



Zakat Intermediaries and Its Impact to Industry Growth: Growth Accelerators or Cost Center?

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Abstract

This study aims to determine the effect of Islamic bank's activity as a zakat intermediary on profitability, efficiency, market share, and growth of Islamic banks in Indonesia. This research also analyses from the literature the possibility of zakat as the funding or financing product. The method used is the panel data method and granger causality. The Independent variable external zakat collection while the dependent variables are ROA, BOPO, Market Share, and Growth. The samples of the research are five Islamic Bank who has done the external zakat collection. The data used are quarterly data with a period from 2013 to 2020. The results of this study indicate that this divine role increase the cost of operation and in the same time decreasing the profitability. The result also stated that the intermediating activities of zakat collection is not significant to push the bank market share, profitability as well as the Bank Growth. However, although in terms of regulation bank cannot be the Amil, in the future, there is potential of zakat can push the Islamic market share and bank growth since the zakat collection, Islamic bank can offer third party funding product as the intermediation between the zakat payer and the Amil zakat whose eligible to collect zakat according to the government regulation.

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I. Introduction

1.1. Background

Islamic banks in Indonesia who operated under the Law No. 21 of 2008 is established to support the Indonesian Muslim by providing services which do not contain elements of *gharar*, *maysir*, *usury*, *dzolim*, and other elements that are haram. Islamic banks, both BUS, and UUS, are allowed to perform social finance functions law establishing their social finance wing in form of Baitul Maal and collecting the Zakat, Infaq, Sadaqah, or other types of social funds. Moreover, based on article 4, paragraph 3, IBs can act as the LKS-PWU who acts as intermediaries between the *Waqif* and the *Nadzir*. The role of Islamic banks in intermediating the *zakat*, which is a component of one of the pillars of Islam has also been explained in the verses of the *Qur'an*, and the *Hadith*, one of the verses of the *Qur'an* that explains about the virtues of *zakat* is the Surah At-Tawbah verse 103 which means:

“Take alms from a portion of their property, with that alms you cleanse and purify them and pray for them. Verily, your prayers (become) peace of mind for them. And Allah is all-hearing again, all-knowing” (Q. At-Taubah: 103).

And also in the other part of the *Qur'an*, it has been explained how important the zakat intermediary, which explained in the following verse, which means:

“Indeed, the best person you take to work (with us) is a strong person who can be trusted again.” (Q.S Al-Qashash: 26).

In the above verse, it has been stated that an *Amil Zakat* is a person or entity that is strong and can be trusted as well as being appointed by the authority. Thus, in this case, the Islamic Bank, their duties mainly on mediating the *zakat* collection by acting as intermediaries of the fund and distribute it to the LAZ/BAZ who is appointed to organize the fund. The Islamic bank role is a mere of providing a payment point system that allows the *Muzakki* to pay their obligation.

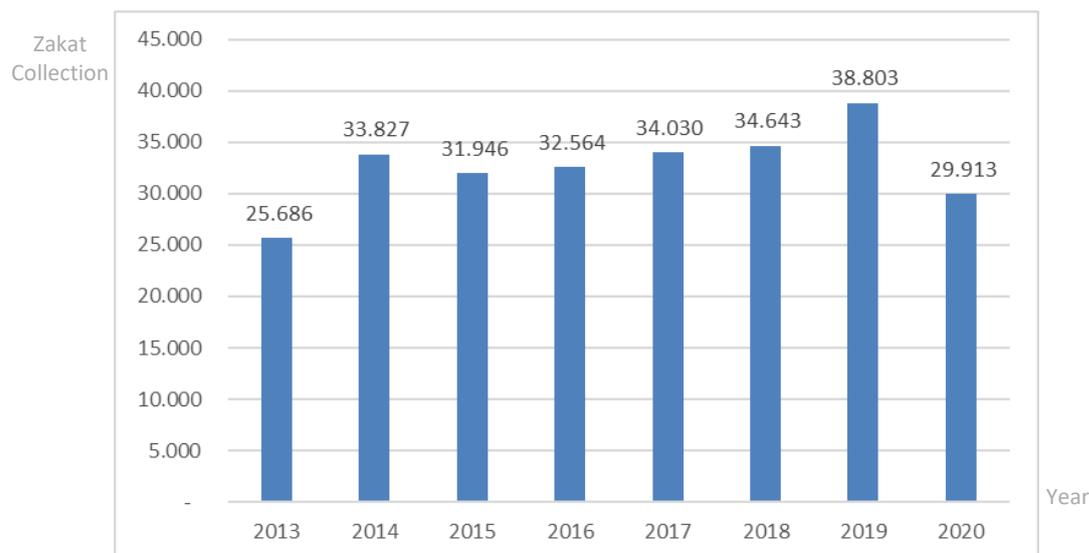


Figure 1. IB External Zakat from its Payment Point (in Million)

Source: Audited Report of 5 IBS (2020)

Based on the Figure 1, OJK (2020) data, the zakat intermediary trend is increasing from 2013 to 2019. In 2013, the collection amount is IDR 25,6 Billion and increased to the IDR 38.8 Billion in 2019. However, due to CoVid19, the 2020 data was decreased to IDR 29.913 billion. Using the bank level data during 2013 to 2020 on 5 Islamic banks who have been active reporting their collection, BSM contribute 37% of the zakat collection while Bank Muamalat give 32%, and BNI Syariah come next with 26,69%. Both BRI Syariah and BCA Syariah only contribute 3,4% in total. Again, based on the Islamic Banking Act 21 – 2008, the zakat that was collected by the bank is mere intermediation before rendering it to the LAZs or BAZs, which have signed an MoU with them. In the case of BSM and Bank Muamalt, both banks have been formed their social finance wing namely LAZ BSM as well as Baitul Maal Muamalat (BMM)

So it can be concluded that the percentage of Zakat collection that belong to LAZ and BAZ thru Islamic Bank is still very small when compared with the acquisition of zakat funds by BAZNAS, and it can be hypothesized that banks might support the Zakat collection of LAZ or BAZ or even being having new role beyond the existing intermediary role. According to Rahman (2012), the Islamic Banking Institution should become a better Zakat manager and not just collecting it and dispense to the poor and needy. Moreover, Choudhury & Harahap (2008) assert that the Islamic bank has the central role in optimizing the resource mobilization to achieve the social and economic objectives. This research will close the gap that Wahab & Rahman (2012) and Choudhury & Harahap (2008) argue by assuming that Islamic Bank being the *Amil Zakat*, although the regulation strictly said that IBs only act as intermediaries. This research will analyse the cost and benefit that will be attached to Islamic banks and give additional considerations for future role.

1.2. Research Objectives

Based on above data, the zakat collection via Islamic bank still limited to average IDR 32 Billion during 2013 to 2020. This figure is quite small compared to IBs asset as well as how they serve the customers using existing capabilities. The Islamic bank basically has all it takes to manage the *zakat* more seriously. However, being the Zakat intermediary will impact the performance of the Islamic bank since they will bear the cost. Besides the cost, when assuming the role of Islamic Bank as *Amil Zakat*, it is also related to the opportunity to grow the industry by utilizing the Zakat Fund. Again Choudhury & Harahap (2008) pointed out that Islamic bank plays its role to provide the shariah-compliant product for Zakat fund, assuming that IBs being the *Amil* of the *Zakat*. To that extent, this research will try to solve the problem below:

1. What is the relationship between the collection of external zakat and the level of profitability of Islamic banks in Indonesia?
2. How is the relationship between the collection of external zakat and Operational Costs (BOPO) in Indonesia?
3. What is the relationship between the collection of external zakat and the market share of Islamic banks in Indonesia?
4. What is the relationship between the collection of external zakat and the growth of Islamic banks in Indonesia?
5. How is the zakat based product can be implemented in the Islamic Bank?

II. Literature Review

2.1. Background Theory

2.1.1. Islamic Bank – The Intermediation Theory

The vocal point of the theory of intermediary is on fund allocation. Banks, in this case, transform the asset of the surplus unit to become the asset of the deficit unit. Interest or profit loss sharing is the sweetener that is shared by banks to the surplus unit. In order to transfer the asset as it has been stipulated above, banks are using the concept below (Darsono et al., 2017, p. 58). According to Darsono et al. (2017), the poof of fund allocation is basically defined as a comingling the demand deposit (current account & saving account) with the term deposit. From the pool, the proceed from the depositors is channelled into some asset like reserve requirement in the central bank, financing/credit, short term paper investment, as well as a fixed asset. The diagram the pool of fund explained by Figure 2.

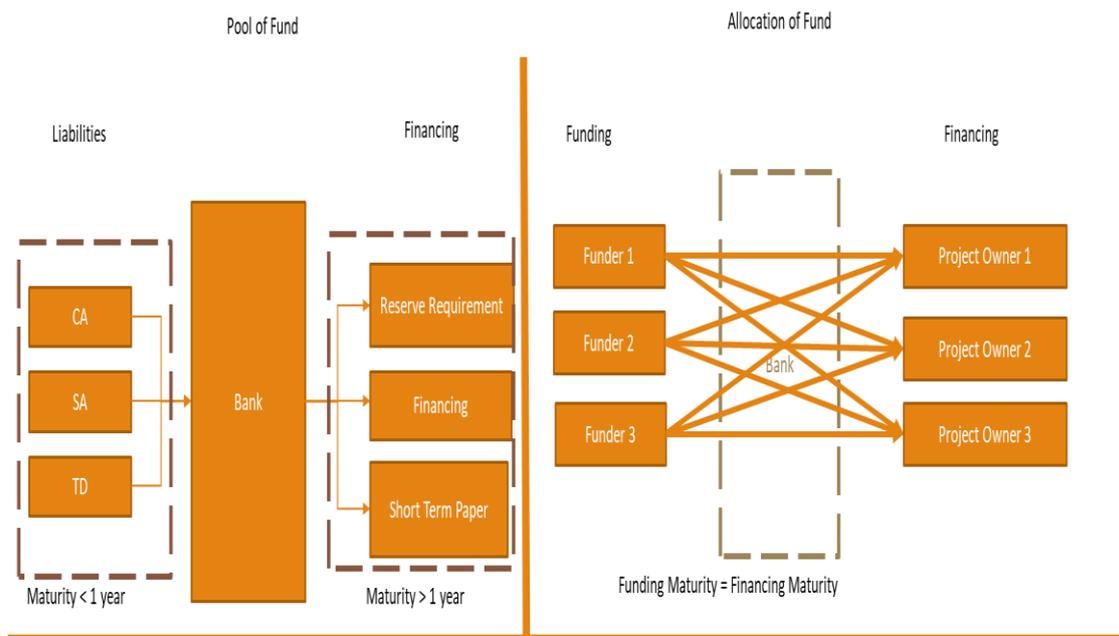


Figure 2. The Pool Of Fund vs Allocation of Fund

Source: (Darsono et al., 2017, p. 59 with some modification)

Basically, the pool of fund is the main concept that is used in fractional banking according to Bagus et al., (2016a), Block & Garschina (1996), Chari & Phelan (2014), Cochran (2012), Cochran & Call (1998b) De Soto (1995), Gertchev (2013); Mallett (2011, 2015), Rothbard (2008), Sanches (2016), Werner (2016). All of the writers that have been cited previously stated that the usage of the demand deposit to be united with the term deposit to make credit would result in a severe economic crisis since the demand deposit basically is for saving purposes and should be available at any time in short term basis while the credit characteristically has a long period of time and at the end, a mismatch would happen. The pool of fund also resulted in an irregular deposit as it is also opined by Bagus & Howden (2009, 2012), De Soto (1998), Hulsmann (2004), Rahamim (n.d.), Yeager (2010), whereas the demand deposit, which mainly for saving purpose is unable to be used by the bank for financing to prevent the further mismatch.

Morover, According to Darsono et al. (2017), there are another type of fund management which are the conversion of funds or allocation of fund. This should be introduced to cater the weakness of pool of fund which might result the liquidity mismatch. The allocation of fund is basically classified the source of fund based on its rate of return, tenure, as well as the liquidity needs. Unlike the pool of fund, the conversion of fund pushed the bank to seek and select the prime credit customer before raising a third party fund to finance the customer's project. Theoretically, the conversion of fund ask the bank to be

conservative in operating their business since the project must exist in advance before offering the funding product to customer based on the project needed. Here is the diagram of allocation of fund below. Refer to Figure 2The diagram above is close to the concept of *100%RBS* since it attempts to minimize the deposit – loan maturity mismatch (Bagus & Howden, 2009, 2012). However, the Austrian school proponents such as Bagus & Howden, (2009, 2012), De Soto (1998), Hulsmann (2004), Yeager (2010) whereas the demand deposit should not be used for financing since it is mainly for saving purpose to prevent the further mismatch. For the purpose of this research, the future zakat based deposit product will use the conversion of fund so that the fund can be channeled properly to the *Mustahiq*.

2.1.2. The Integration of Islamic Commercial Finance and Social Finance

Social finance according to Cornée et al., (2018), has important role not only to support the economic thinking but also the economics of the poor. It basically combines the grant and the soft loans according. It also channelling fund from prosocial funder to the needy receiver to full fill their daily needs. There are several studies that have proposed some blending of social finance into commercial finance. Among such studies include Rogers & Clarke (2016) who write on the social finance aspect of peer to peer lending (P2P). The P2P basically denotes as the platform that support to the poor to access the credit for daily needs. Nevertheless, the poor got the higher cost of fund than financing form Bank.

The Integration between the Social and Commercial finance actually has been happened in the Islamic Financial Institution namely the Baitul Maal wa Tamweel. According to Ascarya (2018), The BMT according to Ascarya (2018) basically has two side of business which are the Baitul Maal (BM)and Baitul Tamweel (BT). The Baitul Maal (BM) will record and register the Waqif that gives their asset for the sake of Allah thru waqaf. On the other hand, the BT will have a duty to collect the Cash Waqf and Zakat and distribute it to finance the consumptive as well as productive financing. The rise of consumptive financing is essential since the market that BMT serviced is lower grass root that don't have any wealth even to fulfill their daily food needs. In this case, the financing for consumptive purpose such as the education, health, as well as cloth financing will be paid by the debtor using the profit that they get from productive financing. BMT also should provide technical assistance to the debtor both for 8 Ashnaf debtors and MSM-E to actually escalate their living hood. Again, the profit that BMT get from this operation should be plowback to the pool of fund.

Most of the research actually propose Waqf model to finance a project such as Mohsin (2013) and Tanjung (2018) as well as Hamber & Haneef (2017). Mohsin (2013) proposes the Waqf fund to be used for financing a project both commercial as well as the social project. Furthermore, the waqf fund also can be used to buy a share of commercial company so that every dividend that paid by company will be given to the receiver of the Waqf Fund. The potential of Waqf is huge to fund education, infrastructure, healthcare as well as for the religious purposes like building Mosque. Hamber & Haneef (2017) proposed unique structure of integrating ICF into venture capital. They called it as the Waqf Based Social Micro Ventures Fund (WSMVF). The source of fund of WSMVF are from the Baitul Maal, the voluntary giving from the community, and also from the corporation by means of grant or CSR. Tanjung (2018) agreed on the proposal of WSMVF as well as the modus operandi. The point of concern that Tanjung (2018) highlight is on the balance sheet position of Waqf fund in the WSMVF financial report. Tanjung (2018) asserts that the Waqf Fund should be clearly recorded and suggesting three form of ISF integration which are the (1) waqf fund posted on the equity (2) recorded as third party fund of the ventures (3) put it on both equity and the third party fund. The ownership integration of ISF to ICF happened on the first alternative as well as the third alternative. On the other hand, the operational integration will be occurred on the second and the third alternatives. Moreover, all alternatives will end up with the bottom line integration.

There is also research that touch on the Zakat to be commingle with the commercial finance. Sloane-White (2017) explain the transformation of Zakat since it beyond the teaching of Islam, it's a power house to boost the muslim society as whole thru the establishment of Zakat based Hospital, Universities, etc.

2.2. Zakat and Islamic Bank

Allah Azza Wajalla in His Verse, said that:

“The example of a person who gives up his wealth in the way of Allah is like a seed growing seven stalks. In each stalk, there are one hundred seeds. Allah multiplies for whoever is desired, and Allah is all-knowing and knowledgeable (QS Al-Baqarah: 261).

In Ibn Kathir's Tafsir it is explained that in surah Al-Baqarah verse 261, there is a parable made by Allah Subhanahu Wa Ta'alam illustrating that the reward will be doubled for someone who has given or given his treasure in the way of Allah to seek His mercy and pleasure, and where every charity the goodwill be multiplied to tenfold to seven hundred times. Based on the above verse,

researcher believe that if Islamic Bank helps ummah by collecting and disbursing zakat to the Mustahiq. Moreover Mannan (2018) propose three sector banking that has been done by the Social Islamic Bank of Bangladesh (SIBL) by cover the formal sector, microfinance as well as the social finance sector thru the application of Cash Waqf Certificate. The model will impact two side of the SIBL internal and external. The internal impact is the increase of cost since covering up the grass root need more personnel as well as the considerable amount of profit from financing the grass root. Moreover, the idea of three banking sector promote growth for the Islamic Financial Institutions that do it. The external impact of the model basically will increase the market share of Islamic Banking. Based on the Mannan (2018), this research is exploring whether the existing external zakat collection impact more to the expense of the bank or otherwise give more benefit to the Islamic Bank. Thus, in this research, we use a ratio that introduced by regulator which is Operational Expense Operational Revenue (BOPO) to state whether the collection impact the expense of bank On the other hand, Return On Asset will be used to know the future possibility that the external zakat collection will give more benefit to the IBs assuming that Bank get more fee based income that can be recorded as the revenues (Harfiah et al., 2018).

2.3. Previous Studies

There is few research which related to the topic that this research offered. Thus only two main research from Choudury and Harahap (2008) and Rahman (2012) which has closest topic to support the argument that is established by this research. First is from Choudury and Harahap (2008) that use quantitative approach of linear regression. The results of this study conclude that the potential relationship to be obtained between zakat and other expenditure variables, in accordance with Islamic principles in the important role of Islamic banks as a resource mobilization institution for the achievement of welfare aided by social and economic systems becomes an important point to be observed in the strategy development.

Second articles from Rahman (2012) which use literature study approach. Among the reading materials referenced are materials related to the poor and needy, the policy from selected Islamic banks in Malaysia as well as zakat statistical reports of Islamic banking institutions. The results of this study, as a general guideline in building a framework, through zakat distribution management whose method refers to the policies and regulations of Islamic banking institutions. In addition to Islamic banking institutions in Malaysia helping the poor and poor in improving their lives in the forms of charity assistance provided.

Above past studies have the same consensus which stated that the role of Islamic bank as zakat orchestrator is indispensable since they have the system and resource to mobilize it. However, none of these research analyse using the bank level data. This paper will close the gap using the bank level data to measure the impact of zakat collection to profit, cost, market share and growth.

III. Methodology

3.1. Data

This research is a quantitative study with a descriptive study approach, which uses the financial statements of Islamic banks that have been registered at Bank Indonesia (BI), and the Financial Services Authority (OJK), the population of banks used is 14 Islamic commercial banks and 20 Islamic business units, and the sample used is five Islamic banks, because there are only five banks that carry out activities as amil zakat, namely Syariah Bank Mandiri (BSM), Bank Negara Indonesia Syariah (BNIS), Bank Rakyat Indonesia Syariah (BRIS), Bank Muamalat Indonesia (BMI), and Central Asia Syariah Bank (BCAS). The data used are quarterly data with a period from 2013 to 2020. Data analysis techniques used are panel data regression and Granger causality.

3.2. Model Development

In this study, there are four models that will be run separately using panel data regression which are:

Model 1 Relationship Between Zakat Collection with Profitability:

$$ROA_{IBt} = \alpha + \beta_1 ZC_t + \varepsilon_t$$

ROA_{IBt} = Profitability of Islamic Bank (DV1)

ZC_t = External Zakat Collection

β_1 = Coefficeint Regression of each Independent Variables

ε_t = error term

α = Constanta

Model (1) indicates that as zakat intermediaries, Islamic banks can increase profitability, by actively contributing to zakat collection in Indonesia. In the study of Harfiah et al. (2018) explained that zakat can be one of the factors driving increased profits in Islamic banking. Thus the first hypothesis is:

H1: Zakat has a positive and significant relationship to the level of profitability of Islamic banks in Indonesia.

Model 2 Relationship Between Zakat Collection BOPO:

$$BOPO_{IBt} = \alpha + \beta_1 ZC_t + \varepsilon_t$$

$BOPO_{IBt}$ = Operation Cost to Operating Revenue of Islamic Bank (DV 2)

ZC_t = External Zakat Collection

β_1 = Coefficeint Regression of each Independent Variables

ε_t = error term

α = Constanta

Model (2) indicates that as zakat intermediaries, it can affect the operational costs of operating income contained in Islamic banks. According Harfiah et al. (2018) as well as the 2017 annual financial statements of Bank Syariah Mandiri and Bank Muamalat Indonesia, which have formed their own LAZ, the management of zakat is still using the operational costs of the bank itself to run LAZ which has been formed by the Islamic bank. Thus the second hypothesis is

H2: Zakat has a negative and significant relationship to the operational costs of operational income (BOPO) of Islamic banks in Indonesia

Model 3 Relationship Between Zakat Collection Market Share:

$$MS_{IBt} = \alpha + \beta_1 ZC_t + \varepsilon_t$$

MS_{IBt} = Market Share of Islamic bank (DV 3)

ZC_t = External Zakat Collection

β_1 = Coefficeint Regression of each Independent Variables

ε_t = error term

α = Constanta

Model (3) indicates that as zakat intermediaries, Islamic banks can increase market share growth or Islamic banking market share in Indonesia. According to data from Islamic Banking Statistics in 2015, in the 2009 to 2015 period the market share of Islamic banking in Indonesia continued to increase, but the level of Islamic banking market share was still below the 5% level. In a study conducted by Rahman (2012) and Choudury and Harahap (2008) which mentioned the level of market share in Islamic banks in Malaysia could increase with the activity of Islamic banks in Malaysia in their activities as amil zakat. Thus the third hypothesis is:

H3: Zakat has a positive and significant relationship to the market share of Islamic banks in Indonesia

Model 4 Relationship Between Zakat Collection Growth:

$$Growth_{IBt} = \alpha + \beta_1 ZC_t + \varepsilon_t$$

$Growth_{IBt}$ = Growth of Islamic bank (DV 3)

ZC_t = External Zakat Collection

β_1 = Coefficeint Regression of each Independent Variables

ε_t = error term

α = Constanta

Model (4) indicates that as zakat intermediaries, it can influence the growth of Islamic banks in Indonesia. In the research of Nyin and Wee, Et.al (2014) which states that zakat has an influence on the growth of the total assets of Islamic banks, where if the total collection of zakat increases, the total assets of the bank will decrease, and if the total collection of zakat decreases, the total assets will increase. Thus the fourth hypothesis is:

H4: Zakat has a positive and significant relationship to the growth of Islamic bank assets in Indonesia.

3.2. Operational Variables

There are 5 indicators used to answer the research problem as well as explaining above four models, which are shows in Table 1.

Table 1. Operational Variable

Variable	Indicator	References
Zakat is funds obtained by banks as amil zakat obtained from the public (X1)	Zakat received by banks from outside (external)	Rahman (2012)
Profitability is one of the ratios used in measuring financial performance (Y1)	$ROA = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\%$	Harfiah et al. (2018)
Operational Costs Operational Income is the comparison between operational costs and operating income in measuring the level of efficiency and the ability of banks to carry out their operations (Y2)	$BOPO = \frac{\text{Operating Expenses}}{\text{Operating Income}} \times 100\%$	Harfiah et al. (2018)
Market Share is a percentage of the overall market for a certain product or service category issued by a company in the same category (Y3)	$MS = \frac{\text{Total Assets of BUS or UUS}}{\text{Total Islamic Banking Assets BUS and UUS (BUS dan UUS)}}$	Jumono et al. (2015)
Growth of Islamic Banks in Indonesia (Y4)	Growth Rate = (Current year's total assets - Previous year's total assets)	Choudury dan Harahap (2008)

3.3. Method

3.3.1. The Data Panel Regression

Data analysis method used in this study is panel data, which is a combination of cross-section data with time-series data, where cross-section units are measured differently, panel data regression is used to know and measure variables of profitability, BOPO, market share, and bank growth Islamic in Indonesia is influenced by external zakat variables obtained by Islamic banks as amil zakat in Indonesia. The data processing is carried out using EViews10 software. In the panel data regression estimation model according to Baltagi & Liu (2019) can be done with 3 approaches, namely as follows:

Common Effect or Pooled Least Square (PLS)

It is the simplest panel data model approach because it only combines time series data and cross sections and do not pay attention to the dimensions of time or individuals so it is assumed that the behaviour of Islamic bank data in various time periods. This method can use the Ordinary Least Square (OLS) approach or small squares technique to estimate panel data.

Fixed Effect Model (FEM)

This model assumes that differences between individuals can be accommodated from their intercept differences. The fixed effect model is a technique for estimating panel data using dummy variables to capture intercept differences. Intercept between banks, intercept differences can occur due to differences in work culture, managerial, and incentives. Besides that, this model also assumes that the regression coefficient is fixed between banks and time. This approach with dummy variables is known as least square dummy variables (LSDV).

Random Effect Model (REM)

This model estimates panel data where interruption variables may be interconnected between time and between individuals. In the random effect model, the intercept difference model is accommodated by the error terms of each bank. The advantage of using random effects is that it eliminates heteroscedasticity. This model is also called the generalized least square (GLS) technique

And the next step to analyse the panel data model is to select the best model using several tests, namely (Batalgi & Liu, 2019):

Hausman Test

Hausman test is a test used to choose the best model between the fixed effect model or random effect model. This thurst test is based on the idea that least squares dummy variables (LSDV) in the fixed effect and generalized least (OLS)

methods in the common effect method are inefficient. Namely, by testing the hypothesis form:

H₀: Random Effect Model

H_a: Fixed Effect Model

Hausman test statistics follow the Chi-Square distribution with degrees of freedom (df) equal to the number of independent variables. The null hypothesis is that the right model for panel data regression is the random effect model, and the alternative hypothesis is the right model for panel data regression is the fixed effect model.

Chow Test

Chow test is a test to determine what model will be chosen between the Common Effect model or Fixed Effect model. The chow test hypothesis is:

H₀: Common Effect Model (pooled OLS)

H_a: Fixed Effect Model (LSDV)

The null hypothesis in this test is that the intercept is the same or in other words, the right model for panel data regression is the common effect model and the alternative hypothesis is the intercept is not the same or the right model for panel data regression is the fixed effect model.

Lagrange Multiplier Test

The Lagrange Multiplier Test is a general principle for testing hypotheses about parameters in likelihood framework. This test is carried out with the aim of determining the best method of panel data regression, whether to use common effect or random effect. Thus, the hypothesis constructed is (Baltagi et al., 2002):

H₀: Common Effect Model

H_a: Random Effect Model

As the hypothesis above, the null hypothesis in this test is that prob. beusch-pagan is the same or in other words, the right model for panel data regression is the common effect model and the alternative hypothesis is the prob. Beusch-pagan is not the same or the right model for panel data regression is the random effect model.

3.3.2. Granger Causality Test

Granger causality test is an analysis model that explains whether a variable has a two-way relationship or only one direction only. Granger causality test is basically looking at past effects on current conditions so that the data used

is the data series, so that the hypothesis formulation of granger causality is (Horváth et al., 2014):

Ho: X is not Granger cause Y

Ha: X Granger cause Y

and,

Ho: Y is not Granger cause X

Ha: Y Granger cause X

The Granger casualty test will be used in the case that data panel regression cannot show the significances of the External Zakat Collection to the ROA, BOPO, Market Share, and the Growth of Islamic Banks.

IV. Results and Analysis

4.1. Results

4.1.1. Classic Assumption Test

Multicollinearity Test

Table 2. Multicollinearity test results

Variable	VIF	1/VIF
ROA	1.00	1.000000
BOPO	1.00	1.000000
Market share	1.00	1.000000
Pertumbuhan	1.00	1.000000
Mean VIF	1.00	

The model that can be classified as no multicollinearity happened when the VIF value below 10 and the value of 1 / VIF (tolerance) is more than 0.1. Thus below is the result of multicollinearity test.

From the Table 2 it can be seen that the VIF values of all variables are below 10 and the value of 1 / VIF is above 0.1. Then it can be concluded that there is no Multicollinearity relationship between independent variables in this study.

Heteroscedasticity Test

Before entering to the model selection, the data should be tested with the heteroscedasticity test through the Breusch-Pagan / Cook-Weisberg test. When the test result is below 0.05 (probability) it indicates heteroscedasticity. The results of running data for the heteroscedasticity test for ROA (Y1) prob.> χ^2 was 0.1805, BOPO (Y2) prob.> χ^2 was 0.7905, market share (Y3) prob.>

chi was 0.000, and growth (Y4) prob.> chi² was 0.0032. From the results of running the data it is known that the ROA (Y1), and BOPO (Y2) variables have values greater than the significance value of 0.05. this indicates that the data detected no heteroscedasticity. And for market share (Y3) and growth (Y4) variables which have a value smaller than the 0.05 significance value, this indicates that there are indications of heteroscedasticity symptoms. As an alternative to the common effect / PLS or fixed effect / FEM model that still contains symptoms of heteroscedasticity, it can use the Generalized Least Squared (GLS) approach that accommodates auto-corellation and heteroscedasticity in the model.

Selection of the Best Model

1) Hausman Test

For testing the best model using the Hausman test, it can be seen from the probability value is 0.05, if the value is greater than 0.05 then Ho is accepted and the model chosen is REM, but if the value is less than 0.05 then the model chosen is FEM.

Table 3. Hausman Test Results: REM vs. FEM

Model	Prob. > F	Best Model
ROA (Y1)	0.0287	FEM
BOPO (Y2)	0.0526	REM
Market Share (Y3)	0.6614	REM
Growth (Y4)	0.1100	REM

From the Table 3, it can be seen that the prob. value of each variable sequentially are Y1 is 0.0287<0.05, Y2 is 0.0526>0.05, Y3 is 0.6614>0.05, and the Y4 is 0.1100>0.05 indicating that Y1 is significant at the 5% level, therefore the null hypothesis (Ho) is rejected and the regression model chosen is FEM while Y2, Y3 and Y3 accept the null hypothesis, meaning that the regression model chosen is REM. This paper directly jumps to the LM test since the Chow Test test PLS vs FEM, while the results of Hausmann test are all in favor of REM.

2) Lagrange Multiplier Test

For selecting the best model using the Lagrange multiplier test, it can be analysed from the probability value for prob. Beusch pagan is 0.05, if the value is greater than 0.05 then H0 is accepted and the model chosen PLS, but if the value is less than 0.05 then the model selected is REM.

From the table 3 it can be seen that the prob. value of the variable Y1 is 0.5368>0.05, as its result is not significant at the 0.05 level, the null hypothesis

(Ho) is accepted which means the best model chosen is PLS. Then, the prob. value of Y2 is $0.0000 < 0.05$, prove that it is significant at the 0.05 level, then Ho is rejected so that the regression model chosen is REM. The prob. value of Y3 is $0.0000 < 0.05$, the same as prob. Y4 value is $0.0000 < 0.05$, which means that it is significant at the 0.05 level, then Ho is rejected so the regression model chosen is REM.

Table 4. Lagrange Multiplier Test Result (CEM vs. REM)

Model	Test	Prob. Beusch pagan	Best Model
ROA (Y1)	LM	0.5368	PLS
BOPO (Y2)	LM	0.0000	REM
Market Share (Y3)	LM	0.0000	REM
Pertumbuhan (Y4)	LM	0.0000	REM

Table 5. Selection of The Best Model

Model	Test			Best Model
	Hausman: FEM vs. REM	Chow: FEM vs. PLS	LM: REM vs. PLS	
ROA (Y1)	FEM	FEM	PLS	FEM
BOPO (Y2)	REM	FEM	REM	REM
Market Share (Y3)	REM	FEM	REM	REM
Growth (Y4)	REM	FEM	REM	REM

In conclusion, based on the classical assumption test conducted, two variable which do not pass the heteroscedasticity. As an alternative, for Market Share and Growth, Suwardi (2011) stated the data can be analysed using Generalized approach Least Squared (GLS) or commonly called Random Effect Model (REM) which accommodates the existence of autocorrelation and heteroscedasticity in the model. So the best model used is the Random Effect Model (REM). It shows in table 4 and table 5.

4.1.2. Panel Data Results

The hypothesis of this study was tested using panel data regression analysis. Hypothesis testing is done in 2 ways: the coefficient of determination test (goodness of fit) and the partial significance test (t-test) based on the results of data processing table 6 shows the results of hypothesis testing for the following models.

From the Table 6, only Hypothesis 2 has been accepted since the value p-value below 0,05. Hypothesis 2 is measuring the relationship between zakat collection and the BOPO. Based on the literature review, the relationship between two variables in hypothesis 2 is negative since the more zakat

collection, the cost also will be raised. As per Table 6, the probability value of H2 is 0,0258 while the t statistic is 2,211. The r square of H2 is 2,3% meaning that the zakat only can explain 2,3% variance of the BOPO while the rest is measured by other variable. The other hypothesis which are H1, H3, and H4 is rejected due to the p-value above the 0,05.

Table 6. ROA hypothesis test results

Hypotesis	Coeffient	P-Value	T-Statistic	F-Stat	P-Value (Ftest)	R-Square	Result
H1	-0.002137	0,56888889	-0.541703	2,201	-	39,70%	Reject
H2	0.165355	0,02588	2,2111	4,805	0.029836	2,30%	Accept
H3	0.021978	0,2358	1,1902	1,423	0,230	2,60%	Reject
H4	0.09439	0,2924	1,06	1,105	0.294725	0,01%	Reject

4.1.3. Granger Causality Results

As seen from the Table 7, The causality of External Zakat to ROA is 0.9825 which is not significant, but the ROA to External Zakat is significant (0.0023). Therefore, External Zakat does not cause ROA, while ROA causes External Zakat. Furthermore, there are no significant causes between External Zakat to BOPO (0.921) and the BOPO to External Zakat (0.0015), Thus, External Zakat do not cause BOPO, otherwise BOPO causes External Zakat. Similar thing happened to the last two variables as the causality of External Zakat to Market shares (0.9042) and Market share to External Zakat (0.3083), then the causality of External Zakat to Growth (0.6944) which means there is no reciprocal causality. However, the Growth to External Zakat (0.0035) means Growth causes External Zakat.

Table 8 are the granger causality test result:

Table 8. Granger Causality Test Results

Granger Test	F. statistic	Prob
External Zakat to ROA	0.01761	0.9825
ROA to External Zakat	6.35564	0.0023
External Zakat to BOPO	0.08238	0.921
BOPO to External Zakat	6.82916	0.0015
External Zakat to Market shares	0.10073	0.9042
Market share to External Zakat	1.18629	0.3083
External Zakat to Growth	0.36564	0.6944
Growth to External Zakat	5.88975	0.0035

4.2. Analysis

4.2.1. The Effect of Collecting External Zakat on the Level of Return on Assets (ROA) of Islamic Banks in Indonesia

The results of this study indicate that the collection of external zakat has no significant influence on the ROA level of Islamic banks in Indonesia. This study contradicts several research that have been conducted. Yohani and Yusuf (2014), explained that zakat can affect the profitability of Islamic banking. Likewise, Nyin and Wee, et.al (2014), stated that the total income and total collection of zakat has a positive relationship, which if the total collection of zakat increases, the total income of Islamic banking will also increase, and vice versa if the total income increases, the total collection of zakat will also increase. However, Firmansyah and Rusydiana (2013) states that ROA can affect zakat on Islamic banks. These is accordance with the results of the Granger causality test between the ROA to the collection of external zakat which assert there is significant relation.

4.2.2. The Effect of Collecting External Zakat on Operational Costs Operational Income (BOPO) of Islamic Banks in Indonesia

The results of this study indicate that the collection of external zakat has significant influence on the level of BOPO in Indonesian Islamic banks. The result of this study in line with the fact that several Islamic banks in Indonesia which already have their own zakat collection units or institutions such as Baitul Mal Muamalat (BMM) owned by Bank Muamalat Indonesia and Amil Zakat Institution of Prosperous Partners Umat (Laz BSM Umat) owned by Bank Syariah Mandiri. As the LAZ payroll and operations owned by the two Islamic banks are still borne by themselves, hence zakat has a positive effect on the BOPO of Islamic banks in Indonesia. It is better for banks that already have LAZ to issue ZISWAF-based funding products so that assets in general can increase, or work together with UPZ that already exists around the banking environment. Therefore this study shows that there is no significant influence between collection of external zakat and operational costs of operational income (efficiency) of Islamic banks in Indonesia according to the results of the granger test.

4.2.3. The Effect of Collecting External Zakat on Islamic Bank Market Share in Indonesia

The results of this study indicate that the collection of external zakat has no significant effect on the level of Market Share in Indonesian Islamic banks. The results of this study are not in line with research conducted by Rahman (2012) and Choudury and Harahap (2008) which states that the level of market share

in Islamic banks in Malaysia increase through the activity of Islamic banks in Malaysia as amil zakat. Moreover, the results of granger causality test show that zakat has no significant relationship to the overall market share of Islamic banks in Indonesia, because the collection of zakat can increase market share and with that the market value of Islamic banks in Indonesia will increasingly have an impact on the overall market share value of banks in Indonesia, therefore if Islamic banks in Indonesia are more active in activities as amil zakat, then the market share level will definitely increase if zakat collection activities increase due to a significant relationship in granger between zakat and Islamic bank market shares in Indonesia.

4.2.4. The Effect of Collecting External Zakat on the Growth of Islamic Bank Assets in Indonesia

The results of this study indicate that the collection of external zakat has no significant influence on the growth rate of assets in Indonesian Islamic banks. This study contradicts the research conducted by Nyin and Wee, Et.al (2014) which states that zakat has an influence on the growth of total assets of Islamic banks, where if the total collection of zakat increases, the total assets of the bank will decrease, and if the total collection zakat decreases then total assets will increase. If the total collection of zakat increases, the operational expenses in the zakat collection activities will also increase, such as payroll for amil or employees and other operational expenses used in activities as amil zakat. Therefore, this study shows that zakat has no a significant influence on the growth rate of Islamic bank assets in Indonesia

4.2.5. The Implementation of Zakat Based Product in Islamic Banking

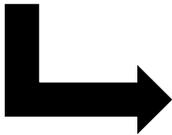
As a result from this study and previous research done by Firdaus et al. (2012), stated that Indonesia's potential national zakat reached IDR217.60 trillion, which equivalent to 3.40% of GDP. Afterwards, Asfarina et. al (2019) asserted the calculation of zakat potential in Indonesia up to IDR216.54 trillion or equal to 1.75% of GDP, whilst the actual amount of zakat collected for 2018 (not including infaq) amounted to only IDR 8.10 trillion, or 0.05% of GDP. It indicates that the role of zakat has no been significant in improving welfare.

To maximize zakat, the conceptual work of Ascarya (2018) can be referred in this case. Islamic Bank according to Ascarya (2017), has a role in mobilizing the fund from surplus unit and channeling it to the deficit unit. Nevertheless, Islamic banks in several countries have another divine role as per instructed in the Indonesian Islamic Banking Act No. 21 – 2008 which stated in the article 4; The Islamic banks could collect the fund from Zakat and Waqf. By that end, basically the Indonesian Islamic banks have done their Islamic social finance

part by virtue of collecting and distributing the Zakat, Waqaf, Infaq, Shadaqah (ZISWAF). Ascarya (2017) proposed an integration of Islamic social finance into the banking business by adding the Ziswaf linked product on the balance sheet with special requirement.

Before linking the social and commercial finance, Ascarya (2018) pointing some issues that need to be solved before integrating the Islamic social finance to the commercial finance such as Fractional reserve banking (FRB), the liquidity-driven business, and the pooling of fund. The fractional reserve banking will delay the integration since its create a bubble and instability of the bank business. Moreover, the FRB basically drives the bank to deploy the pooling of fund system by way of uniting the term deposit, saving, and current account in a blend and exploit it into financing. The pool of fund will not fit to the social finance scheme like zakat. If one Islamic banks open zakat deposit on their liabilities side; it can only be used for the 8 ashnaf of Zakat financing. Meaning to say, this kind of product should be separated using allocation of fundschemes to ensure that it not mingle with the third party fund. Ascarya (2018) also illustrated the Islamic bank balance sheet which taking into account the Islamic social finance below:

Current IB Balance Sheet	
Assets	Liabilities
Cash	Wadiah/Mudharabah CA
Central Bank Placement	Wadiah/Mudharabah SA
Interbank Placement	Mudharabah Time Deposit
Receivables (Murabahah, Ijarah, Qard)	Other Liabilities
Syirkah Financing	
Fee Based	
Inventories	Reserves
Fixed Asset	Equity



Future IB Balance Sheet with Social Finance	
Assets	Liabilities
Cash	Wadia/Mudharabah CA
Central Bank Placement	Wadiah/Mudharabah SA
Interbank Placement	Zakat Saving Deposit
Receivables (Buy and Sale Finnancing, Qard)	Mudharabah Time Depositiit
Syirkah Financing	Other Liabilities
Fee Based	Waqf Long Term Deposit
Inventories	Waqf Equity
Fixed Asset	Reserves
	Equity

Figure 3. Balance Sheet of an Islamic Bank: Current and Proposed One
Source: Ascarya (2018)

As reflected on Figure 3 of balance sheet, based on Ascarya (2018) thoughts, the existing liabilities side of Islamic Bank is fulfilled by Wadiah and Mudharabah based current account and saving account plus the plain vanilla Mudharabah time deposit as well as other liabilities like interbank money market, sukuk, as well as MTN. Alongside the liabilities, the Islamic bank has equity and reserves. After introducing ZISWAF based product like zakat saving deposit, Waqf Long Term Deposit as well as the Waqf Equity, it will change the funding structure of IB since the cost of fund will be reduced and diminishing the liability mismatch due to the irrevocable Waqf long term deposit. The change in financial position will correspondingly affect the Islamic bank business. To maximize the social finance side of banking business by establishing the Baitul Maal to control the distribution of ZISWAF through the social program.

To Actually deliver new product that is based on the Zakat contract, some regulations need to be considered to be amended. The regulations are below:

1. This study proposes that zakat based products are not included in the calculation of Statutory Reserves based on PBI 20/3 / PBI / 2018 related to Statutory Reserves in Rupiahs and Foreign Currencies for conventional commercial banks, BUS & UUS. This proposal was given based on the following considerations:
 - a. The definition of Third Party Funds is in accordance with Bank Indonesia regulation No. 20/3 / PBI / 2018 is defined as *“unrestricted savings / investment funds entrusted by customers to Islamic banks based on wadiah / mudharabah agreements in the form of demand deposits, deposits, certificates of deposit or other equivalent forms”*. While the Zakat characteristics that are alms that cannot be withdrawn by the depositors.
 - b. If the reserve requirement is applied, the IS does not receive Islamic bank might face the Islamich Issues since the Zakat fund should be channelled to the 8 Ashnafs,
 - c. At the operational level, the zakat based product management account must use a shelter account and the pool of funds must be separated from the DPK account in general.
2. This study proposes that Zakat-based products are not included in the calculation of Financing to Deposit Ratio (FDR) with the following considerations:
 - a. Referring to POJK No. 8 / POJK.03 / 2014 related to BUS-UUS Soundness Rating, that in the Financing to Deposit Ratio (FDR) formula of financing divided by DPK. In accordance with the explanation related to the definition of DPK above, because this new product model is bound either to the project or to a particular portfolio, the transactions recorded by the bank for this product

are not included in the health component of Islamic banks since the receiver is the Mustahiq.

- b. There is no liquidity gap because the assets and liabilities are balanced due to the non-revocable feature zakat funding product.
3. Law of the Deposit Insurance Agency No. 24 of 2004 concerning LPS states that LPS will guarantee the meet below requirement:
- a. In savings products, banks act as Mudarib who bear the risks
 - b. On deposit products, banks act as Investment manager who bear the risks
 - c. Deposits based on other Islamic principles determined by LPS after obtaining LPS consideration

From the explanation above basically opens wide opportunities for Islamic banks to make product innovation specifically in products that are bound Zakah Fund. The product has an opportunity to be guaranteed by LPS through consideration given from DSN, OJK, and LPS.

V. Conclusions and Recommendation

5.1. Conclusion

External zakat collection by Islamic banks in Indonesia has no significant influence on the profitability (ROA) of Islamic banks in Indonesia, nor on the market share and asset growth of Islamic banks in Indonesia. However, the collection of external zakat conducted by Islamic banks has a significant influence on the operational costs of operating income (BOPO) of Islamic banks in Indonesia. The results of the causality test suggest that external zakat collectors may have a relationship with Islamic bank market share If external zakat collecting activities continue. In a nutshell, it is not suitable for Islamic bank to acts as Amil, hence the collection of Zakat from external should be channelled directly to LAZ / BAZ. Thus, the product that is offered to the customer is a mere of intermediaries of *Muzakki* and LAZ.

5.2. Recommendation

There are still a multitude of discussion in this paper that may need to be improved, hence the authors suggest for further research to examine the variables in this research using different method to find the alternative. For instance, the previous study on Social Islamic Bank Ltd. by referencing cash waqf for monetizing Islamic Voluntary Sector, accumulation of Social Capital and National wealth, and implementing strategic social investment program (Mannan, 2018). It could be adding Islamic Business Units as research objects

or comparing Islamic banks in Indonesia with Islamic banks in Malaysia as research objects using different variables with monthly or quarterly financial data to find a better discussion.

As for Islamic banks, we hope that they could more active in the collection of external zakat activities by forming zakat collection units or institutions themselves or working with existing zakat collection units or institutions. Increase the socialization of zakat to customers and the public in order to attract customers and the public to channel their zakat through Islamic bank services and published a new product, ZISWAF-based funding product.

Furthermore, all of these efforts would not have been possible without the help of regulators and the government. Thus, they need to provide more facilities for Islamic banks conducting activities as amil zakat, speed up and simplify the approval process for issuing new products for Islamic banks that want to make ZISWAF-based funding products, reducing the tax since this is some alms that used for poverty alleviation as well as giving more incentives for those Islamic banks that collecting the Zakah.

References

- Alam Choudhury, M., & Syafri Harahap, S. (2008). Interrelationship between Zakat, Islamic bank and the economy: A theoretical exploration. *Managerial Finance*, 34(9), 610–617. <https://doi.org/10.1108/03074350810890967>
- Ascarya, A. (2018). *Micro Level models of integrated Islamic commercial and social finance in* (Working Paper No. 6; IESTC Working Paper Series, Issue 6).
- Asfarina, M., Ascarya, A., & Beik, I. S. (2019). Classical and contemporary fiqh approaches to re-estimating the zakat potential in Indonesia. *Journal of Islamic Monetary Economics and Finance* 5(2), 387–418.
- Bagus, P., Gabriel, A., & Howden, D. (2016). Reassessing the ethicality of some common financial practices. *Journal of Business Ethics*, 471–480. <https://doi.org/10.1007/s10551-014-2525-9>
- Bagus, P., & Howden, D. (2009). The legitimacy of loan maturity mismatching: A risky, but not fraudulent, undertaking. *Journal of Business Ethics*, 90(3), 399–406. <https://doi.org/10.1007/s10551-009-0050-z>
- Bagus, P., & Howden, D. (2012). The continuing continuum problem of deposits and loans. *Journal of Business Case Studies - Spanish Edition*, 295–300. <https://doi.org/10.1007/s10551-011-0996-5>
- Baltagi, B. H., & Liu, L. (2019). Forecasting with unbalanced panel data. *Journal of Forecasting*, 38(8), 1–32. <https://doi.org/10.1002/for.2646>
- Baltagi, B. H., Song, S. H., & Jung, B. C. (2002). LM Tests unbalanced data for nested the panel with model regression errors correlated serially. *Annales d'Économie et de Statistique*, 219–268.
- Block, W., & Garschina, K. M. (1996). Hayek, business cycles and fractional reserve banking: Continuing the de-homogenization process. *The Review of Austrian Economics*, 9(1), 77–94. <https://doi.org/10.1007/BF01101882>
- Bank Indonesia. Regulation No. 20/3 / PBI / 2018 on Statutory Reserves in Rupiah and Foreign Exchange for Conventional Commercial Banks, Sharia Commercial Banks, and Sharia Business Units. (2018, April 03). Retrieved from <https://peraturan.bpk.go.id/Home/Details/135871/peraturan-bi-no-203pbi2018-tahun-2018>
- Chari, V. V., & Phelan, C. (2014). On The social usefulness of fractional reserve banking. *Journal of Monetary Economics*, 65, 1–13. <https://doi.org/10.1016/j.jmoneco.2014.04.008>
- Cochran, J. P. (2012). Fractional reserve banking and central banking as sources of economic instability : The sound money alternative. *Indian Journal of Economic & Business*, 11(2), 543–560.

- Cochran, J. P., & Call, S. T. (1998). The role of fractional - reserve banking and financial intermediation in the money supply process: Keynes and The Austrians. *The Quarterly Journal of Austrian Economics*, 1(3), 29–40.
- Cornée, S., Jegers, M., & Szafarz, A. (2018). *A theory of social finance working paper*. 1–53. <https://halshs.archives-ouvertes.fr/halshs-01717167/document>
- Darsono, Sakti, A., Ascarya, Aisyah, S., Harisman, Darwis, A., Suryanti, E. T., & Rahmawati, S. (2017). *Perbankan syariah di Indonesia: Kelembagaan dan kebijakan serta tantangan ke depan* (M. S. Antonio (ed.); 1st ed.). Jakarta: PT. Rajagrafindo Persada.
- De Soto, J. H. (1995). A critical analysis of central banks and fractional - reserve free banking from the austrian school perspective. *The Quarterly Journal of Austrian Economics*, 8(2), 25–38.
- De Soto, J. H. (1998). A critical note on fractional - reserve free banking. *The Quarterly Journal of Austrian Economics*, 1(4), 25–49.
- Gertchev, N. (2013). From monetary nationalism to monetary imperialism: Fractional reserve banking and inter-government cooperation. *The Quarterly Journal of Austrian Economics*, 16(2), 109–134.
- Hamber, N. M., & Haneef, M. A. (2017). Waqf -based social micro venture fund: A proposal for the Malay-Muslim community in Singapore Norliana Mohammad Hamber. *JKAU : Islamic Econ*, 30(1), 37–60.
- Harfiah, L., Purwati, D. A. S., & Ulfah, P. (2018). Analysis the effect of profitability (roa), cost ratio (bopo), and financing to deposit ratio (fdr) on the profit sharing mudharabah in Islamic banking in Indonesia. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2752444>
- Horváth, R., Seidler, J., & Weill, L. (2014). Bank capital and liquidity creation: Granger-Causality Evidence. *Journal of Financial Services Research*, 45(3), 341–361. <https://doi.org/10.1007/s10693-013-0164-4>
- Hulsmann, J. G. (2004). Legal tender laws and fractional - reserve banking. *Journal of Libertarian Studies*, 18(3), 33–55.
- Jumono, S., Achsani, N. A., Hakim, D. B., & Fidaus, M. (2015). Market concentration, market share, and profitability (study at Indonesian commercial banking in the period of 2001-2012). *Asian Social Science*, 11(27), 18–27. <https://doi.org/10.5539/ass.v11n27p18>
- Law of the Deposit Insurance Agency No. 24 of 2004 concerning Indonesia Deposit Insurance Corporation. (September 22, 2004). Retrieved from https://www.lps.go.id/en/web/guest/uu_perpu/-/asset_publisher/Z2kn/content/undang-undang-no-24-tahun-2004-tentang-lembaga-penjamin-simpanan
- Mallett, J. (2015). General disequilibrium : The hidden conflict between fractional reserve banking and economic theory. *Cosmos + Taxis*, 2(2), 18–33. web: <https://reykjavik.academia.edu/jackymallett%0ABio->

sketch:

- Mallett, J. (2011). Analysing the behaviour of the textbook fractional reserve banking model as a complex dynamic system. *Proceedings of the Eighth International Conference on Complex Systems*, 1141–1156. <http://necsi.edu/events/iccs2011/papers/60.pdf>
- Mannan, M. A. (2018). Linking Islamic commercial and social finance with special reference to cash-waqf as new strategy of interest-free micro-credit for family empowerment of the poor towards establishing world social bank : A case study approach. *Journal of Islamic Monetary Economics and Finance*, 3(Special Issue), 1–24.
- Mohsin, M. I. A. (2013). Financing through cash-waqf : a revitalization to finance different needs. *International Journal of Islamic and Middle Eastern Financial Management*, 6(4), 304–321. <https://doi.org/10.1108/IMEFM-08-2013-0094>
- POJK No. 8 / POJK.03 / 2014 related to BUS-UUS Soundness Rating. (2014, June13). Retrieved from <https://www.ojk.go.id/id/kanal/syariah/regulasi/peraturan-ojk-terkait-syariah/Pages/39peraturan-otoritas-jasa-keuangan-tentang-penilaian-tingkat-kesehatan-bank-umum-syariah-dan-unit-usaha-syariah.aspx>
- Rahamim, D. (n.d). *Detangling the Fractional Reserve Banking Debate*. 1–24.
- Rahman, A. A. (2012). The role of zakat in islamic banking institutions in developing the economyof the poorand needy In Malaysia. *Tazkia Islamic Finance and Business Review*, 7.2, 256–276. <https://doi.org/10.30993/TIFBR.V7I2.16>
- Rogers, C., & Clarke, C. (2016). Mainstreaming social finance: The regulation of the peer-to-peer lending marketplace in the United Kingdom. *British Journal of Politics and International Relations*, 18(4), 930–945. <https://doi.org/10.1177/1369148116651357>
- Rothbard, M. N. (2008). *The mystery of banking* (second edi). Ludwig Von Mises Institute.
- Sanches, D. (2016). On the welfare properties of fractional reserve banking. *International Economic Review*, 57(3), 935–954. <https://doi.org/10.1111/iere.12181>
- Sloane-White, P. (2017). Zakat and Its Transformations: A Pillar of Corporate Islam. In *Corporate Islam*. Cambridge University Press. <https://doi.org/10.1017/9781316875605.006>
- Tanjung, H. (2018). An integration of waqf and ventura capital :A proposed model for Indonesia. *Journal of Islamic Monetary Economics and Finance*, 3(Special Issue), 125–140.
- Wahab, N. A., & Rahman, A. R. A. (2012). Productivity growth of zakat institutions in Malaysia: An application of data envelopment analysis. *Studies in Economics and Finance*, 29(3), 197–210.

<https://doi.org/10.1108/10867371211246876>

Werner, R. A. (2016). A lost century in economics: Three theories of banking and the conclusive evidence. *International Review of Financial Analysis*, 46, 361–379. <https://doi.org/10.1016/j.irfa.2015.08.014>

Yeager, L. B. (2010). *Bank reserves : A dispute over words and classification*. December 2009, 183–191. <https://doi.org/10.1007/s11138-009-0102-8>

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