Vulnerability in Islamic Banking: Case of Indonesia

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Abstract: The recent global financial crisis has renewed the focus on the resistance of Islamic banks in order to confront the crisis. While several empirical studies show that Islamic banks have no resist from the crisis. Thus, Islamic banks run their business side by side with their counterpart and play the game under the same umbrella and the rules of game. In case of Indonesia, which implements dual banking system, Islamic banks have potential to be effected by the variables of conventional banks. Which mean, this condition led the Islamic banks have the vulnerable spot in economic life. This paper aims to examine the stability of Islamic banks and to discern dynamic behavior of Islamic banks to the macroeconomic variables such as GDP, inflation rate, exchange rate and interest rate. The measure of stability of Islamic banks formulated as z-score. Then, we use VAR/VECM analysis in order to see the dynamic behavior and the vulnerability of Islamic banks. The paper found several findings, first, during the global financial crisis, Islamic banks more stable than the conventional banks, while after the global financial crisis conventional banks tend to be more stable than Islamic banks. Second, From the IRF test display that Islamic banks react sensitively to the shock of interest rate. However, Islamic banks prohibit the practice of interest rate. Even though, in practical reason, Islamic bank use interest rate as benchmarking to determine the price. This condition put the Islamic Banks in vulnerable condition. Third, the FEVD test showed that the stability of Islamic banks mostly contribute by its own stability then followed by GDP, interest rate, exchange rate and Inflation. At the seventh period the stability of Islamic banks mostly contribute by its stability then followed by Inflation rate, GDP, exchange rate and interest rate.

Keywords: Islamic Banks stability, the global financial crisis, vulnerability of Islamic banks

Introduction

Financial crisis have occurred over and over again since the regime of gold standard have demolished in 1915, and the latest crisis occurred a decade ago due to subprime mortgage in USA which has made tens of financial institutions in troubles and some of them have gone bankrupt. This global financial crisis has been called by the expert as the worst financial crisis ever since the Great Depression in 1930 (Ascarya, Widodod Cahyono, 2004).Friedman and Schwartz argued that the cause of the great depression led to the present financial crisis, classified by a meltdown of subprime loans and the bursting of the housing bubble (Askari Hossein, Zamir Iqbal, Noueddine Krichene, 2010).

In general, most of the world's economy is effected by the global financial crisis through two main routes, trade and financial. On the trade side, export performance is getting depressed with the fall in prices that have a strong impact especially to countries exporters of natural resource commodities (including Indonesia). Meanwhile on financial side, the crisis spread through the decline in stock market and the depreciation of the exchange rate in consequence of risk aversion behavior of foreign investor (Bank Indonesia, 2008). Not only the West, but also the third world such as Bangladesh, Indonesia, Malaysia, Pakistan, South

America, Africa as well as the Middle East has not been spared from the global financial crisis which is originated by the USA(Hassan, 2010).

Indonesia as one of emerging country which it's national income is generated from natural resource export, has been shocked during the global financial crisis. The GDP of Indonesia was decline on the first quarter in 2009 and arrived at the lowest spot on the first quarter in 2010. Thus, the decline of export in natural resource (oil and gas) occurred on the first and the second quarter in 2009. The value of export reached 3.6 billion Dollar US and 4.4 billion Dollar US. For the record, export in natural resource grew negatively 54% (yoy). The fall of oil price became the most determined variable in oil export side (Bank Indonesia, 2009b).

In micro level, commercial bank's liquidity is not save due to foreign fund withdrawn which is led to the role of commercial bank in lending sector is disrupted. In addition, the lack of liquidity occur in both conventional and Islamic banking(Bank Indonesia, 2008).
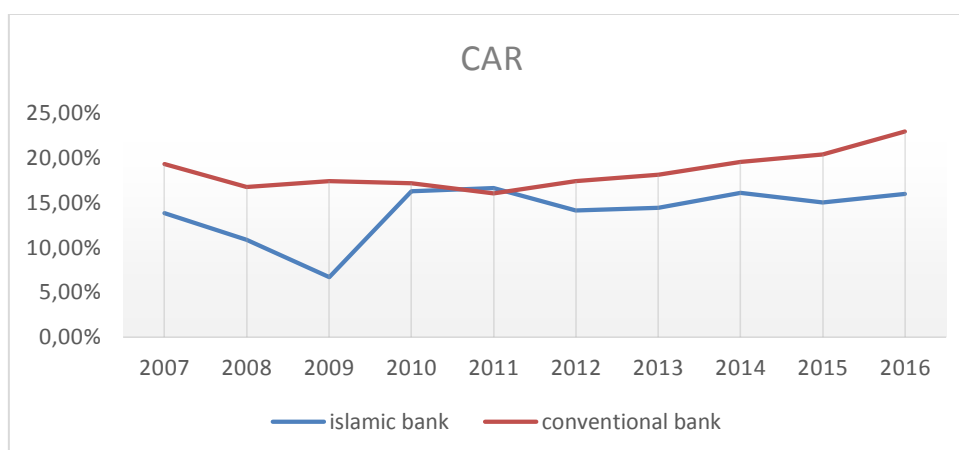
Source : Bank Of Indonesia, edited

Figure 1
CAR Of Islamic and Conventional Bank

The chart above describe about how the liquidity of commercial banks was disrupted during the global of financial crisis occurred. Neither conventional banks nor Islamic banks, the lack of liquidity shocked both of them. Hence, liquidity risk is highlighted as a primary concern in south-east Asia (IFSB, 2016). Furthermore, financial crisis always start with the failure of bank's role as intermediation unit, then give an impact systemically to the whole economic system with no boundaries, none of country can survive from banking crisis, even though developed country (Lutfi, 2012).

In the other hand, the implementation of dual-banking system in Indonesia led the Islamic bank influenced by the variable of conventional bank (Bank Indonesia, 2008). Therefore, Islamic bank has not been totally resist from the crisis, thus Islamic bank operate under the same umbrella and the rules of game with the conventional bank (Smolo & Mirakhor, 2010). Therefore, it's indicate that Islamic bank has the same risk and vulnerable spot with conventional one especially during the global financial crisis is occurred.

Study found that Islamic banks has no significant difference with the conventional banks in terms of probability of default during financial crisis occurred (Abedifar, Molyneux, & Tarazi, 2011).While(Hesse, 2010) found that the size of Islamic banks are really matter in the resistance of financial crisis impact. In addition, small Islamic banks are more stable than small conventional banks, otherwise, the bigger size of Islamic banks the more vulnerable to remain stable from the crisis. However, Islamic banks as intermediation units as other financial institution have a common risk to run their business.

Inspired by Cihak and Hesse's working paper, this paper attempts to analyze the risk of bankruptcy of Islamic banks with Z-score analysis and to appear the vulnerability of Islamic banks by using VAR analysis before and after the global financial crisis. Then, it takes Indonesian Islamic Banks as a study case from period 2007-2014. This paper at least have three major objectives are to measure the stability between Islamic and Conventional banks in Indonesia during and after the global financial crisis; to examine the dynamic behavior of Islamic banks in Indonesia to macroeconomic variables shock and to expose the vulnerability within the Islamic banks in Indonesia along the period of research.

Literature Review

The Indonesian Islamic banking industry grows rapidly after the establishment of Bank Muamalat Indonesia in 1992. For the record, until December 2016, according to the OJK there are 13 full-fledge Islamic banks and 34 sharia business units. The total asset of Islamic banks reach Rp 254.184 billion (OJK, 2017).

Along with the rapid growth of Islamic banking industry, in the case of Indonesia which implement dual-banking system, Islamic banks have to operate their business side by side with the conventional banks. However, like the other financial institution, Islamic banks face some financial risk like credit risk, market risk, liquidity risk and bankruptcy risk (Ismal, 2012). Amongst all, bankruptcy risk is the most critical especially in today's economic condition which susceptible of crisis.

Somehow, the recent global financial crisis has renewed the focus on the resistance of Islamic banks in order to confront the crisis (Hasan & Dridi, 2010). In fact, empirical study showed that Islamic bank has the same chance to be bankrupt. The first empirical study of Islamic bank bankruptcy (*i.e* stability) was outlined by Cihak and Hesse (2010)in which the stability measured with the Z-Score analysis as dependent variable and the macroeconomics variable took as the independent variables. The result captured that the stability of Islamic banks were depended on the size. Small Islamic banks tends to be more financially stronger than small conventional banks. In the other hand, the larger Islamic banks the more vulnerable than conventional banks.

The other empirical study comes from (Abedifar et al., 2011) in which he attempts to analyze the risk and stability of Islamic banking by using simultaneous modeling framework and a sample of 456 banks from 22 countries between 2001 and 2008. The results find that no significant difference between Islamic and conventional banks in terms of insolvency risk. On credit risk suggest that Islamic banks write-off credits more frequently or/and have lower loan recoverability compared to conventional banks. They also observe that Islamic banks benefit less than conventional banks from the negative impact of asset size on both their credit and insolvency risks. He also argued that Islamic bank face an extra risks due to the complexity of Islamic modes of finance.

Another study regarding the risk of bankruptcy in Islamic banking was undertaken by (Muhammad Ali Shahid, 2012). The study took the Pakistani Islamic and Conventional banks to compare the stability between the two. The result of the study showed that small Islamic banks tend to be financially stronger than small conventional banks, large conventional banks tend to be financially stronger than large Islamic banks, small Islamic banks tend to be financially stronger than large Islamic banks, which may reflect challenges of credit risk management in large Islamic banks and the market share of Islamic banks had a significant impact on the financial strength of other banks. This study also reflects that the size of bank is determined to the stability.

(Altaee, Talo, & Adam, 2013) attempts to test the stability of Islamic bank in comparison to the conventional bank in pre and post the global financial crisis in Gulf Cooperation Council (GCC) countries. The result found that there is no evidence that there is a significant difference between the financial stability of Conventional and Islamic banks for the

periods 2003-2010, 2003-2007, and 2008-2010. However, Conventional banks tend to be financially stronger than Islamic banks for the pre- financial crisis.

Shajari and Mohebikhah (2012) also attempts to measure the stability of Islamic bank by using z-score technique. The empirical results from panel estimation show that: a) the large Islamic banks are more stable than the large commercial banks and furthermore, the small Islamic banks have lower z-score comparing to the small commercial banks. b) as past history shows, in general the financial crisis has a direct negative impact on stability of the large banks; moreover, our study shows that after a financial crisis the small Islamic banks are more stable than large Islamic banks. c) there is no significant difference between stability in oil and non-oil producing countries, however results change between the small and large banks in the two groups of Islamic and commercial banks which tend to be more stable for oil producing countries.

Rashid Abdul, Saba Yousaf, (2017) try to analyze the stability between Islamic and conventional bank in Pakistan. Using z-score analysis to compute the stability between the two for period 2006-2012. The result found that the regression result indicate that income diversity, profitability ratio, loan to asset ratio, asset size and the market concentration ratio of banks have significant effects on the stability of banks. moreover, the result in z-score analysis showed that Islamic bank perform better than conventional bank and contributed more effectively in the stability of financial sector.

Gamaginta and Rokhim (2009) attempts to compare the stability of Islamic banks and conventional banks in Indonesia from period 2004-2009, by using Z-score and parametric t-test. The result shows that the Islamic banks in general have a lower degree of stability compared to conventional ones. Some exclusion includes the tendency that small Islamic banks have the same degree of stability with small conventional banks. During the financial crisis period of 2008-2009, Islamic banks and conventional banks tended to have the same relative degree of stability. Interestingly, the stability of full-fledge Islamic banks is lower than Islamic business units.

Reviewing the empirical work from Cihak and Hesse (2010) in measuring Islamic financial stability, this paper attempt to analyze the risk of bankruptcy of Islamic and conventional bank before and after the global financial crisis by using z-score for period 2007-2014. While in the regression analysis, we use VAR/VECM analysis in order to figure out the dynamic behavior of Islamic banks which tend to expose the vulnerability of Islamic bank it self.

Data and Methodology

Measuring Stability

This paper will compare the stability between Islamic and conventional banks. To measure the bank soundness, this paper will use the z-score analysis. Inspired by (Hesse, 2010) the z-score analysis will be formulated as $z=(k+\mu)/\sigma$, where k is the capital (CAR), μ is average return on asset (ROA) and σ is standard deviation of return on asset (ROA) as a proxy for return volatility. In addition, the result of z-score will be assumed as the probability of bank's default. Therefore, the higher result of z-score the smaller chance of bank to be bankrupt. In this investigation, we attempt to compare the stability between Islamic and conventional banks from period 2007-2014. Finally, the z-score analysis will be put as the dependent variable, while we use macroeconomic variables as independent variable discern in dynamic behavior of Islamic banks and to expose the vulnerability within in Islamic banks.

VAR / VECM Analysis

In order to appear the vulnerability spot in Islamic bank, we use VAR/VECM analysis. Basically, VAR/VECM is a tool to examine the dynamic behavior. In the other word, VAR model discern the influences of macroeconomic variables on the behavior of Islamic bank stability. We assume that vulnerability can be exposed by the behavior of Islamic banks to the macroeconomic variables. Nonetheless, VAR model is built with the consideration to minimize the theory approach in order to captured the real phenomena in the economic life. Therefore, VAR model is using time series data. The problem come up from time series data is correlated with the stationary of it's data. When the data come with stationary in level, then the analysis will use VAR model. Otherwise, when the data is stationary in difference, the analysis will use VECM model. Hence, the process of VAR model can be de describe as table below :
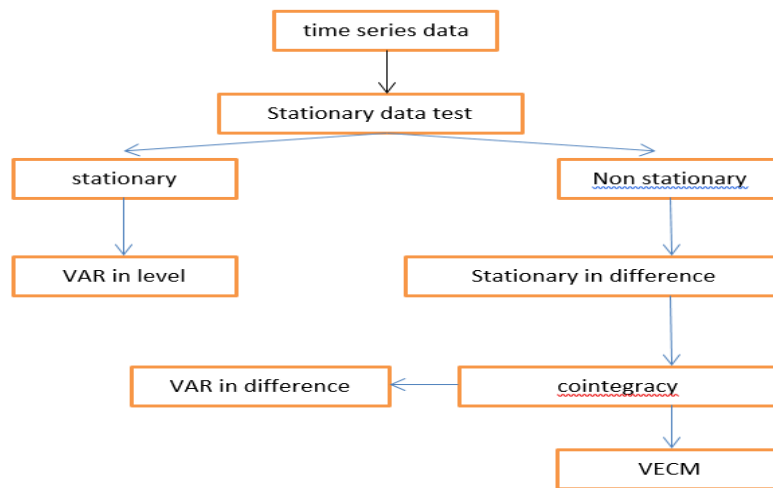
Source : (Agus, 2013)

Figure 2.
The Process of VAR

In this paper, VAR model can be formulated as :

$$Z\text{-sy}_{1t} = \beta_{01} + \Sigma^p_{i=1} \beta_{i1} \, Z\text{-sy}_{1t\text{-}i} + \Sigma^p_{i=1} \beta_{i1} \, GDP_{1t\text{-}i} + \Sigma^p_{i=1} \alpha_{i1} \, INF_{2t\text{-}I} + \Sigma^p_{i=1} \theta_{i1} \, ER_{3t\text{-}i} + \Sigma^p_{i=1} \Upsilon_{i1} \, BI_{4t\text{-}i} + e_{1t}$$

Where $Z\text{-sy}_{1t}$ is Z-score of Islamic banks, GDP is Gross Domestic Bruto, INF is inflation rate, ER is Exchange Rate, BI is Interest Rate, and e is error standard. In this paper we use GDP, Inflation rate, exchange rate and interest rate as macroeconomic variable.

The main part of this investigation is to captured the dynamic behavior of islamic banks to the macroeconomic variables and to expose the vulnerability within in Islamic banks. Then, we use the IRF (Impulse Response Function) analysis. IRF is one of the important analysis in VAR/VECM model due to it's ability to track the response from the endogenous variables within VAR/VECM system for the shocks in endogenous variables. In the other hand, to captured the contribution from every variable, we use FEVD (Forecasting Error Variance Decomposition) analysis. Different from IRF, FEVD analysis has ability to describe the variance percentage in every variable due to the change (shock) in VAR System(Agus, 2013).

The data used in the analysis is quarterly. We use the secondary data from period 2007-2014 and accumulated aggregately. The data is obtained from the financial report of Islamic and conventional bank which already reported to the OJK.

Results and Discussion

Stability Comparison

In this section we attempt to measure the z-score of Islamic and conventional bank. Like what we discuss in section above, the result of z-score is an indicator of bank stability.The higher z-score indicate thatthe bank less risky (probability of default).
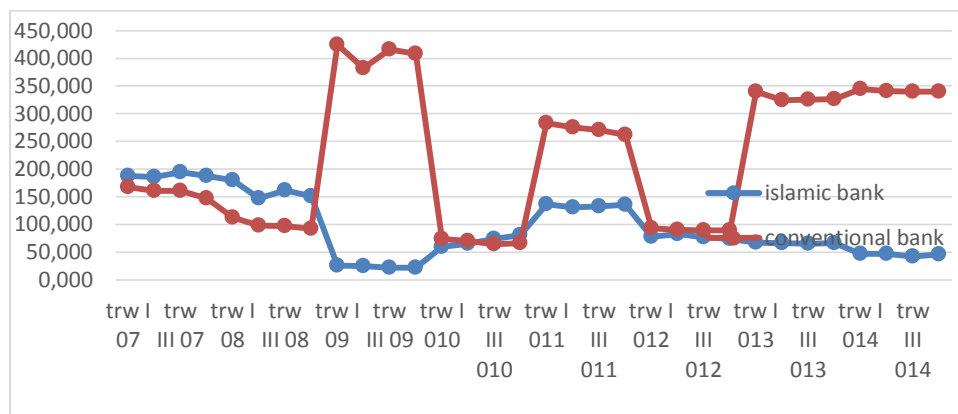

Figure 3
z-score comparison in period of research

From the chart above, we can see that in the period of global financial crisis (2007-2008) Islamic banks have higher z-score than conventional banks. That indicates that Islamic banks more stable than conventional banks in period of global financial crisis. Nonetheless, at the first quarter in 2009 Islamic banks have lower z-score than conventional banks even in the lowest point of z-score while the conventional banks reach the highest point of z-score at the same time. While this condition remain until the end of the research period.

Along the period of the research neither Islamic nor conventional banks have fluctuate z-score result. Beside that, the Islamic banks have not very fluctuate in z-score result compare to the conventional banks. the phenomena above indicate that conventional banks response to the financial crisis shock responsively compare to the Islamic banks. However, in case of Indonesian Islamic banks which is still as developing financial institution, Islamic banks have not been running their business efficiently due to the competition between financial institutions and business expansion. This condition force the BOPO ratio of Islamic banks increase 2.59% compare to the previous period in 2008 reach 81.80%. increasing BOPO ratio in 2009 force Islamic banks generate less profit compare to previous period in 2008. In 2009, Islamic banks generated 17% lower than in 2008 which is generated the growth 24%(Bank Indonesia, 2010).

In the other hand, conventional banks have been operating in Indonesia since centuries have strong capital in their balance sheet. At the first quarter in 2009, conventional banks reached the highest point of z-score, that mean the conventional banks have strong stability to response the crisis which is occurred in previous period. For the record, conventional banks have capital adequacy ratio above the minimum standard which is reached 17%, that's why the conventional banks remain stable a year after the global financial crisis is occurred.Even though, the conventional banks have lower z-score compare to the Islamic banks during the global financial crisis occurred(Bank Indonesia, 2009).

VAR/VECM Analysis

This paper, we use VAR/VECM analysis. Before going to the VAR/VECM part, we need to examine several test systematically. The test will be unit root-test, lag optimum and cointegration test. Those test aim to determine which tool of analysis do we have to use whether VAR or VECM. First, we have the unit root-test, and the result discuss below :

Table 1
Augmented Dickey-Fuller (ADF) Test

variables	t-statistic			
	Level	explanation	difference	explanation
Z-score ofIslamic banks	-2.827956	Non-stationery	-5.995590	stationery
GDP	-2.652275	Non-stationery	-5.022494	stationery
Inflation*	-3.054603	Non-stationery	-5.409058	stationery
Exchange Rate	-0.519844	Non-stationery	-4.694708	stationery
Interest Rate	-2.097639	Non-stationery	-5.100150	stationery

*stationary in 2nd difference, data edited

The ADF test above showed that the time series data is being stationary in difference, especially for inflation variable being stationary in second difference. In previous section explained that if the time series data is being nonstationary in level but stationary in difference then we have VECM analysis. The next step of VECM pre-analysis is cointegration test. The result of cointegration test will discuss below:

Table 2
Cointegration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.750924	88.04361	69.81889	0.0009
At most 1	0.585031	46.34371	47.85613	0.0689
At most 2	0.324829	19.95713	29.79707	0.4258
At most 3	0.201036	8.173469	15.49471	0.4470
At most 4	0.046875	1.440275	3.841466	0.2301

Trace test indicates 1 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.750924	41.69991	33.87687	0.0048
At most 1	0.585031	26.38657	27.58434	0.0705
At most 2	0.324829	11.78366	21.13162	0.5692
At most 3	0.201036	6.733194	14.26460	0.5212
At most 4	0.046875	1.440275	3.841466	0.2301

Max-eigenvalue test indicates 1 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source : data edited

The table above describes the cointegration test among variables. The result of the test showed that value of Trace Statistic is 88.04361 higher than the Critical Value 69.81889, so does the value of Max-Eigen statistic is higher than Critical Value is 41.69991 compare to 33.87687. According to the result above the variables cointegrate among them in long term. The cointegration among them is pointed by the value of Trace-Statistic and Max-Eigen whichhave higher result than the Critical Value.

Therefore, this paper will use the Vector Error Correction Model (VECM) analysis due to nonstationary time series data in level but there is cointegration among variables. The next test is lag optimum test, the result of lag optimum will show in the table below:

Table 3
Lag Optimum

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-82.31459	NA	0.000284	6.021696	6.257437	6.095527
1	7.597525	142.6192	3.32e-06	1.544998	2.959442*	1.987984
2	41.20244	41.71645*	2.18e-06*	0.951556*	3.544703	1.763697*
3	65.65392	21.92201	3.69e-06	0.989385	4.761236	2.170682

Source : edited

Based on the data in the table above. The result show that the majority of indicators (LR, FPE, AIC and HQ) have the smallest result at the lag 2. Therefore, the lag optimum occurred in the lag 2. To display the response of the stability of Islamic banks to macroeconomic variables, we use the IRF test. The result of the IRF test discuss below:
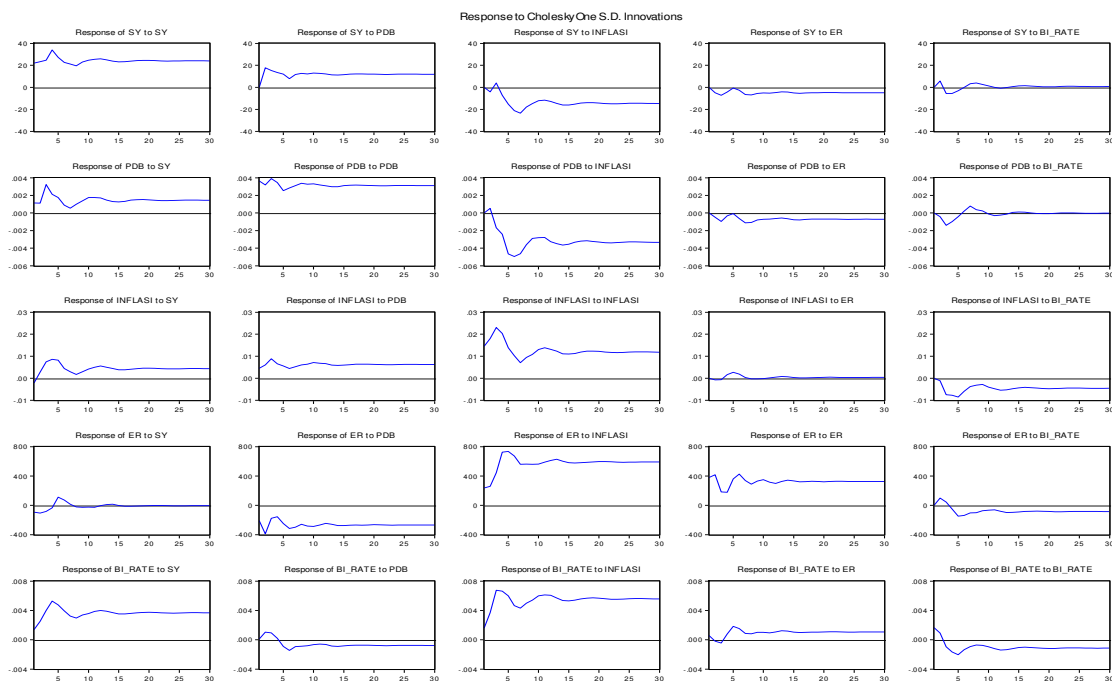

Figure 4
Impulse Response Function (IRF)

Figure 7 display the impulse response function (IRF) of the stability of Islamic banks with macroeconomic variables such as GDP, Inflation rate, exchange rate and Interest Rate. The z-score which represent stability of Islamic banks react positively to GDP from the first period of research until the end of the period. in contrast, the stability of Islamic banks react negatively to exchange rate shock. Meanwhile, in response to the inflation rate, the stability of Islamic banks react negatively in the beginning of the period then turn into positive response then turn into negative response until the end of the period. More interestingly, Islamic banks stability react sensitively to the shock of interest rate. Despite, start with the positive reaction in the first period but turn into negative response in the period after then, turn again into positive response interchangeably until the end of the period.

Table 4
Forecasting Error Variance Decomposition (FEVD)

		Variance Decomposition of SY:			
Period	S.E.	SY	PDB	INFLATION	ER	BI_RATE
1	21.99248	100.0000	0.000000	0.000000	0.000000	0.000000
2	37.61899	72.38499	22.39141	1.146671	1.690881	2.386047
3	48.55627	69.26850	23.42378	1.343280	3.222615	2.741823
4	61.58725	73.42816	19.33136	2.240963	2.472445	2.527075
5	70.19061	71.67157	17.79244	6.479694	1.910410	2.145885
6	77.20743	67.83707	15.75684	12.93266	1.699865	1.773564
7	84.57909	62.83912	15.04514	18.45640	2.030942	1.628401
8	89.88481	60.38462	15.30529	20.30531	2.375206	1.629575
9	94.93572	59.99920	15.37552	20.62048	2.471187	1.533604
10	99.81925	60.35103	15.61224	20.12869	2.503650	1.404387

The result of variance decomposition above explain the percentage of variable shock. According to the table above The stability of Islamic finance (SY) mostly influence by it self, which mean the stability of Islamic banks is depended on the structure of its capital (CAR) and the return (ROA). While, the macroeconomic variables such as GDP become the most influenced variable at the early period then followed by interest rate, exchange rate and inflation rate. Nevertheless, at seventh period, inflation take over the GDP becoming the most influenced macroeconomics variable than followed by GDP, exchange rate and interest rate.In contrast, while the shock of interest rate have low percentage compare to the GDP variable but responded sensitively by the stability of Islamic banks.

Discussion

Despite our result figure that Islamic banks tend to be more stable than conventional banks during the global financial crisis, but after the global financial crisis end up the conventional banks tend to have the higher z-score compare to the Islamic banks. however, in case of Indonesian banking industry, there are several assumptions why Islamic banks are more stable than their counterpart during the global financial crisis. First, Islamic banks have not effected the global financial crisis directly, but effected through the micro level in financing sector. Second, none of Islamic banks in Indonesia have listed in financial market. For the record, only PaninSyariah Bank which have listed to the financial market, with this condition we assume that Islamic banks have not effected directly to the global financial crisis. Third, the Islamic bank only have 5.3%of market share to the total market in Indonesia, this condition indicate that Islamic banks have not play the significant role in banking industry in Indonesia.

Even though, we can put this result as a prove that Islamic banks can be the solution of the future of financial industry which in today's era is susceptible with crisis.

Meanwhile, the dynamic behavior of Islamic banks in response to the shock of macroeconomic variables should be underlined. Some question perhapsarisein the mid of the result above. First, the sensitive response of Islamic banks to the interest rate shock. Thus, Islamic banks in Indonesia which operate side by side with conventional banks and competing them under the dual banking system, Islamic banks are not resist from the monetary environment of the country (Ibrahim & Sufian, 2014). Hence, Islamic banks which operate under dual banking system run their business under the same umbrella and the rules of game with conventional banks. Furthermore, Islamic banks use interest rate as benchmark of margin and *the nisbah*of profit-lost sharing mode.The critics suggest that the product of Islamic banks are but blurred copies of conventional products(Smolo & Mirakhor, 2010). In addition, *murabahah*mode (debt financing) contribute more than 50% of total financing in Islamic banks(OJK, 2017).

Second, in the other hand, the FEVD test showed that the stability of Islamic banks mostly effected by its self. In the other word, the stability of Islamic banks depended on the structure of it's CAR and their return. Thus, the z-score analysis formulated as capital plus return and divided by it's return volatility. which mean, the vulnerability of Islamic banks comes from its own stability. When the Islamic banks struggle with their capital and return, meant that Islamic banks is struggling with their stability. This condition in line with the Islamic banks struggling of, the thigh competition between financial institutions in funding sector forced Islamic banks to be inefficient, although as developing financial institutions, Islamic banks also need business expansion (LPPS 2009). While, from macroeconomic side, the impact of the movement of interest rate is undeniable to the Islamic banks.hence, Islamic banks contains flaws resembling those underlying the global financial crisis and, as such, is vulnerable to its own crisis.(Smolo& Mirakhor, 2010).

Conclusion

In light of rapid growth of Islamic banks in Indonesia, this paper try to expose the vulnerability of Islamic banks in Indonesia. Using VECM analysis, this paper examine the dynamic behavior of Islamic Banks to macroeconomic variables movement.

The stability of Islamic banks which measure with z-score analysis display the higher z-score than the conventional banks during the global financial crisis. While after the global financial crisis occurred, the conventional banks have higher z-score result than Islamic banks until the end of the period of research.

While the dynamic behavior of Islamic banks stability, we use VECM analysis which consist of GDP, exchange rate, inflation rate and interest rate. The key findings describe the excess sensitivity of Islamic banks stability to the shock of interest rate, even though, in FEVD analysis interest rate contribute lower percentage than other macroeconomic variables such as GDP and inflation rate. Hence, the FEVD analysis figure that the stability of Islamic banks mostly influenced by its own stability. These result in line with the phenomena of Islamic banks in practice side.

However, along with the rapid growth of Islamic banks in Indonesia there are several homeworks to do for all the stake holder of Islamic banks. Even though, Islamic banks well known as interest-free banking system but the vulnerability of Islamic banks come up from interest shock. In practice, debt financing based (*murabahah*) contributes more than 50% of financing in Islamic banks. Hence, Islamic banks use interest rate as benchmark to determine the margin and the *nisbah*.

Recommendation

In light of the result of the paper, the author urge several recommendations in order to the better future of Islamic banks in Indonesia. The recommendations are :

1. Searching for an alternative of benchmarking to the interest rate, due to its movement effected the stability of Islamic banks.
2. Strengthen the capital ratio of Islamic banks, despite the situation of Islamic banks recently still need in business expansion.
3. Islamic banks need distinguish regulations and rules from the conventional banks, due to in case of Indonesia which implement dual banking system forced the Islamic banks to be influenced by the variables of conventional banks.

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