Shadow Banking Sharia For Financial Cycle Resilience in Indonesia

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Abstrak

Shadow banking syariah menjadi percontohan yang baik dalam pengelolaan tingkat kesehatan perbankan di Indonesia, berdasarkan pengukuran aktivitas keuangan melalui data laporan Bank Indonesia secara time series dari tahun 2019 hingga 2022, ditemukan bahwa hasil penelitian yang dilakukan dengan menggunakan pengembangan model Ed Waves Index menunjukkan bahwa aktivitas keuangan perbankan syariah dapat terus berjalan, meski gelombang siklus keuangan (variabel makroekonomi) mengalami depresi keuangan tingkat akut (krisis moneter dan pandemic covid-19) baik secara internal maupun eksternal, dimana reaksi tekanan aktivitas keuangan perbankan syariah bergerak secara normal dengan kisaran antara 0.010 Amplitudo hingga -0.015 Amplitudo, berdasarkan kategori reaksi searah pada periode pertama, reaksi kontra (berlawanan) pada periode kedua, reaksi normal pada periode ketiga dan terakhir kembali searah pada period keempat. Implikasi dari pergerakan gelombang aktivitas banking syariah ini mampu memberikan sumbangsih terhadap pertumbuhan ekonomi dan stabilitas keuangan di Indonesia

Kata kunci: aktivitas keuangan, ed waves index model, siklus keuangan, perbankan syariah, shadow banking syariah

Abstract

Sharia shadow banking is a good example in managing the level of banking soundness in Indonesia, based on measuring financial activity through Bank Indonesia report data in a time series from 2019 to 2022, it was found that the results of research conducted using the development of the Ed Waves Index model showed that financial activity Islamic banking can continue to run, even though the waves of the financial cycle (macroeconomic variables) are experiencing an acute level of financial depression (monetary crisis and the Covid-19 pandemic) both internally and externally, where the reaction to the pressure of Islamic banking financial activity moves normally with a range between 0.010 Amplitude to -0.015 Amplitude, based on the category of unidirectional reactions in the first period, contra (opposite) reactions in the second period, normal reactions in the third and finally unidirectional reactions in the fourth period. The implications of the movement of this wave of Islamic banking activity are able to contribute to economic growth and financial stability in Indonesia.

Keywords: financial activity, ed waves index model, financial cycle, sharia banking, sharia shadow banking

INTRODUCTION

Islamic banking is one of the banking sectors that able to withstand changes in financial activity in Indonesia. Resilience and strength in dealing with these pressures is controversial, based on the phenomenon that found that *firstly* Islamic banking units number is much smaller than conventional banking, *secondly* Islamic banking financial activities are not different from conventional banking activities, *thirdly* the market for conventional bank markets is higher than Syariah banking. This condition shows that Islamic banking existence is important in maintaining the financial cycle movement, both when facing pressure and under normal circumstances.

The Islamic banking financial movement activities culture has increased, shortly after the financial crisis in 1998, this measurement was obtained from the total financial activity of 14 Islamic Commercial Banks, 20 Islamic Business Units and 164 Islamic Finance Banks.

The increase in financial activity effect is that the market reaction to Islamic banking has increased rapidly, marked by Islamic banking ability to anticipate financial pressures due to the

financial crisis, this is supported by growth concept which has experienced a positive increase in asset capital at a maximum point of 23.5 % in 2017 (Evgenidis & Malliaris, 2022).

Empirical research has found that Islamic banking financial activity in financial circulation is an important part of achieving economic growth and financial stability, in line with the Muslim population contribution in Indonesia which reaches around 87% and is a country that has the largest number of Muslims in the world (Goetz & Gozzi, 2020 ; Sahinoz & Erdogan Cosar, 2018 ; Hamouda, 2021 ; Christiano et al., 2014 ; Abdullah, 2014).

The Islamic banking presence in financial activities in Indonesia provides great prospects for increasing business and investment, and financial circulation can move quickly. This financial movement will then become the central point in financial activity distribution from upstream to downstream, based on this activity it will also assist the Central Bank and the banking sector in creating economic growth and financial stability based on financial activity.

The financial movements behavior carried out by Islamic banking makes the financial activities movement stronger, this is seen in the savings and financing activities measurement carried out, first the Islamic banking deposits concept uses an anti-usury model, which shows that a halal financial system is a strong attraction in society, thus providing high trust and changing public perceptions of finance in financial transactions by Islamic banking is aimed at small sectors with a large quantity compared to financing in large sectors (Agung et al., 2001; Afonso & Alves, 2015; Aysan et al., 2017; Basmar et al., 2022). Can be interpreted that the financing risk level in Islamic banking is much smaller compared to conventional banking, which is indicated by a fairly low level of non-performing financial risk (Basmar et al, 2023 ; Rafique et al. , 2021 ; Nasreen & Anwar, 2019).

The phenomenon illustrates that the economy concept using the Islamic transaction model will slowly replace the conventional financial transaction model, even though the current condition is that the volume of conventional financial transactions still plays an important role.

Measuring Islamic banking capital strength in terms of maintaining economic resilience conceptually provides internal and external influences on increasing financial activity in Indonesia, the measure is an important indicator in the maintaining financial capital resilience process in Islamic banking (Basmar et al, 2023 ; Claessens et al., 2011; Erdem & Tsatsaronis, 2013).

The pressure rate on Islamic banking capital during economic waves can have a positive effect on the banking intermediary functions flow, even though the financial cycle waves movement has a high level of sensitivity, indirectly this influence has an impact on the banking system soundness as a whole, this condition then has a multiplier effect on several other economic indicators (Basmar et al., 2019; Borio, 2012; Ajello, 2016).

The financial activity movement that occurs through the relationship between finance the movement or capital in the Islamic banking sector and economic activity is based on the influence of macroeconomic variables interaction, and synergizes to form a financial cycle that is comprehensively integrated with other intermediary pressures, both internally and externally as well as partially or simultaneously.

The reaction to pressure that occurs in the financial cycle waves will illustrate the extent to which the overall financial reaction is in responding to pressures on financial driving variables that can provide strong reactions to various elements of the financial sector, especially Islamic banking, where there is strength in Islamic banking being able to manage financial activities in response to all reactions. financial cycle pressures, therefore this research will find financial wave movement activity in response to financial cycle pressures, the study results can be used as input for regulators in evaluating financial regulations for the banking sector, especially in relation to increased business activity in economic growth and financial stability in Indonesia.

RESEARCH METHOD

The research process was carried out using secondary data obtained from Bank Indonesia's financial reports which are published annually. To get good results the researchers used time series data on a quarterly basis, whereby the study final results will be presented in a quantitative descriptive form.

The measurement model in this study is based on the strength of Islamic banking capital strength against economic pressures, the most important aspect of measuring the level of Islamic banking strength is carried out based on the banking intermediary function as a statue of art. In this study, the conversion of the Islamic banking intermediary function can be shown through the basic equation as follows:

$$\Delta = \alpha + \beta \qquad (1)$$

The financial flow in Equation 1 does not specifically describe the strength of capital in Islamic banking, where the financial flow concept is still similar to conventional financial flow, it is necessary to make specifications related to financial concepts in particular, through financial activities that are directly related to the financial capital Islamic banking measurement, the Equation 1 derivative is then continued with a more specific model as shown in the equation below:

$$\alpha = \sigma + \tau + \upsilon \qquad (2)$$

The expansion behavior model is principally determined by financial flows that stimulate the increasing financial projections process in one financial cycle. Islamic banking capital can already be done, especially in predicting the pressure movement on future financial activity, shown in Equation 2.

The balance in financial size flows is then distributed into moving financial activity process in Islamic banking, this size is determined by two important aspects, namely Islamic pawn or *rahn* (ζ) and Islamic financing or *ijarah* (ξ), there is a financial integration process then it will provide a special description of financial waves movement in forming several waves, this condition can then be translated in Equation 3 as follows:

$$\beta = \zeta + \xi \qquad (3)$$

The Equation 2 and Equation 3 formation is the main part in determining predictions of financial movements, this is a key equation in determining the return received amount by the mudharib, the interconnection between financial activities that occur in Islamic banking can be described as a whole through Equation 4 below :

$$\Delta = (\sigma + \tau + \upsilon) + (\zeta + \xi) \qquad (4)$$

The Equation 4 model becomes a measure of Islamic banking financial activities totality which is the basis for determining financial stability which will then be converted normally in a financial model concept for a certain period size

This balance is in addition to being a measure of strength in determining financial behavior contained in Islamic banking financial flows. This measurement concept illustrates that the Islamic banking finance movement (Δ) as a whole will move stably, the financial capital balance can be said to be stable, the overall financial activity picture can be seen based on the following equation:

$$\Delta = (\Sigma\sigma + \Sigma\tau + \Sigma\upsilon) + (\Sigma\zeta + \Sigma\xi) \qquad (4a)$$

Based on this balance concept, the pressure measurement of financial waves that moves stably is then carried out as a basis for determining growth and financial stability that occurs in the economy, this indicates that the contribution level of Islamic banking financial movements can be measured.

The pressure contained size in Islamic banking financial flows is characterized by high maximum pressure, as well as the magnitude of financial depression level that occurs. This can be described by the following equation:

$$\Delta_{max} = (\Sigma\sigma_{1<\sim} + \Sigma\tau_{1<\sim} + \Sigma\upsilon_{1<\sim}) + (\Sigma\zeta_{1<\sim} + \Sigma\xi_{1<\sim}) \tag{5}$$

Equation 5 uses the normal limit level of financial movements with the maximum basic limit being at point 1 Amplitude to infinity (1 < ~), this concept indicates that financial pressure when moving with pressure ranging from 1 Amplitude value to the highest level with unmeasured limits will provide a positive influence on economic growth, the effect implementation of this pressure will provide a positive space in the financial cycle as a whole.

The maximum balance concept (Δmax) is found through the movement limitations of financial activities carried out by Islamic banking in maintaining the capital contained level in the financial cycle, necessary to identify early symptoms of interactions with movements in the financial cycle as a whole that have the potential for economic growth.

The financial performance shown in Equation 5 will be the antithesis of Islamic banking financial activities to external pressures, this measurement is needed as an important part in getting the right size value when the response to financial pressure becomes stronger, financial flows in this negative concept will be described based on Equation 6 below:

$$\Delta_{min} = (\Sigma\sigma_{-1<\sim} + \Sigma\tau_{-1<\sim} + \Sigma\upsilon_{-1<\sim}) + (\Sigma\zeta_{-1<\sim} + \Sigma\xi_{-1<\sim}) \tag{6}$$

Equation 6 can be easily translated that the Islamic banking financial activity movement when under internal pressure will move with a range of -1 amplitude to an immeasurable level, this indicates that the financial depreciation level is increasing, this is also an indicator in determining the transformation financial pressure magnitude on the accumulated financial cycle in the financial stress internally form.

This financial stress flow will have a negative effect on the movement level in the financial cycle, the pressure effect has a negative value on financial stability movement, based on Equation 5 and Equation 6 it can be determined the movement size of Islamic banking financial activity that is normal to changes in financial pressure, both that occur internally and externally, these measurements can be described in Equation 7 below:

$$\Delta_{nor} = (\Sigma\sigma_{1>0>-1} + \Sigma\tau_{1>0>-1} + \Sigma\upsilon_{1>0>-1}) + (\Sigma\zeta_{1>0>-1} + \Sigma\xi_{1>0>-1}) \tag{7}$$

Equation 7 shows that there are Islamic banking financial activities in a normal path, this concept is described that all pressures, both positive (Equation 5) and negative pressure (Equation 6) do not have a strong reaction in the financial cycle waves flow, this normal path does not a strong impact on the financial growth process and overall financial stability.

The reaction that occurs in Equation 7 shows real financial activity where the macroeconomic and microeconomic indicators reaction does not show significant pressure, to measure the Islamic banking strength against extreme pressures in the economy, especially in maintaining financial capital can remain consistent in carrying out financial activities both when there is crisis pressure financial and the Covid 19 pandemic pressure needs to be done.

Furthermore, based on Equation 7, the normal strength of Islamic banking financial activities is used as a basis for determining shadow movements which are a support in maintaining financial activities which are also part of maintaining Islamic banking financial capital as a whole, the measurement description can be shown through Equation 8 below :

$$\Delta' = (\Sigma\sigma + \Sigma\tau + \Sigma\upsilon + \Sigma\zeta + \Sigma\xi)_{1>0>-1} \tag{8}$$

The basis for measuring shadow is then expanded into several levels of pressure that occur in Islamic banking financial activities. This is used to measure the extent to which the effectiveness and Islamic banking financial resilience activities occurs when there is an interconnection process with external pressure.

External testing was carried out by placing a number of other pressures such as the financial crisis and the Covid-19 Pandemic pressure. In these conditions, the macroeconomic indicators that experienced the most pressure were the inflation rate (μ), exchange rates (η), and interest rates (ɰ), as well as several other variables that are considered to have an influence (ε), based on these conditions the equation can then be formed as follows:

$$\Lambda = \mu + \eta + \text{ɰ} + \varepsilon \tag{9}$$

Equation 9 is a normal external reaction, to identify more clearly the pressure amount that occurs in each indicator, it is necessary to extract pressure based on the friction effect of the macroeconomic indicators that occur, can be explained in Equation 9a as follows:

$$\Lambda = \Sigma \, (\mu + \eta + \text{ɰ} + \varepsilon) \tag{9a}$$

Equation 9a explains the each macroeconomic variable amount that can put pressure on Islamic banking financial activities, which will then be measured for the strength level of pressure when there is an increase in economic growth, this is shown in Equation 10 below:

$$\Lambda = \Sigma \, (\mu + \eta + \text{ɰ} + \varepsilon) \,_{1<\sim} \tag{10}$$

In Equation 10 it can be seen that external pressures show relatively good growth even though there are significant changes in overall economic behavior. This is assumed to be under pressure that changes the macroeconomic variables movement which are considered positive for the rate of financial cycle movement.

Besides that, measurements must also be made when macroeconomic variables have a negative effect on the financial cycle movement, this becomes a counterbalance to the financial cycle pressures, this can be seen through Equation 11 below:

$$\Lambda = \Sigma \, (\mu + \eta + \text{ɰ} + \varepsilon) \,_{-1<\sim} \tag{11}$$

Equation 11 becomes part of the financial flow process externally, the movement concept of the financial cycle has been described clearly and with certainty, therefore based on Equation 10 and Equation 11 it can then be determined that the financial cycle movement is normal, this can be described based on Equation 12 below This :

$$\Lambda = \Sigma \, (\mu + \eta + \text{ɰ} + \varepsilon) \,_{1>0>-1} \tag{12}$$

From Equation 9, then counter pressure is carried out in Equation 8, the measurement of the pressure amount can be clearly known, especially towards changes in reactions to Islamic banking financial activities, the counter pressure results between Islamic banking financial activities and financial cycle pressures can be carried out with the aim of obtaining a measure of influence sharia banking shadow on the financial cycle, then the new equation model that is formed can be shown through Equation 13 as follows:

$$\Delta' + \Lambda$$
$$((\Sigma\sigma + \Sigma\tau + \Sigma\upsilon + \Sigma\zeta + \Sigma\xi) \,_{1>0>-1}) \; + (\Sigma \, (\mu + \eta + \text{ɰ} + \varepsilon) \,_{1>0>-1}) \tag{13}$$

From Equation 4, counter-pressure is carried out against Equation 9, the amount measurement of pressure can be clearly identified, especially towards changes in reactions to Islamic banking financial activities. The counter-pressure results between Islamic banking financial activities and financial cycle pressures can be described in Equation 14 as follows:

$$\Delta' = \int_{n=0}^{\sim} \frac{\sqrt{\Sigma\sigma + \Sigma\tau + \Sigma\upsilon}\,1>0>-1}{3} + \frac{\sqrt{\Sigma\zeta + \Sigma\xi}\,1>0>-1}{2} \; + \Lambda = \int_{n=0}^{\sim} \frac{\sqrt{\Sigma\mu + \Sigma\eta + \Sigma\text{ɰ} + \Sigma\varepsilon}\,1>0>-1}{4} \tag{14}$$

The simultaneous pressure counter results then form a new equation (λ'), where through this equation it is found that the Islamic banking financial maximum measurement activity on the the financial cycle waves movement, as seen in Equation 15, where this equation shows that the shadow banking impact that occurs in Islamic banking under normal conditions, which is then shown through the waves of Islamic banking financial activity flow that are not affected by external pressures even though the financial cycle movement waves moves with a high degree of turmoil due to an acute financial depression

$$\lambda' = \int_{n=0}^{\sim} \frac{\sqrt{\Sigma\sigma + \Sigma\tau + \Sigma\upsilon + \Sigma\zeta + \Sigma\xi + \Sigma\mu + \Sigma\eta + \Sigma\underline{u} + \Sigma\varepsilon}\, 1 > 0 > -1}{9} \tag{15}$$

As the final stage in measuring the sharia shadow banking activities movement against waves in the financial cycle, it is carried out based on the maximum wave pressure, as shown in Equation 16 below:

$$\lambda'\max = \int_{n=\sim}^{\sim} \frac{\sqrt{\Sigma\sigma + \Sigma\tau + \Sigma\upsilon + \Sigma\zeta + \Sigma\xi + \Sigma\mu + \Sigma\eta + \Sigma\underline{u} + \Sigma\varepsilon}\, 1 < \sim}{9} \tag{16}$$

Pressure comparison is then carried out by measuring the sharia shadow banking activity movement to the financial cycle waves where the main element is changes in depressed economy symptoms, this is shown in Equation 17 below:

$$\lambda'\min = \int_{n=\sim}^{\sim} \frac{\sqrt{\Sigma\sigma + \Sigma\tau + \Sigma\upsilon + \Sigma\zeta + \Sigma\xi + \Sigma\mu + \Sigma\eta + \Sigma\underline{u} + \Sigma\varepsilon}\, -1 < \sim}{9} \tag{17}$$

Through the Ed Waves Index development model that has been carried out based on Equations 1 to 17, the measuring process the Islamic banking shadow activities movement on financial cycle resilience can be carried out properly, this will show how strong Islamic banking activities can maintain the banking soundness level through capital financial performance, despite strong external pressure, that from this measure it can be seen whether sharia banking can increase economic growth and maintain financial stability both under normal economic conditions and when there is a strong financial depression.

RESULT AND DISCUSSION

Islamic shadow banking has a positive influence on the financial cycle waves movement that occur in financial activities on an intermediary basis, seen through the dynamic wave pressure support, then raises the Islamic banking capital resilience performance.

This attachment confirms that the policy of determining financial movement projections using the profit-sharing principle is able to reduce financial stress in general, even though the reducing power concept is found to be insignificant, but at least it does not exacerbate the financial cycle wave rate against macroeconomic pressures can facilitate the financial crisis occurrence both domestic and global.

On the other hand, the financial activity movement is also detected not to have a strong influence from the financial cycle movement, the reciprocal reaction between the Islamic banking financial activity waves and the financial cycle has a relationship but the pressure transformation process does not indicate a strong mutual attachment to one another.

The movement and calculation pattern of the movement of the Islamic shadow banking wave moves in a stable path, even though in several periods it experienced a financial depression, but the depression value did not have an extreme effect on the financial cycle movement as a whole, this is based on the calculation model that has been shown in the Ed Waves Index development that has been presented previously, therefore to find out the sharia shadow banking movements flow in the financial cycle waves can be shown in Figure 1 below:

Figure 1. Shadow Banking Syariah dan Financial Cycle in Indonesia

The fluctuations in the Islamic banking financial waves activity throughout the measurement in Figure 1 look very dynamic with a pressure culture that tends to be under normal pressure, the movement pattern is quite flexible with the movement area at a safe point, this indicates that the Islamic banking financial strength activity has its own characteristics. in responding to every pressure that is the movement process part of the Sharia Shadow Banking wave.

The Sharia Shadow Banking condition in its activities wave shows a very strong response in counteracting the pressure magnitude that affects it, this power then makes Islamic banking able to survive should there be a negative response to the economy in Indonesia, either in the form of the Covid-19 Pandemic pressure or the financial crisis reaction that occurred automatically.

On the other hand, Figure 1 also explains that the financial cycle movement also fluctuates with a range of movements dominated by negative pressure. This indicates that the sensitivity level of financial flows that occur in the economy can increase financial stress which then becomes a very acute financial depression.

This financial cycle wave reaction then adopts the macroeconomic variables strongly pressure, resulting in uncontrolled financial cycle movements, which can be caused by the reaction speed of changes in pressure or the reaction speed of receiving pressure, both of these reactions then result in financial cycle waves that are very vulnerable to changes in macroeconomic variable activity. contained in the economy in Indonesia, to obtain measurements of two waves movement including the response to financial activity, the pressure measurements contained in Table 1 below:

Table 1. Pengukuran Tekanan Shadow Banking Syariah terhadap Siklus Keuangan

Periode	Syariah Shadow Banking		Λ	λ'	Reaction
	Δ	Δ'			
I	0.010 A	- 0.005 A	- 0.025 A	- 0.002 A	Searah
II	0.008 A	- 0.009 A	- 0.020 A	- 0.004 A	Kontra
III	0.010 A	- 0.009 A	- 0.029 A	- 0.005 A	Normal
IV	0.003 A	0.000 A	- 0.013 A	- 0.001 A	Searah

Source: Processed Data 2023

The sharia banking wave movement in Table 1 moves with different levels of pressure in each period with the financial activity concentration in the financial movement standard area,

which can be categorized as quite stable, this movement activity can be described specifically based on the research results contained in Table 1 above .

In Period I, waves measurements of Islamic banking financial activity moved with positive movement fluctuations at the highest point at 0.010 Amplitude, while negative movements of Islamic banking financial waves activity moved at the lowest point at – 0.005 Amplitude.

At the same point, financial cycle activity moves with a very deep level of pressure until it reaches the point – 0.025 Amplitude, the financial cycle activity level that moves in a negative area indicates that the external and internal pressure magnitude greatly influences financial market reactions, the reaction effect explains that the financial cycle experiences a fairly high level of financial stress.

The two pressure waves gave a reaction to the Islamic shadow banking wave showing movement with the pressure point at -0.002 Amplitude, this condition indicated that the financial cycle movement was responded positively, but this pressure had no effect on Islamic banking financial activities, the Islamic shadow banking wave was categorized as strong in anticipation of changes in overall pressure.

The research implications through sharia shadow banking waves that move in the same direction as the financial cycle waves, this is in line with research conducted by Rochon, 2020 which shows that the independence of sharia banking financial activities is stronger in responding to any reactions to external and internal pressures that contain quite high stress, the Islamic banking financial management independence is still quite feasible in addressing the risks that are likely to arise due to the Covid-19 Pandemic influence or the financial crisis in Indonesia.

In Period II, measurements of Islamic banking financial waves activity moved with positive movement fluctuations at the highest point at 0.008 Amplitude, while negative movements of Islamic banking financial waves activity moved at the lowest point at – 0.009 Amplitude.

Referring to the same period, there was financial cycle activity moving with a very deep level of pressure until it reached – 0.020. It explains that the financial cycle is in a state of significant financial dilemma.

The sharia shadow banking wave responds to both pressures through the financial activity movement with the pressure point at -0.004 Amplitude, this condition indicates that the financial cycle movement is responded positively, but these pressures have no effect on the financial activity of sharia banking, the sharia shadow banking wave is categorized as quite strong in anticipate pressure changes terms.

The research results implications shown by the sharia shadow banking wave reaction to the opposite movements of the financial cycle indicate that changes in pressure transformation due to changes in economic indicators do not affect the Islamic banking financial performance activities reaction in financing the business sector, this is in line with research conducted by Basmar et al., 2021, dilemma problems found in the financial cycle waves movement can be anticipated by the financial circulation that occurs in Islamic banking financial capital.

In Period III, waves measurements of Islamic banking financial activity moved with positive movement fluctuations at the highest point at 0.010 Amplitude, while negative movements of Islamic banking financial waves activity moved at the lowest point at – 0.009 Amplitude.

Based on the same measurement point, it was found that financial cycle activity moves with a very deep level of pressure until it reaches the point – 0.029. This reaction explains that the financial cycle is experiencing an alarming level of financial depression.

The two pressures influence on sharia shadow banking waves gives a pressure reaction based on financial activity with the pressure point at -0.005 Amplitude, this condition indicates that the financial cycle movement has a positive response, but this pressure has no effect on sharia banking financial activities, sharia shadow banking waves are categorized weak in anticipating changes in pressure.

The pressure implication with reference to the pressure response results to the sharia shadow banking wave on the financial cycle shows that there are similar patterns of interaction in responding to changes in economic activity as a whole, this is in line with the findings conducted by Cuciniello & in Iasio, 2021, where this neutral reaction shows that the sharia banking financial performance through intermediary function can maintain financial soundness level, by increasing

banking financial capital as required by Bank Indonesia, the sharia banking strength is still well controlled even though there is depression a level in the financial cycle movement in Indonesia.

In Period 1V, waves measurements of Islamic banking financial activity moved with positive movement fluctuations at the highest point at 0.003 Amplitude, while negative movements of Islamic banking financial activity waves moved at the lowest point at 0.000 Amplitude.

Through the same reaction it can be seen that the financial cycle activity moves with a very deep level of pressure until it reaches the point – 0.013. The amplitude, the financial cycle activity level which moves in the negative area indicates that the external and internal magnitude pressures acts lightly in influencing financial market reactions, the reaction effect explains that the financial cycle is in normal condition.

Two pressures strength measurement on sharia shadow banking waves gives a pressure reaction based on financial activity with the pressure point at -0.001 Amplitude, this condition indicates that the financial cycle movement has a positive response, but this pressure has no effect on sharia banking financial activities, sharia shadow banking waves categorized as very strong in anticipating changes in pressure fluctuations.

The binding implications the two waves, especially in responding to pressures that occur in financial cycle activities result in sharia shadow banking waves acting with unidirectional wave movements, this is in line with the findings conducted by Hafstead & Smith, 2012, where the findings show that the pressure size that occur in the financial cycle due to the economic variables pressure will still give respect to Islamic banking financial activities, but the reactions that arise can still be anticipated through the prudence principle in financing by Islamic banking, this treatment becomes a dynamic control to regulate reactions overall financial changes.

Therefore, as a whole, the sharia shadow banking wave in changing the financial cycle has a strong level of independence, based on this independence level, the sharia shadow banking wave can anticipate all pressures that occur both externally and internally on economic variables indicated by movements in the financial cycle. indirectly this research finds that sharia banking still contributes to economic growth and financial stability despite the Covid-19 Pandemic pressure and the financial crisis even though it is in a very mild category.

CONCLUSION

Islamic shadow banking moves quite stable with a movement range between 0.010 Amplitude to -0.015 Amplitude, indicating that the space for Islamic banking financial activities movement is in a fairly safe condition, the sharia shadow banking waves reaction is not contaminated by internal and external pressure through the financial cycle waves movement.

The movement strength of the sharia shadow banking wave against this financial cycle wave was identified by different reactions where the first response was a unidirectional relationship, then in the following period there was a strong contra (opposite) reaction, and the movement returned to normal and then the reaction again showed a unidirectional movement between sharia shadow banking waves with financial cycles waves.

The reactions implementation that occur indicates that the Islamic banking capital strength is very strong, the assessing process the banking soundness through Bank Indonesia's control does not experience a decline, even though there is pressure on macroeconomic variables, therefore this study shows that the managing Islamic banking financial activities concept can increase economic growth and financial stability despite strong pressure on the economy such as the financial crisis and the Covid-19 pandemic in Indonesia.

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