Capital Adequacy Ratio, Profit-Sharing and Return On Asset: Case Study of Indonesian Sharia Banks

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Abstract: The main purpose of this case study is to examine the mechanism effect of capital adequacy ratio (CAR) and profit-sharing on return on asset (ROA). The data for the present study are collected from Indonesian sharia banks in the period of 2011 to 2015. The data is analyzed using content analysis and descriptive statistics. The empirical findings reveal that CAR and profit-sharing have a significant positive effect on ROA.

Key-Words: capital adequacy ratio, profit-sharing, return on asset

1. Introduction

The development of sharia banks is now widely recognized by the wider community, especially in Indonesia where the Islamic banking system itself embraces sharia or Islamic law which is known as the profit-sharing system (*nisbah*), unlike the conventional banking system is known as the interest rate. With the rapid development in the sharia banking sector, this can be used as a reason for the performance of Islamic banks to be the center of attention for implementing banks, stakeholders, policymakers, and government. Although initially Islamic banks are humble, it has now grown worldwide and become more competitive when compared to conventional banking systems (Kamaruddin and Fadzlan, 2017).

Sharia bank is one of the institutions engaged in the financial sector that can survive when the economic crisis hits other banks. By the middle of 2015, the market share of the sharia banking industry experiences a moderate increase. As of August 2015, the assets of conventional banks grew more positively at the level of 15,17% or 6.010.74 trillion rupiah. In addition to growing lower, the asset value among banks has not reached the set target of 5%. In August of 2015, the assets of new sharia banks occupied 4,55% of conventional bank assets (Yuhanah, 2016).

A sharia bank is an institution that implements or operates its business on the basis of Islamic principles and avoids matters of blessing on the practice of usury or performs on the basis of profit sharing. According to Mawaddah (2015), sharia bank is a bank that has the activity of collecting funds, channeling funds and wearing rewards which refers to Islamic law and does not charge or even pay interest to customers. Then the remuneration received by the sharia bank or paid by the customer depends on the contract and the agreement between the customer and the bank. Sharia bank only pays profit sharing to customers in accordance with the profits derived from the results of the investments made by the customer. In essence, Sharia bank is an intermediary that has the main duty to collect funds from community and channel back to the community as well. As a financial intermediary, it is expected that sharia banks can perform well compared to interest-based banks.

The role of sharia banks in Indonesia is very crucial, thus, for its performance will remain proper and efficient, it is necessary to increase based on the principles of sharia. Profitability (ROA) is the most appropriate parameter to measure the financial performance of a bank. An important profitability ratio for banks is Return on Assets (ROA). ROA is important for banks because ROA is used to measure the effectiveness of companies in generating profits by utilizing the assets they have (Adyani, 2012). The rate of ROA aims to assess the profitability of a bank because Indonesia Bank is a banking supervisor who puts forward the value of a bank's profitability seen from the assets, which most of the funds come from public savings. The greater ROA of a bank, the greater the level of profit to be achieved by the bank and the better the bank's position in terms of asset use (Wibowo, 2012).

2. Literature Review

2.3 Sharia Bank

Sharia bank or commonly known as Islamic bank is a bank that runs activities based on the principles of Islam that embrace the system of profit sharing (nisbah). Bank Syariah is a financial institution that runs its product operations based on guidance from Al-Qur'an and Hadith of Prophet Muhammad SAW. In other words, Bank Syariah is a financial institution whose activities are based on the principles of Islamic sharia (Akbar, 2008). In operating its business activities, the Islamic bank has always adhered to the principles of sharia and away from the practice of usury. An important role in the economy can be seen through the sharia banking industry which is the national banking system. In particular, the role of sharia banks is to bind strongly to a new nationalism, meaning that sharia bank becomes a provider of economic business communities and strengthens the economy of society (Suryani, 2011).

Table 1: The different between sharia bank and conventional bank

No.	Note	Islamic Bank	Bank Conventional
1.	Legal foundation	Banking law and the foundation of Islam	Banking law
2.	Return	Profit sharing	Flower
3.	Forms of business	Social purpose, profit	Advantages
4.	Organizational structure	Board of commissioners, islamic supervisory board, national Islamic council	Board of Commissioners
5.	Financing criteria	Bankable halal	Bankable halal or haram

2.4 Sharia Financing

Financing is a funding provided from one party to another to support planned investment, either conducted alone or by the institution. It can be said that financing is a recommended funding to support planned investments. In its implementation, sharia banks must meet the aspects of syar'i and economic aspects. The aspects are as follows:

1. Syar'i aspect, an aspect based on Islamic sharia in every realization of financing to the customers where there is no *maisir*, *gharar*, and *usury* elements and its business activities must be kosher).
2. Economic aspect, an aspect that looks at the things of sharia banks and for customers of sharia banks.

2.5 Types of Financing

The types of Islamic bank financing are also grouped based on earning assets and non-productive assets, namely financing with the principle of profit sharing. There are 2 financings with the principle of profit sharing:

1. *Mudharabah*, an agreement made between two parties (fund placements and funds managers) who perform a certain activity and profit sharing (ratio) between the two agreed
2. *Musyarakah*, an agreement made between the two parties (the owner of funds or capital to mix funds) or their capital in a particular business. Profit sharing among fund owners based on an agreed ratio.

3. Hypotheses Development

3.1 The Relation Between Capital Adequacy Ratio and Return On Asset

Capital Adequacy Ratio (CAR) is the ratio of capital ability to show how far bank assets have risks. The risk is also derived from the capital itself, where the bank obtained the capital from sources outside the bank. Under the terms of Bank Indonesia, the value of the CAR has a minimum value of eight percent (8%). Therefore, bank management should increase the value of it. When a capital is sufficient, the bank can easily expand the business in order to increase bank profitability (Dewi, 2010). To obtain a high profitability, the bank must be able to make CAR more than eight percent (8%).

According to existing theory, the stronger of CAR is the greater ability of a bank to assume the risk of any credit or risky earning assets. The higher CAR will have a positive effect on ROA of a bank. Setiawan (2009) stated that CAR has a positive effect on ROA of a bank. Then, it is obtained the following hypothesis:

***H1**: CAR has a positive effect on ROA*

3.2 The Relation Between Rasio Net Operating Margin and Return On Asset

Net Operating Maring (NOM) is the equation of the ratio of Net Interest Margin (NIM) due to the Islamic bank system does not recognize any interests but sharing profit. The NOM ratio is a ratio that measures the ability of productive assets to generate net income. According to the existing theory, the greater of NOM is the greater operational income of a bank on assets managed by the bank, so that the condition of troubled banks is getting smaller. According to Sabir, et al (2012) stated that NOM has a positive effect on ROA. Then, it is obtained the following hypothesis:

***H2**: NOM has a positive effect on ROA*

3.3 The Relation between Financing to Deposit Ratio and Return On Asset

Financing to Deposit Ratio (FDR) is a division between the financing provided by the bank and third-party funds (deposits) which is managed by the bank. The size of FDR indicates the level of bank liquidity. According to the existing theory, the greater of FDR of a bank will be described as a bank that is less liquid (Muhammad, 2005). If the FDR is smaller, then the bank will have a negative impact in channeling the less effective financing system. Therefore, to obtain income in the form of profit sharing and bonus management, the bank should be able to control the funds collected from the community that will be channeled back into the community in the form of financing. If the FDR is greater, then the profit earned is also greater. To increase ROA, banks should also be able to increase profits, because both of these are related where profit is one of the components that make up ROA (Sari, 2013). This theory is supported by Oktaviyani (2016) stated that FDR has a positive effect on ROA. Then, it is obtained the following hypothesis:

***H3**: FDR has a positive effect on ROA*

3.4 The Relation between Non-Performing Financing and Return On Asset

Non-Performing Financing (NPF) is a comparison of financing provided to third parties and does not include financing of other banks. It is the financing of substandard, doubtful, and loss. It is also the ratio of comparison to earning assets owned by banks (Ramadhan, 2015). According to theory, the smaller NPF is the smaller the credit risk borne by the bank. Conversely, if the higher NPF shows that an unprofessional system occurs in credit management. The bigger of NPF of a bank, the more problematic financing or in other words the higher risk of financing will affect the decrease of ROA. Similarly, if the ratio of NPF is lower, then it indicates low financing risk which then will affect the increase ROA (Irmawati, 2014). This theory is supported by Fahmi (2012) stated that NPF negatively affects ROA. Then, it is obtained the following hypothesis:

***H4**: NPF has a negative effect on ROA*

3.5 The Relation of Sharing Profit Return On Asset

Mudharabah and *musyarakah* are part of the financing of profit sharing in sharia banking.

According to Muhammad (2005), there are several things that must be considered by both parties related to the financing of profit sharing *(mudharabah*), the agreed profit sharing ratio and the profit rate obtained. To obtain income-sharing agreement, the bank as the party with the fund will calculate the ratio. There are several aspects to determine the profit-sharing ratio such as business data, installment capability, profit of operations undertaken, an expected rate of return, financing ratio and distribution of sharing profit. According to the theory, the higher financing for the results, it will increase the profit-sharing ratio that will affect the high of ROA. In other words, the greater the profit-sharing rate, the greater the bank's profitability (Irmawati, 2014). This theory is supported by Suhendra and Heraeni (2014) stated that financing for sharing profit has a positive effect on ROA. Then, it is obtained the following hypothesis:

H5: Financing of Sharing Profit has a positive effect on ROA

4. Materials and Methods

4.1 Return on Asset (ROA)

The ratio commonly used to measure financial performance is ROA. ROA is a bank performance indicator that measures the ability of bank management in obtaining profitability. Bank Indonesia Standard sets the minimum ROA above 1,5% (<1,5%), in order for a bank to be categorized as 'healthy'. ROA is measured by comparing net income with total assets available. As the higher ROA then the profits of a bank is also increasing, and the better in terms of use of assets. The formula used for ROA (Suryani, 2011) is:

$$\textbf{ROA} = \frac{\text{Net Income}}{\text{Earning Asset}} \times 100\% \qquad \textbf{(1)}$$

The following table shows the level of profitability based on ROA ration.

Table 2: ROA level criteria

Rasio	Category
ROA > 1,5%	Very healthy
1,25% < ROA ≤ 1,5%	Healthy
0,5% < ROA ≤ 1,25%	Quite Healthy
0 < ROA ≤ 0,5%	Less Healthy
ROA ≤ 0	Not Healthy

4.2 Capital Adequacy Ratio (CAR)

CAR is a capital adequacy ratio that shows the bank's ability to prepare capital for business needs and assumes the risk of loss of capital possibly encountered by the bank. The capital provision itself is used to cover possible losses and this is related to capital adequacy. In the event of loss, it can cause problems on assets derived from third-party funds (Dewi, 2010). The higher the CAR, the more capital the bank has to replace the asset decline.
The formula of CAR calculation, in general, is as follows:

$$\textbf{CAR} = \frac{\text{Capital of Bank}}{\text{Total ATMR}} \times 100\% \qquad \textbf{(2)}$$

4.3 Net Operating Margin (NOM)

If in conventional banks this ratio is known as Net Interest Margin (NIM)), while in sharia banks, it is better known as NOM. The NOM ratio in sharia banks represents net operating income on the average earning assets. The larger the NOM of a bank, it will increase net operating income (earnings) over earning assets. In accordance with the rules set by Bank Indonesia, the amount of NOM achieved by a bank must be greater than 6% (Afifah, 2014). The NOM calculation formula is generally as follows:

$$\textbf{NOM} = \frac{\text{Net Operating Income}}{\text{Earning Asset}} \times 100\% \qquad \textbf{(3)}$$

4.4 Financing to Deposit Ratio (FDR)

FDR is the ratio between financing provided by banks and third-party funds (savings, demand deposits, and time deposits). Based on Bank Indonesia Circular Letter no. 26/5 / BPPP dated May 29, 1993, the amount of Financing to Deposit Ratio shall be below 110%. In other words, banks may provide financing or credits that exceed the number of third-party funds. In general, the safe limit of the FDR is around 90% -100%. If the FDR in sharia banking exceeds the limit, it will be a serious threat to the liquidity of sharia banks (Irmawati, 2014). The amount of FDR of a bank can be calculated based on the following formula:

$$\textbf{FDR} = \frac{\text{Total of Financing}}{\text{Total Fund from the third party}} \times 100\% \ \textbf{(4)}$$

4.5 Non-Performing Financing (NPF)

NPF is divided into two including NPF Gross and NPF Nett. NPF Gross is a non-performing financing before reducing the Allowance for Earning Assets (PPA) while NPF Nett is a non-performing financing that has been reduced by an already set PPA. NPF is a ratio to measure how much the bank's ability to control problematic financing (Ramadan, 2015). Troubled financing is a condition where there is a major deviation in repayment of financing which causes delays in return. If not handled properly, the problematic financing will be very harmful to the bank (Rachman and Ahmad, 2015). The amount of NPF of a bank can be calculated by the following formula:

$$\text{NPF} = \frac{\textit{Total of Non - Performing financing}}{\textit{total of Payment}} \times 100\% \quad \textbf{(5)}$$

4.6 Profit Sharing Financing

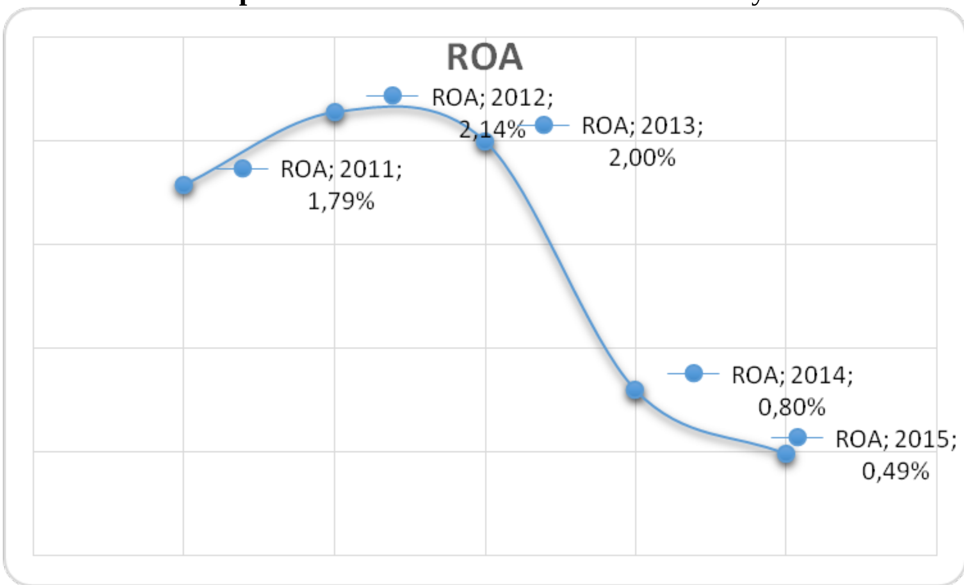
Financing of share profit studied by this research is *mudharabah* and *musharaka*. Mudharabah financing sharing of agreements between fund placements and fund managers to conduct certain business activities with profit sharing between the two parties based on the agreed ratio. In the event of loss, it will be borne by the owner of capital. Managers are also responsible if there is a loss if caused by the manager (Permata, et al, 2014). The amount of profit-sharing financing can be calculated by the following formula:

Total of Financing of sharing profit = Payment of *mudharabah* + *musyarakah* (6)

5. Results and Discussions

The data of the performance of banks on ROA with indicators of Sharia Bank Financial Performance (BUS) in Indonesia in the year of 2011-2015 covering the following ratios; CAR, NOM, FDR, NPF, and Sharing profit become phenomenon gap in research this is shown as follows:

Graph 1: The action of sharia bank measured by ROA



Based on Sharia Banking Statistics results for 2011 to 2015 on ROA decreased from year to year. In 2011 ROA of 1,79% and then in 2012 ROA increased by 2,14% and again decreased in the year 2013 by 2,00%. In the year 2014, the average ROA tended to decrease drastically that was equal to 0,80% so that impact on the assessment of very healthy to be less healthy. Then in the year 2015, the average ROA decreased by 0,49%. Based on the data gap phenomenon, it can be seen that the average ROA Sharia Commercial Bank has decreased in 2013 until 2015.

Table 3: The average ROA, CAR, NOM, FDR, NPF, and financing of sharing profit

Variable	2011	2012	2013	2014	2015
ROA	1,79%	2,14%	2,00%	0,80%	0,49%
CAR	16,63%	14,43%	14,42%	16,10%	15,02%
NOM	1,60%	2,04%	1,49%	2,09%	0,52%
FDR	88,94%	100,00%	100,32%	91,50%	88,03%
NPF	2,52%	2,22%	6,50%	4,33%	4,84%

Financing of profit sharing (*mudharabah* and *musyarakah*)	29.259 (in billion)	39.69 (in billion)	533.379 (in billion)	690.125 (in billion)	55.336 (in billion)

In 2011 the average of ROA of 1,79%, in 2012 rose by 2,14%. In the year of 2013, it decreased by 2,00% again while in 2014 tended to decrease by 0,80%. Then in 2015 the average of ROA again decreased by 0,49%. In 2011 the average CAR worth 16,63%, then decreased in the next year that was equal to 14,43%. In 2013, the average CAR tended to decrease by 14,42%, while in 2014 the average CAR is increased by 16,10%. Then in 2015, the average CAR decreased by 15,02%. The average number of NOM in 2011 was 1,60% and then increased by 2,04% in 2012. In 2013 the average NOM tended to decrease by 1,49%, while in 2014 the average NOM backs up 2,09%. In 2015 the NOM average decreased drastically by 0,52%. The average FDR was 88,94% in 2011 and increased by 100% in 2012, whereas in 2013 the average FDR again increased by 100,32%.In 2014, the average FDR tends to decrease by 91,50%. Then in 2015, the average FDR has decreased again by 88,03%.

The average NPF variable in 2011 was 2,52% and then decreased the following year by 2,22%. In 2013 the average NPF tended to increase by 6,50%. In 2014, the average NPF variable decreased by 4,33%. Then in the last year 2015, the average NPF increased by 4,84%. Variable Financing of profit sharing (in billions) in this study is the sum of mudharabah and musyarakah, in 2011, it obtained financing of profit sharing at 29.259 billion. Then in 2012, sharia commercial banks obtained an increase of 39.69 billion. In the year 2013, sharia commercial banks again experienced a good increase in 533.379 billion. As for the year 2014, Islamic banks also obtain quite satisfactory that is equal to 690.125 billion. Then in the year 2015, it gained as much as 55.336 billion. That can be said if the financing of sharing profit is getting higher, then more banks also earn a profit.

6. Conclusion and Suggestion

Based on previous data and analysis, so it gets the conclusion as follows; ROA has decreased in the period of 5 years where only happened once an increased in 2012 at 2,14%. Another variable is CAR also experienced the same case which only increases in 2014 with the percent 16,10%. NOM has a fluctuating number which in 2012 has increased and year after it decreases and in the year, in 2014 it continues to increase until the end of 2015 it decreased again by 0,52%. Furthermore, in the FDR, in two years increased until finally in 2014 and 2015 decreased to reach the number 88,03%. The NPF is the same as the NOM which is decreasing in 2012 and increasing again in 2013 and decreasing again in the next year in 2014 with the number 4,33% and then rises again by the end of the year, 2015 reaching 4,84%. And the last is financing for sharing profit rises from year to year from 2011 29.259 billion to achieve 55.336 billion in 2015 which can be said if the financing of sharing profit is getting higher, then the bank also gets a profit. In addition, the effects received are CAR, NOM, and financing of sharing profit have a positive effect on ROA, meanwhile, both of financing to deposit ration and non-performing financing have a negative effect on ROA.

Suggestions to be concerned are: (1) For the banks, especially sharia banking, has to pay more attention and keep the value of financial ratios owned by the minimum reference value that has been determined by Bank Indonesia with the capital adequacy standard of 8%; (2) For further researchers is hoped to conduct research related to the development of Islamic banks from sharia bank products such as mudharabah financing and musyarakah financing; (3) This study is based solely on published financial statements that can not be ascertained completely. It is expected for the next researcher in order to do a more perfect research by adding more financial ratios, research objects and the period of years to be studied; and (4) Expected for further research may use different research methods from this research. Given in this study is still using methods that are still mostly done by previous researchers.

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