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# Shirkah
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An Academic Forecast Analysis

Muthmainah
Center for Islamic Economic Forecast,
Karawang, Bekasi

Abstract
This research is intended to analyze and to forecast the growth of sharia insurance in Indonesia, using Autoregressive Integrated Moving Average (ARIMA) analysis. The variables used in this research are assets, investments, premium, and claims. Quarterly time series data from period quarter I (March 2007) up to quarter IV (December 2014), gathered from Islamic Insurance Statistic published by Otoritas Jasa Keuangan (OJK), are being carefully examined and academically used to predict sharia insurance growth in 2016. As a result, based on ARIMA analysis, this research show that the growth of sharia insurance in Indonesia has fluctuated, confidently it can be predicted that nominally it will increase in each quarter, including its assets, investments, premium and claims. This research would especially contribute to the sharia insurance companies to formulate their strategies in the future.

Keywords
sharia insurance, ARIMA, islamic insurance statistic

Strong economic growth combined with the saving increment as well as the growth of middle class economy has been a good signal for sharia life insurance (Republika, May 1, 2013). Ernst and Young (2010) released that during 2007 to 2008, premium or contribution of sharia insurance reached 28% of all economic activities in the world, which reached 5,3 billion USD. Agustina (2011) stated that Islamic countries
could generate the premium until 1,7 billion USD. In 2009, the ratio between premium income toward *Gross Domestic Bruto* (GDP) of Islamic countries reached 1,3%. In addition, according to Jhongpita (2011), in the developing countries, the overall premium reached higher ratio of 2,8% toward the GDP, while in 2011 the growth of Product Domestic Bruto (PDB) of Indonesia lied on the number of 6,5 persen and was predicted to continuously grow. This growth has been influenced by domestic consumption which is averaged in 65 persen from the total of PDB during some years later.

However, the market of sharia insurance in Indonesia has not been managed well, although it have great and mature opportunity. It can be seen from the penetration of life insurance and its loss lied only on the number of 1,78 persen of PDB in 2011. In contrast, the average individual ability to pay the premium of life insurance was only 44 USD (Republika, May 1, 2013). The number of insurance companies and companies that concern on reassurance using sharia principle by December 31, 2013 was 49 companies. They were divided into 5 shariah insurance companies (claimed as purely sharia), 41 insurance companies which have shariah unit and 3 reassurance companies which have shariah one. The development of sharia insurance premium acquisition in Indonesia until 2013 showed a significant increment at the average of 42% compared to the year before. Up until December 2013, the total of shariah insurance premium was IDR 7, 19 trilion. However, in the macro level, the contribution of premium bruto of shariah insurance toward the *Gross Domestic Bruto* (GDP) was 0,11% in 2013 (Report of Shariah Finance Development OJK 2013).

Webb & Beck (2002) demonstrated that in the long term the function of insurance demand has been influenced by *Gross Domestic Bruto* (GDP). The demand function of insurance represent some indicators, such as (1). *insurance penetration*, whic is the ratio of insurance premium
number compared to the level of product domestic bruto; (2). insurance density, is the ratio of insurance premium number compared to the number of the population; (3) insurance in private saving, is the ratio of the insurance premium number to the amount of people saving. From the premium bruto contribution, market share of sharia insurance toward national insurance was 4,41 persen, sharia life insurance was 4, 65 persen, while the common insurance was 3,81 percent. If it is compared to gross domestic product, industrial penetration of shariah insurance was still being in low position (KRjogja.com, February 6, 2015).

### Market Share of Insurance using Sharia Principles

<table>
<thead>
<tr>
<th>Information</th>
<th>Policy/insured</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2012</td>
</tr>
<tr>
<td>Overall Life Insurance</td>
<td>44.182.188</td>
</tr>
<tr>
<td>Shariah Life Insurance</td>
<td>4.488.198</td>
</tr>
</tbody>
</table>

Source: analyzed insurance statistic

The number of people being insured or policy holder from time to time underwent a significant increment in the use of life insurance service using conventional principles. However, this is not comparable with population growth of Indonesian people which grows so rapidly. According to the Population Unit of Central Bureau of Statistic of Indonesia, in 2010 the number of Indonesian population was 238.518.80 and was forecasted to grow to 255.461.40 in 2015. The index of insurance literacy made by OJK showed that Indonesian population who were well literate toward insurance industry were low, it was only 17,84 percent. It means that every 100 people in Indonesia, only 18 percent who understand the insurance (KRjogja.com, February 6, 2015).
From the aforementioned data, it can be inferred that the sharia insurance is growing so significantly, overall the number of market users was still very low compared to its market potential which is so large as Indonesia is a country with largest number of muslim society as the majority of its population and with the total number of over 200 million people (Susilowati, 2011). Regarding to the discussion, I did conducted a research on appraising the growth of sharia insurance performance that contribute to insurance companies as well as to the community. The companies would be able to take the interest of the prospective investors to entrust their capital to the sharia insurance companies. While for the community, it would increase their trust to the sharia insurance companies by assessing the development of the companies’ performance and as a result will entrust their money to be invested. To make an assessment toward company performance, it is required to have an instrument to measure the growth and development of such company quantitatively using sets of indicators of growth in sharia insurance. Those growth indicators are total asset, total investment, gross contribution and gross claims.

**Sharia Insurance and Its Growth**

The definition of shariah insurance which is well known as *at-ta`min, takaful, or tadhamun* is an effort to protect each other and to help many parties through investment in the form of asset and or *tabarru’*by giving the pattern of return to face specific risk using *akad* in accordance with sharia (Aziz, 2010, p. 190). In addition, sharia insurance is a conception where there is an assumption that all participants have a mutual responsibility to the risk of other participants. This mutual responsibility is conducted based on the willing to help each other in the good things by spending a *tabarru’* fund or welfare fund (donation) which is used to resolve the risk (Sula, 2004, p. 293).
Sharia insurance which is based on helping each other for good things and *taqwa*, requires all the participants in a big family to protect each other and bear the economic risk among them. *Takafuli* concept as the basis of shariah insurance is enforced on three basic principles; they are (a) Mutually responsible, (b) Cooperating and helping each other, (c) protect each other (Sula, 2004, p. 294). Purba (2006) states that the challenges faced by many companies based on sharia were varied begin from providing optimum service, human resource development and improvement, product development of sharia finance, and the important need to attend to health level and financial performance of the company.

The robust growing of a company was seen to be the basic requirement for the success of the company. The company which grow either its size or its market would increase company’s profit. Consequently, the company with high growth would appeal management talent and large financial resources (Heris, 2008, p. 12). According to Feeser and Wilard, as quoted Erva Yulianita (2010, p. 17), company’s growth is one of the most important issues in business management since it depicts community’s acceptance and demonstrate the successfulness of the company. Zook and Allen, as quoted Erva Yulianita (2010, p. 17), stated that in reality defending the stability and sustainability of growth is something difficult because the research that has been conducted by Zook and Allen confirmed that there was only one from seven companies which could stay exist dan gain profitable growth.

Insurance growth indicator could be seen from the increment of total asset, development of gross premium contribution of the insurance industry, the development of investment number of insurance industry as well as the number of claims toward insurance industry (Indonesia Insurance Report, 2011). Financial Services Authority established the measurement for sharia insurance growth through its components such
as total asset, total investment, premium contribution dan gross claims. Insurance industry as one of the large amount of public fund management institutions, especially life insurance, depend highly on the success of managing investment in the effort to realize the aim of the company. If the investor is an institution as the life insurance company, so the main purpose of investment portfolio is to gain level of high return with small risk to fulfil its responsibility to the policy holder (claim payment) as well as for the purpose of company’s growth (Sula, 2004, p. 379). From this shariah insurance performance indicators, as published by the Financial Service Authority (OJK) which are total total asset, total investment, premium contribution dan gross claims, the calculation of indicators growth could be formulated as follow:

\[ g_i = \frac{g_i - g_{i-1}}{g_{i-1}} \times 100\% \]

To inform, g is growth (%) and i = total asset, total investment, gross contribution, and gross claims, t: time. In this research, the variable that have been used are total asset, total investment, gross contribution, and gross claims as the measurement of sharia insurance growth. The total asset in the sharia insurance companies according to AAOIFI Bahrain (Sula, 2004, p. 400) covers cash and cash equivalent, investments, contribution receivables, fixed asset (net), and development cost. According to Sliwinsky (2006) the indicators from this ratio are calculated from insurance technical reserve plus others obligation compared to total asset value or company’s wealth. The higher the indicators the better company’s growth level. Investment in the life insurance company principally is a long term investment. For that reason, life insurance company commend its fund in the long term investment as much as 2/3 from its total asset that is being invested in company’s share dan bond (Darmawi, 2001, p. 50). According
to Sliwinsky (2006) investments shows a comparison between investment which is listed in the balance toward capital and insurance fund. Insurance fund is the level of technical insurance reserves. The higher this ratio value, the better company’s financial stability.

High growth potential also can be seen from the amount of insurance premium where is being reinsured outside Indonesia. It becomes one of the causes of national insurance payment balance deficit. Many of the insurance premium, which is being reinsured overseas because the retention level or the ability to bear risk of insurance companies in Indonesia is still very low (www.jiwasraya.co.id). According to Sliwinsky (2006) sales profitability ratio is a company’s ability to generate profit from the gross premium income. This ratio specialize the comparison between gross premium income and company’s net profit. The higher this indicator would give better level of company’s growth.

Claims is an application from the insurance participant to obtain guarantee from the loss based on the agreement. In doing so, it is important for the sharia insurance management to solve the claims efficiently (Sula, 2004, p. 260). For Sliwinsky (2006) claim ratio net of reinsurance depict part of claims arise from generating premium. The lowest this ratio would result in common better financial. The level of claims arose will set the technical financial position from the company’s operation.
Framework of Thinking

The Level of Shariah Insurance Growth in Indonesia

- Total asset
- Total Investment
- Gross contribution
- Gross claims

- Stationary test
- Root test

ARIMA approach

Model Identification $p, d, q$

Estimating the model Parameter

Yes

Diagnostic test

The prediction of Shariah insurance growth

Not

Source: Modified from Nadia Galuh Hendriana Research

**Autoregressive Integrate Moving Average**

Box-Jenkin model is a forecasting technique using time series model based merely on the behaviour of the data variable being observed (let the data speak for themselves). This Box-Jenkin model was technically known
The Growth of Sharia Insurance

as Autoregressive Integrated Moving Average (ARIMA). This analysis is different from the structural model of causality or the simultaneous one, in which the equation model shows the correlation between economic variables. The main reason for using the Box-Jenkin technique is because the movement of economic variables being observed such as the exchange value, holding, and inflation are difficult to be explained using economic theories (Widarjono, 2013, p. 267).

The forecasting method using Box-Jenks (ARIMA-Autoregressive Integrated Moving Average) has very good forecasting accuracy for short term forecast, while for the long term one, the accuracy is not very good. Usually it would tend to be flat or constant for long term prediction (Setiawan, 2012, p. 2). However, if the prediction model and the data could not explain best, then the process of model determination should be repeated. The Box-Jenks model consists of a number of models such as autoregressive (AR), moving average (MA), autoregressive-moving average (ARMA) dan autoregressive integrated moving average (ARIMA) (Widarjono, 2013, p. 267).

This research has examined four hypotheses. \( H_1 \): Total Asset; there is a significant coefficient in the total asset which is tested using the best ARIMA model. \( H_2 \): Total Invest; there is a significant coefficient in the total investment which is tested using the best ARIMA model. \( H_3 \): Gross contribution; there is a significant coefficient in the gross contribution which is tested using best ARIMA model. \( H_4 \): Gross claims; there is a significant coefficient in the gross claims which are tested using the best ARIMA model. In addition, this research is using quantitatif data, emphasizing on theoretical testing through research variables measurement using numbers and conducting a data analysis by employing statistical procedures (Indriantoro and Supomo, 2012, p. 12). This research aims to reconstruct the past phenomenon systematically, objectively, dan
accurately to explain current phenomenon or to anticipate the future phenomenon (Sangadji and Sopiah, 2010, p. 21).

Sample is a part of the number and characteristics controlled by the population (Sangadji and Sopiah, 2010, p. 186). So, the sample for this research is annual financial report of the sharia insurance companies which has been published by the Financial Service Authority during the period of 2007 quarter I untill 2014 quarter IV. The data obtained in the form of annual data, the annual data is then being interpolated into quarter data using E-views, so that gained research sample in the form of quarter data such as sharia insurance statistics in Indonesia quarter I year 2007 untill quarter IV year 2014. Sample determination is done using purposive sampling technique as a method for sample determination based on specific criteria (Sangadji and Sopiah, 2010, p.188). In this research the number of sample used is 32 samples which are the statistical data of sharia insurance in Indonesia quarter I year 2007 until quarter IV year 2014.

The cource of data used was secondary data. Secondary data is data which are gathered in the form of fixed data and has been processed by other parties, usually in the form of publication (Susanti, 2010, p. 15). The secondary data of this research was sharia insurance statistics on the website of Financial Service Authority. The dependent variable in this research was the forecast of the level of growth of shariah insurance in Indonesia. While the measurement indicator is using growth theori bellow:

$$g_i = \frac{g_{it} - g_{it-1}}{g_{it-1}} \times 100\%$$

Information: $g$ is growth (%) and $i = \text{Asset, Investment, Gross contribution, Gross claims}$ $t$: time.
The Growth of Full Fledge Shariah Insurance Company and Shariah Business Unit

<table>
<thead>
<tr>
<th>Year</th>
<th>Asset</th>
<th>Investment</th>
<th>Contribution/ premium</th>
<th>Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1.418,4</td>
<td>1.148,2</td>
<td>805,6</td>
<td>312,6</td>
</tr>
<tr>
<td>2008</td>
<td>1.853,3</td>
<td>1.188,9</td>
<td>1.650,8</td>
<td>492,3</td>
</tr>
<tr>
<td>2009</td>
<td>3.022,7</td>
<td>2.089,3</td>
<td>2.408,3</td>
<td>800,7</td>
</tr>
<tr>
<td>2010</td>
<td>3.542,8</td>
<td>3.304,5</td>
<td>2.787,3</td>
<td>1.083,3</td>
</tr>
<tr>
<td>2011</td>
<td>9.152,2</td>
<td>7.768,8</td>
<td>5.080,9</td>
<td>1.423,5</td>
</tr>
<tr>
<td>2012</td>
<td>13,24</td>
<td>11,33</td>
<td>6,95</td>
<td>1,79</td>
</tr>
<tr>
<td>2013</td>
<td>16,65</td>
<td>14,32</td>
<td>9,000</td>
<td>2,56</td>
</tr>
<tr>
<td>2014</td>
<td>19.761,3</td>
<td>16.940,1</td>
<td>4.796,5</td>
<td>1.545,2</td>
</tr>
</tbody>
</table>

Source: Statistical processed data of shariah insurance

Based on the above table, the growth of shariah insurance company especially the full fledged and sharia business unit in Indonesia underwent a drastic increment from 2007 until 2014. It can be seen from its growth indicators, including asset, investment, contribution/ premium, and claims from 2007 until 2014 that show significant growth. It also indicate that shariah insurance role in Indonesia was also growing even though the economic condition of the country has not been quite stable. The increment of sharia insurance correlated closely to the development of sharia insurance in national level. In relation to the publication of sharia finance development report in 2013, the development of businesman number based on the belief that the potentials of market for Non Bank Financial Industry (NBFI) is still big as well as product development and services of NBFI in accomodating public need and preference.

Besides, the causes of sharia insurance development and future in Indonesia are still widely opened. Strong economic growth combined with the development of saving level and the development of middle class economy is a good sign for sharia life insurance industry (Republika.co.id,
May, 1, 2013). It shows that sharia insurance in Indonesia especially asset, investment, contribution/premium and claim from time to time experienced a growth nominally from 2007 to 2014.

**ARIMA Result and Its Prediction**

This research used variables which is the indicators from the level of insurance growth level: asset, investment, gross contribution, and gross claims. Those variables would be forecasted to see the growth of sharia insurance in the future. Those prediction was using the data series of yesteryear for which is then processed by employing the method of Box-Jenkins (ARIMA) through various level of forecast. Those analytical steps are as follow:

**Stationary Test**

The first step that has been conducted is by doing a stationary test toward all variables using unit root test, purposing to know whether or not the data comprised a unit root, if it contains a unit root then the data is not stationary (Hendriana, 2011, p. 88) and to know how many times the differentiation should be conducted so that the data series could become a stationary. Unit root testing in this research is conducted by the test of *Augmented Dickey-Fuller* (ADF) for stationary data if the value of ADF statistics is the *value of critical value* (Hendriana, 2011, p. 88).

<table>
<thead>
<tr>
<th>No</th>
<th>Variable Name</th>
<th>ADF Statistics</th>
<th>Critical Values 5%</th>
<th>Prob</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Asset</td>
<td>-6.568380</td>
<td>-3.574244</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
<tr>
<td>2</td>
<td>Investment</td>
<td>-6.503890</td>
<td>-3.574244</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
<tr>
<td>3</td>
<td>Contribution/premium</td>
<td>-6.773465</td>
<td>-3.574244</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
<tr>
<td>4</td>
<td>Claim</td>
<td>-6.609040</td>
<td>-3.574244</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

Source: Data processed
Based on the above table, stationary test on the level of 2nd difference shows that the asset was significant, since the value of ADF statistics \((-6.568380) < (-3.574244)\) from the critical value grade, so it can be considered that the data series asset is stationary. For the investment variable, contribution/premium and claims were also significant on \(\alpha = 5\%\), since the ADF statistical value of investment \((-6.503890) < (-3.574244)\) of critical value grade, and the value of ADF statistic for contribution/premium \((-6.773465) < (-3.574244)\) the grade of critical value, with ADF statistical value for claims \((-6.609040) < (-3.574244)\) its critical value. Those showed the data series of investment, contribution/premium, and claims has been stationary in its mean.

**Model Identification**

Quoting Arifiani, Hendriana (2011, p. 91) argues that after the data time series become stationary, the next step is determining the ARIMA model \((p,d,q)\) which is appropriate (tentative), by means of determining some \(p,d,\) and \(q\). In choosing how many \(p\) and \(q\) can be supported by examining the functional pattern of autocorrelation and partial autocorrelation (correlogram).

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>ARIMA Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Asset</td>
<td>((1, 2, 1))</td>
</tr>
<tr>
<td>2</td>
<td>Investment</td>
<td>((2, 2, 2))</td>
</tr>
<tr>
<td>3</td>
<td>Contribution/Premium</td>
<td>((1, 2, 1))</td>
</tr>
<tr>
<td>4</td>
<td>Claims</td>
<td>((1, 2, 1))</td>
</tr>
</tbody>
</table>

Source: Data processed

According to the table, it is known that the beginning model of ARIMA for asset variable 1,2,1 are AR(1) MA(1), through 2nd difference, then for the beginning model of ARIMA for investment variable 2,2,2 are
AR (2), MA (2) through 2nd difference, the beginning ARIMA model for contribution/premium 1,2,1, are AR (1), MA (1) through 2nd difference and the beginning of ARIMA model for claims are 1,2,1 which are AR (1), MA (1) through 2nd difference.

**ARIMA Estimation**

The next step is doing an estimation or try out. Estimation is needed to determine the appropriate ARIMA model to be used in the research. Each of the variable is being estimated to gain the right model for forecasting. The choosing for the best ARIMA model could also be seen from the value of Akaike Info Criterion (AIC) and Schwarz Criterion (SIC). Model with less AIC and SIC value would have better quality and that kind of model is determined to be employed in the research (Winarno, 2009, pp. 7-31).

**ARIMA Prediction**

After obtaining the proper ARIMA model, the last step is making prediction. The prediction of this research is conducted to the variable of asset, investment, contribution/premium, and claims for the first quarter of 2015 until the fourth quarter of 2016.
ARIMA Prediction Result (in Billion Rupiahs)

<table>
<thead>
<tr>
<th>Year</th>
<th>Asset</th>
<th>Investment</th>
<th>Contribution</th>
<th>Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 I</td>
<td>31.190</td>
<td>31.609</td>
<td>5215.1</td>
<td>1144.8</td>
</tr>
<tr>
<td>2015 II</td>
<td>32.153</td>
<td>32.586</td>
<td>5284.2</td>
<td>1178.4</td>
</tr>
<tr>
<td>2015 III</td>
<td>33.117</td>
<td>33.564</td>
<td>5353.2</td>
<td>1212.0</td>
</tr>
<tr>
<td>2015 IV</td>
<td>34.080</td>
<td>34.541</td>
<td>5422.2</td>
<td>1245.7</td>
</tr>
<tr>
<td>2016 I</td>
<td>35.044</td>
<td>35.518</td>
<td>5491.3</td>
<td>1279.3</td>
</tr>
<tr>
<td>2016 II</td>
<td>36.008</td>
<td>36.496</td>
<td>5560.3</td>
<td>1313.0</td>
</tr>
<tr>
<td>2016 III</td>
<td>36.971</td>
<td>37.473</td>
<td>5629.3</td>
<td>1346.6</td>
</tr>
<tr>
<td>2016 IV</td>
<td>37.935</td>
<td>38.451</td>
<td>5698.3</td>
<td>1380.2</td>
</tr>
</tbody>
</table>

Source: Data processed

Based on the prediction, it is shown that asset, investment, contribution and claims from the first quarter in 2015 until the fourth quarter in 2016 demonstrate increment in term of its nominal. After getting prediction result on the nominal of asset, investment, contribution and claims, it is then followed by calculating asset, investment, contribution and claims growth for each quarter.

The growth was calculated using the formula bellow:

\[ g_t = \frac{g_{it} - g_{it-1}}{g_{it-1}} \times 100\% \]

Information: \( g \) is growth (%) and \( i = \) asset, investment, contribution and claims, \( t \): time. So that growth of each variable could be counted as follow:

1) Asset growth
   \[ \text{Asset}_t = (\text{Asset}_t - \text{Asset}_{t-1}) / \text{Asset}_{t-1} \times 100\% \]

2) Investment growth
   \[ \text{Investment}_t = (\text{Investment}_t - \text{Investment}_{t-1}) / \text{Investment}_{t-1} \times 100\% \]

3) Contribution growth
   \[ \text{Contribution}_t = (\text{Contribution}_t - \text{Contribution}_{t-1}) / \text{Contribution}_{t-1} \]
4) Claims growth

\[ \text{Claim}_t = \frac{\text{Claim}_t - \text{Claim}_{t-1}}{\text{Claim}_{t-1}} \times 100\%
\]

After making a calculation on the variable of asset, investment, contribution and claims, so the result is showed in below:

Quarterly growth prediction of shariah insurance (in %)

<table>
<thead>
<tr>
<th>Year</th>
<th>Asset</th>
<th>Investment</th>
<th>Contribution</th>
<th>Claim</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 I</td>
<td>3.18</td>
<td>3.19</td>
<td>1.34</td>
<td>3.02</td>
</tr>
<tr>
<td>2015 II</td>
<td>3.08</td>
<td>3.09</td>
<td>1.32</td>
<td>2.93</td>
</tr>
<tr>
<td>2015 III</td>
<td>2.99</td>
<td>2.99</td>
<td>1.30</td>
<td>2.85</td>
</tr>
<tr>
<td>2015 IV</td>
<td>2.90</td>
<td>2.91</td>
<td>1.28</td>
<td>2.77</td>
</tr>
<tr>
<td>2016 I</td>
<td>2.82</td>
<td>2.82</td>
<td>1.27</td>
<td>2.70</td>
</tr>
<tr>
<td>2016 II</td>
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<td>2.75</td>
<td>1.25</td>
<td>2.62</td>
</tr>
<tr>
<td>2016 III</td>
<td>2.67</td>
<td>2.67</td>
<td>1.24</td>
<td>2.56</td>
</tr>
<tr>
<td>2016 IV</td>
<td>2.60</td>
<td>2.60</td>
<td>1.22</td>
<td>2.49</td>
</tr>
</tbody>
</table>

Source: Data processed

Based on the table, sharia insurance growth, consisting of asset and investment every quarter, is quite stable on the growth level of 2.60% and 2.60%, while the growth of contribution and claims experience fluctuating level of growth rate. As a result, growth forecast of sharia insurance in Indonesia displays a declining growth trend, although it developed nominally. On the other hand, claims experienced growth that depicted poor financial condition of sharia insurance company, because the amount of claims should be paid to the policy holders. The growth of claims have been caused by many things one of them is natural disaster.

According to Webb et al (2002), the slow growth performance of sharia insurance industry has been caused by macro economic growth that can be used as predictor variable in doing insurance demand analysis. Other research supporting Web at al (2002) has been conducted by Kugler and Ofoghi (2006) in England, showing that in the long term the function...
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of insurance demand would be influenced by Gross Domestic Bruto (GDP). One of the causes of sharia insurance decline was the fluctuated economic condition of Indonesian economics that in 2007 the economic growth was 6.3% (yoy), in 2008 6.0% (yoy) although the economic experience a decline but in 2008 the economic condition was still considered as good. Entering the third quarter, economic activities begining to decline, export was declining, the domestic market sluggish started, the industry faced market difficulty (APBN 2007-2013).

In 2009 the growth was 4.6% (yoy) considered as declining since the rupiahs exchange rate was also declining and in 2009 a global crisis occurred and affected Indonesian economy. In 2010 the economy grew 6.2% (yoy) because of the development of investment and export, whereas in 2011 the economy developed compared to the pervious year in 6.5% (yoy). In 2012 it was 6.5% (yoy), developed to 6.8% in 2013 but it became slower in 2014 slow in the first quarter because real export contraction. In the first quarter of 2014, the economic growth was 5.21% (yoy). It was slower compared to the fourth quarter of 2013 which was 5.72% (yoy). The investment in the first quarter of 2014 was increasing, especially investment in non building. The investment grew from 4.4% (yoy) in quarter IV of 2013 to 5.1% in the quarter I of 2014.

Inflation in 2014 has been recorded as much as 8.36% sourced from the increment of subsidized oil price, electricity tariff adaptation for family and industry categories, and the increment of gas (12 Kg) price. This influence toward the decrease level of asset, investment and contribution premium of Indonesian sharah insurance (Permana, 2015, p. 14). The declined of premium was caused by the product provided by sharia insurance business holder who have insurance program for low income societies. Considering that there are still many of Muslim society who are relatively have low income, sharia insurance should also provide insurance
product for those segment of society so that the existence of those kind of industry could be recognized by the public (Laporan Perkembangan Keuangan Syariah, 2013).

Conclusion

This research aimed at understanding the prediction of sharia insurance growth in Indonesia from 2015 until 2016. The variables being tested in this research are asset, investment, premium, and claim. Based on the problem identification, data analysis, and the discussion, it can be concluded that:

1. The result of growth prediction toward shariah insurance using the variable of asset by employing ARIMA method has shown best arima mode for an accurate forecasting. The best ARIMA model for asset variable is (2,2,1). Shariah insurance growth prediction result in the first quarter of 2015 until the fourth quarter of 2016 experienced a decline.

2. The result of shariah insurance prediction using the variable of investment by employing ARIMA method, resulted in the best model of ARIMA for an accurate forecasting. The best ARIMA model for investment is (2,2,1). The result of shariah insurance prediction growth in the first quarter of 2015 until the fourth quarter of 2016 showed a declined trend.

3. The result of sharia insurance growth prediction using premium variable using ARIMA method or Box Jenkins, resulted in the best ARIMA model for an accurate forecasting. The best ARIMA model for the variable of asset is (1,2,2). The result of shariah insurance growth prediction in Indonesia in the quarter I of 2015 until the quarter IV of 2016 experienced a declined trend.

4. The result of sharia insurance growth prediction using claim variable
by employing ARIMA method, resulted in the best ARIMA model for an accurate forecasting. The best ARIMA model for the variable of claim is (1,2,2). The prediction result of growth claims of shariah insurance in Indonesia in the quarter I of 2015 until quarter IV of 2016 experienced a rising trend. It means that if the claims increased the insurance company experienced declining growth condition and in a poor financial position.

The shariah insurance is expected to formulate new strategies so that the growth of shariah insurance would experience a rising trend of growth, by focusing on premium development through developing shariah insurance products which is affordable for middle and lower class of society. The shariah insurance is expected to manage its asset and investment better and more carefully so the investment which is employed by the shariah insurance company from the source of premium and make sure that the investment has been distributed to profitable investment and increases the return to the company so that it develops company's asset as well as investment. The future research on this issue could be developed by comparing the prediction of sharian insurance with the conventional one. It is suggested for the future research to lengthen the research period to gain more accurate result.
References


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