Bank Sharia Bukopin amounted to 10.05%, BRI Sharia amounted to 18.45% Bank Panin Sharia 3.78%, Bank Victoria Sharia 19.97%, amounting to 12.10% BJB Sharia, BNI Sharia amounted to 21.44%, BCA Sharia amounted to 16.94%, and 3.96% Maybank Sharia. Thus, the level of efficiency of Islamic Bank in Indonesia is still considered inefficient or not optimal in managing its resources. However, the average efficiency rate of Islamic Bank in Indonesia in the last three years shows anincrease in efficiency.

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