THE PROFIT EFFICIENCY: EVIDENCE FROM ISLAMIC BANKS IN INDONESIA

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ABSTRACT
This study investigates the profit efficiency of Indonesia Islamic banks during the period 2011 to 2014. The sample comprised of 11 domestic and foreign Islamic banks. We employ non parametric Data Envelopment Analysis method to compute the profit efficiency levels, through of intermediation approach. Furthermore, this study considering input and output oriented measures. Deposits, labour cost and fixed assets are taken as an input variable while output variables are price of profit operation. We find that only three Islamic banks which have been full profit-efficient, while another eight Islamic banks are classified as profit-inefficient. The finding of this study are expected to contribute significantly to the existing knowledge on the operating performance of Islamic banks, Islamic bank's management, and decision-making for regulators of Islamic banks in Indonesia.

Key words: Profit efficiency, Islamic banks, Indonesia.

1.   INTRODUCTION

In this study, we investigated the profit efficiency of Indonesia Islamic banks employing a non-parametric data envelopment analysis method over a recent period of 2011-2014. This investigation is important for several reasons. Bank Muamalat Indonesia (BMI) which was established in 1991 is the first operated Islamic bank in Indonesia, while the second Islamic banks is Bank Syariah Mandiri (BSM) established in 1998. These situation has less supports from the legal aspect. In 1999, Bank Indonesia as Central Bank in Indonesia, reform the legal to disseminate banking nationwide with powers to regulate and permitting conventional banks (Islamic window) to coexist with Islamic banking [1].

Then, since 2010, there are 11 Islamic banks and 23 Islamic windows in Indonesia. In addition, based on the blue print Indonesia Islamic banking development is achieving significant market share of Islamic banking through the advancement of the role of Islamic banking in the national, regional and international financial activities with other Islamic financial sectors. This means Islamic banking has focused on reinforcement including to boosting efficiency and the competitiveness of both the Islamic banks and Islamic windows. Although this issue is very pertinent, only a few studies have been undertaken to investigate it.

2.   PROBLEM STATEMENT

Over the one decade, the literature on the efficiency of Islamic banks shows that

majority of studies focused on cost efficiency while research on the profit efficiency has been much scarcer, see [7,5,3,2]. A few researcher of empirical evidence available has proved that profit inefficiency is quantitatively more important than cost inefficiency, despite the fact that analyse of profit efficiency form a more crucial source of information for bank management than the partially evaluation offered by the cost efficiency analysis [4]. On the other hand, it could be argued that increase in profit efficiency could lead to higher bank profitability levels and could also ensure sustainability of the country's economic growth. Furthermore, profit efficiency is also a firm's goal on maximization of profit since it considered the cost and revenue effects on the changes in outputs scope and scale. Profit efficiency measures how close a bank is in producing the maximum level of profit, given the amount of inputs and outputs and levels of price [9]. Thus, profit efficiency provides a complete description on the economic goal of a bank which requires that banks reduce their costs and increase their revenues. Furthermore, among others suggest that profit efficiency offers valuable information on the efficiency of bank

managements [10,4]. However, one of the main reason rarely of profit efficiency studies is the lack of output price information which is required in the profit efficiency analysis.

3.   METHODOLOGY

Most of the literature distinguishes two main techniques in measuring banking efficiency: parametric using econometric techniques, and the non-parametric using the linear programming. The choice of estimation technique has attracted debate since no method is strictly preferable over one another [9]. A survey of 130 frontier efficiency studies of financial institutions in 21 countries, found a number of interesting result [8]. First, the number of studies of the two methods was by then very close, with 69 used of non-parametric and 60 using parametric method (some papers used more than one methods). Second, both methods typically produce an average efficiency score of a financial institution to be about 80% relative to best-practice banks, with the non-parametric techniques generally giving slightly lower efficiency but greater dispersed estimates. Finally, different determination of inputs and outputs to be included in the efficiency models due

to viewing banks as production, value added or intermediation units may produce different results [8].

The production approach is where a bank is viewed as a producer using physical inputs such as capital and labor to produce loan accounts and deposits [11]. The intermediation approach defines a bank as an intermediary which of capital and labor are used to transfers deposits into other earning assets and loans [7]. The value added approach defines a bank identified those balance sheet categories (asset or liabilities) as output that contribute to bank's value added e.g. associated of business with the consumption of real deposit and loans are viewed as output because the responsible for the significant proportion of value added [13].

This study has used the non-parametric, Data Envelopment Analysis (DEA) for analyzing profit efficiency of Islamic bank in Indonesia due to the following reasons. First, in specifying input-output variables, the intermediation approach is selected as it is in line with the principle of Islamic financial system. Second, it is easy to use it, does not

require to specify any functional form of the frontier [5,9]. Third, works well with a small sample size [5.9]. This is very important in our study due to the small number of Indonesia full-fledge Islamic Banks. The non-parametric DEA is also chosen because it can be applied to multi-input and multi-output variables. The DEA approach constructs the frontier of the observed input-output ratios by linear programming techniques. It estimates efficiency under the assumption of constant returns to scale and variable returns to scale. DEA assumes that linear substitution is possible between observed input combinations on an isoquant [11]. This study also considered input and output oriented measures. The deposits, labour cost and fixed assets are taken as an input variable while output variables are price of profit operation.

Furthermore, there are two profit functions that can be distinguished, depending on whether or not market power of output prices is taken into account: the standard profit efficiency and the alternative profit efficiency [9,12]. The standard profit efficiency assumes the existence of perfect competition in both input and output factors, and thus firms are price-takers,

i.e., no market power of output prices. The alternative profit efficiency, which assumes the existence of imperfect competition or firms have market power in setting output prices [9]. Therefore, only standard profit efficiency is estimated in this study due to the reason there is no market power of output prices of Islamic banks sample. The efficiency ranges over the zero to one interval, and equals one for the best-practice bank in the sample [7,9,11].

4. DATA

In this study, we collect data from 11 full-fledge Islamic Banks comprising of eight domestic and three foreign n in Indonesia from 2011 to 2014. The primary source of financial data from the financial statement of 11 full-fledge Islamic banks (see table1).

Table 1: List of Indonesian full-fledge Islamic banking during year 2011-2014

No	Bank Names	Status
1	BMI	domestic
2	BSM	domestic
3	Mega Syariah	domestic
4	BBRIS	domestic
5	BJBS	domestic
6	BCA Syariah	domestic
7	Bukopin Syariah	domestic
8	BNI Syariah	domestic
9	BVS	foreign
10	PNBS	foreign
11	MSI	foreign

Source: Bank Indonesia, Note: BMI**=** Bank Muamalat Indonesia, BSM= Bank Syariah Mandiri, Mega Syariah= Bank Mega Syariah, BBRIS= Bank BRI Syariah, BJBS= Bank Jabar Banten Syariah, BCA= Bank BCA Syariah, Bukopin Syariah= Bank Bukopin Syariah, BNI Syariah=Bank BNI Syariah, BVS= Bank Victoria Syariah, PNBS= Panin Bank Syariah, MSI= Maybank Syariah Indonesia.

5. RESULT

Table 2 presents the result of (weighted) average of profits efficiency of Indonesia Islamic banks over the periods of 2011 to 2014. The empirical findings seem to suggest that the average domestic and foreign could only earn 53.5 per cent of what was available. However, both Islamic banks lost the opportunity to generate around 46.5 per cent more optimal output from the minimum level of input that may lead to higher profits. The study also shows that two domestic Islamic banks: BCA Syariah and Bukopin Syariah and then, one foreign Islamic bank: BVS have exhibited higher mean profit (one) efficiency relative to their Islamic bank counterparts. Therefore, the results state that the level profit efficiency is higher in the foreign Islamic banks compared to that in the domestic Islamic

banks. That implies that foreign Islamic banks are capable of producing more outputs by utilizing less input to generate higher profits. Meanwhile, domestic Islamic banks are utilizing more input and produce fewer output that may lead to the lower profit.

Table 2: Profit efficiency of Islamic banks

No	Bank Names	Scores
1	BMI	0.734
2	BSM	0.384
3	Mega Syariah	0.061
4	BBRIS	0.221
5	BJBS	0.118
6	BCA Syariah	1
7	Bukopin Syariah	1
8	BNI Syariah	0.095
9	BVS	1
10	PNBS	0.303
11	MSI	0.969
Mean		**0.535**

6.   CONCLUSION

This paper investigates the relative profit efficiency of Indonesia Islamic banks during the period of 2011 to 2014. The majority of studies have focused more on cost efficiency in Islamic banking sectors and only a few have looked on profit efficiency. The non-parametric DEA method was applied to distinguish profit

efficiency of these banks. The empirical findings suggest that Indonesia Islamic banks have exhibited mean 53.5 per cent of what was available. The Islamic banks also lost the opportunity to generate around 46.5 per cent more optimal output from the minimum level of input that may lead to higher profits. The overall results imply that during the period of study, the Islamic banks were operating at optimal scale of operation. However, they were managerially inefficient in exploiting their resources to the fullest. The finding of this study are expected to contribute significantly to the existing knowledge on the operating performance of Islamic banks, Islamic bank's management, and decision-making for regulators of Islamic banks in Indonesia.

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