THE ANALYSIS OF NON PERFORMING FINANCING DETERMINANTS ON INDONESIAN ISLAMIC BANKING

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Abstract
This project presents a summary of analysis on the factors affecting Non Performing Financing (NPF) of Sharia banking in Indonesia, namely Economic Performance (EK), Total Financing (FIN), Finance Rate (FR), Dummy Global Financial Crisis (D07) and Inflation Rate (INF). The method employed was Cointegration Test where the data used derived from January 2003 to March 2013 monthly data. The statistical analysis results showed that each of independent variables significantly influence the growth of NPF (non-performing financing) of Sharia banking in Indonesia. Additionally, the study gave the implication that Islamic banking should apply prevention methods and prudence principles appropriately in providing finance to clients in order to avoid high NPF in Islamic banking. Afterward, the Government, as the highest authority of banking institution, was expected to support the sharia banking financing by establishing an independent agency to help the bank assessing the feasibility of the proposed candidates who would receive financing assistance from sharia banking.

Keywords: Indonesian Sharia Banking, NPF (Non Performing Financing), Financing, Dummy of Global Financial Crisis.

Abstrak

Kata Kunci: Perbankan Syariah Indonesia, NPF (Non Performing Financing), Pembiayaan, Dummy Global Financial Crisis.
In the operational activities of Islamic banks, Islamic principle is the rule of Islamic law based on the agreement between the bank and other parties for funds and storage or financing business activities, or other activities that are in accordance with Sharia. One of the functions of banking intermediation, which supports real sector of the economy is through Islamic bank financing products. Islamic bank financing has several categories, such as, based on the principle of profit and loss sharing (Mudharabah and Musyarakah), the principle of buying and selling goods with profit (Murabahah, Salam, Istishna’), or the financing of capital goods based on the principle of leasing (ijarah), or with the option the transfer of ownership of the leased item from the bank to the customer (ijarah muntahiyah bit-tamlik). The growth of financing in Indonesian Islamic banking can be found in table 1, as follows:

Based on Table 1.1, growth financing of Islamic banks in Indonesia beginning in 2006 until the year 2012, demonstrating the increasing public confidence towards Islamic banking financing. Islamic banking is an alternative financing solution for the community to meet the needs of business as well as consumer needs improvement.

Financing is one of the largest and most productive assets of Islamic banks. Quality of bank’s financing became a major concern as it becomes indicator of the health of Islamic bank. Assessment of the quality of earning assets of Islamic banks are regulated by Bank Indonesia Regulation, indicated in number:1/13/PBI/2011, regarding the assessment of the quality of earning assets for the Islamic Bank and Business Unit, in article 8 paragraph 2, explaining that the quality of earning assets in the form of financing are classified into Current, in Particular care, Substandard, Doubtful and Bad (collectibility 1 – 5).

### Table 1. The Growth of Financing in Indonesian Islamic banking (In Billion Rupiahs)

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Akad Salam</td>
<td>337</td>
<td>351</td>
<td>369</td>
<td>423</td>
<td>347</td>
<td>326</td>
<td>376</td>
</tr>
<tr>
<td>Akad Istishna</td>
<td>836</td>
<td>516</td>
<td>765</td>
<td>1.305</td>
<td>2.341</td>
<td>3.839</td>
<td>7.345</td>
</tr>
<tr>
<td>Akad Qardh</td>
<td>250</td>
<td>540</td>
<td>959</td>
<td>1.829</td>
<td>4.731</td>
<td>12.937</td>
<td>12.090</td>
</tr>
<tr>
<td>Lainnya</td>
<td>20.445</td>
<td>27.944</td>
<td>38.195</td>
<td>46.886</td>
<td>68.181</td>
<td>102.655</td>
<td>147.505</td>
</tr>
</tbody>
</table>

In the description of the article 8 Law – Law No. 7 of 1992 jo. ACT No. 10 of 1998 on Banking as well as in the explanation Section 37 of ACT No. 21 of 2008 about Islamic banking, stated that financing based on sharia principles provided by the bank to contain risk, so in practice the bank should pay attention to the basic principle of financing (Djamil, 2012: 72).

Defaulted financing called Non Performing Financing (NPF), which can be calculated by comparing the total financing with collectibility 2 until 5 (i.e. In particular care, substandard, doubtful and bad) and total credit in the Islamic bank. This NPF ratio is one of the indicators of performance of Islamic banking. If the higher value of the NPF, the performance of Islamic banks is getting worse.

NPF is a deduction of profit in banking, because banks are required to make allowance for productive assets, the backup is taken from a bank profit and will have an impact the decline of the profit provided to deposit’s customer. When this happens continuously, then the Islamic banks will be hard to compete with conventional banks that are able to provide a high reward for customer deposits. From the side of financing, when financing funds already disbursed to customer, if there is a credit risk, Islamic bank cannot be pulled back so that the Islamic banking capital is reduced and the bank will also reduce its financing to the community.

Some previous research about non performing loan in conventional bank done by Raphael Espinoza and Anathakrisman Prasad (2010), Irum Saba, Rehana Kooser and Muhammad Azeem (2012), Hermawan Soebagio (2005), Ihda a. Faiz (2010). The research showed different results and inconsistent about the influential factors contributing to the non performing loans.

**Metodology**

The research object is the data Bank Syariah (Sharia-based commercial banks and Syariah Business Unit) in Indonesia. Research using observation period from January 2003 to March 2013, with other types of data on a monthly basis. Research using 123 amatan time (N = 123). Types of data used are secondary data compiled by time series (runut time). The data collection method used is documentation study. It is the collection of data that manage with the category and classification of written materials-related research issues. Data collected is Non Performing Financing (NPF) and the Total Financing during the period January 2003-March 2013. Data sources used in the study was obtained from the Islamic Banking Statistics published by Bank Indonesia.

Data for rate of return is Indonesia’s repayment rate financing or Financing Rate (interest rates Investment Bank as a proxy) and data for inflation is inflation rate in Indonesia during the period January 2003-March 2013. The source of the data used in this research was Indonesia economic and Financial Statistics, published by Bank Indonesia. Data research for economic indicators, is Economic Performance is Indonesia (IPI as a proxy) during the period January 2003-March 2013. the data used in this study were obtained from the Central Bureau of statistics, Indonesia via the official website of the Central Bureau of statistics, namely www.bps.go.id.
For dummy data, about the onset of the global financial crisis (D07), established and supported by the literature that discusses the global financial crisis that began in August 2007. The literature supporting the global financial crisis is the book of Faisal Basri and Haris Munandar in 2009. All data is grouped in the table and further processed using EViews 6.1. As for the research analysis techniques, this model is shown in Equation 1.1.

\[ NPF = b1 \text{EK} + b2 \text{FIN} + b3 \text{FR} + b4 \text{D07} + b5 \text{INF} \]

Where:

- **NPF**: (non-performing financing) in period \( t \)
- **EK**: economic performance in the period \( t \)
- **FIN**: Total financing of Islamic banks in the period \( t \)
- **FR**: rate of return on the Financing period \( t \)
- **D07**: dummy the onset of the global financial crisis in the period \( t \)
- **INF**: the inflation rate in the period \( t \)

The magnitude of coefficients of each independent variable is shown with \( b1, b2, b3, b4, \) and \( b5. \)

According to Gujarati (2012: 428), stationerity of time series is very important because if the time series is stationary, we can study the behavior of fiercely only for the period of time that in the discussion. Each set of time series data is therefore only for certain episodes. The methods used in testing the unit root test is Augmented Dickey-Fuller (ADF) and Philips test-Perron (PP). While the value of the critical value of criteri-
The main problems in time series data is the presence of autocorrelation. To resolve this issue then it should use the optimal lag length gained from testing optimal lag. Determination of the optimal lag in this study are based on the shortest lag according to Schwarz Information Criterion (SIC). According to Gujarati SIC gives scales better than AIC because SIC gives the scales are larger and more penalties against the addition of a variable (Faiz, 2010: 227).

**Result of Research and Discussion**

Result of Stasionerity Test:

Based on table 2, unit root test (test stasioneritas) by using the methods of the ADF on the level of level of intercept, the variable – such as: NPF, inflation, Financing, Financing Rate and Dummy is insignificant, indicated that the value of the ADF t-statistic is less than the Critical Value of the Mackinnon pass. Due to the significant levels of OAK $\alpha = 10\%$, while in this study using $\alpha = 5\%$ level is hence concluded that the variable EK (economic performance) is not significant at the $\alpha = 5\%$ level. The root test (test stasioneritas) by using the methods of the ADF on the level level trend and intercept, variables – variables such as: NPF, inflation and the Dummy is insignificant, indicated that the value of the ADF t-statistic is less than the Critical Value of the Mackinnon pass. Due to the significant levels of OAK $\alpha = 10\%$, while in this study using $\alpha = 5\%$ level is hence concluded that the variable EK is not significant at the $\alpha = 5\%$ level.

While variables – variables such as: Financing and Financing Rate is significant, which indicated that the value of the ADF t-statistic is greater than the Critical Value of the Mackinnon pass. Significant levels of Financing, was significant at the $\alpha = 1\%$ and significant levels of Financing Rate, is significant at the $\alpha = 5\%$. The root test (test stasioneritas) by using the methods of the ADF in the first (1st) level of difference either intercept or trend and intercept, all variables may at the level of $\alpha = 1\%$, $5\%$ and $10\%$. This indicates that the value of the ADF t-statistic is greater than the Critical Value of the Mackinnon pass. The root test (test stasioneritas), using PP at the level of good level, intercept and trend and intercept, almost all variables – variables such as: NPF, inflation, Financing, Financing Rate and Dummy is significant at the $\alpha = 1\%$ and $5\%$. This indicates that the value of PP t-statistic is less than the Mackinnon pass.

The root test (test stasioneritas), using the method of PP, at the level of first difference (1st), both intercept and trend and intercept, all variables – variables such as: NPF, EK, inflation, Financing, Financing Rate and Dummy is significant at the $\alpha = 1\%$ level. This indicates that the value of PP t-statistic is greater than the Critical Value of the Mackinnon pass. Granger test results in the method of statistical testing, Johansen to reduce rank i.e. trace test (trace) and maximum eigenvalue test (max). Granger test results with Linear deterministic specification Johansen – Intercept and Trend (4), shown in table 1.3.

Based on the results of the test data table 1.3 Linear Granger – Intercept and Trend (4), shows there are 3 connections Granger. The value of Max Eigen Statistics ($\eta_{max}$) and the value of the Trace Statistic ($\eta_{trace}$) is greater than the critical value at the level of significance $\alpha = 5\%$, so the $H_0$ stating $r = 1$ or Granger accepted.

From Granger test results obtained long term equations where the OAK has
Table 2. Result of Stationarity Test Using ADF dan PP

<table>
<thead>
<tr>
<th>No.</th>
<th>Variabel Variabel</th>
<th>Kode Variabel</th>
<th>Level Intercept Lag</th>
<th>1st Difference Trend &amp; Intercept</th>
<th>PP</th>
<th>1st Difference Trend &amp; Intercept</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Non Performing Financing</td>
<td>lnnpf</td>
<td>3</td>
<td>-1.653408</td>
<td>-7.628648***</td>
<td>-1.581493</td>
</tr>
<tr>
<td>2</td>
<td>Kinerja</td>
<td>lnk</td>
<td>1</td>
<td>-2.735597*</td>
<td>-15.39951***</td>
<td>-2.317708</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>-15.34917***</td>
<td>-16.48417***</td>
<td>3.536701***</td>
</tr>
<tr>
<td>3</td>
<td>Financing</td>
<td>lnfin</td>
<td>7</td>
<td>-0.774520</td>
<td>-3.680793***</td>
<td>-1.909390</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>-2.468568***</td>
<td>-7.650902***</td>
<td>-2.723075</td>
</tr>
<tr>
<td>4</td>
<td>Financing</td>
<td>fr</td>
<td>4</td>
<td>-1.935007*</td>
<td>-3.357131**</td>
<td>-1.411209</td>
</tr>
<tr>
<td></td>
<td>Dummy07</td>
<td>D07</td>
<td>0</td>
<td>-3.666579**</td>
<td>-3.428336*</td>
<td>-2.349811</td>
</tr>
<tr>
<td>5</td>
<td>Inflasi</td>
<td>inf</td>
<td>12</td>
<td>-1.750331</td>
<td>-4.935887***</td>
<td>-2.351662</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>-2.545356</td>
<td>-4.953834***</td>
<td>-2.526086</td>
</tr>
</tbody>
</table>

·* Significant 10 %  
·** Significant 5 %  
·*** Significant 1 %  
Source: eviews 6.1

On the Granger test FR, it brings long term equations where the FR has influence of 0.86% of the NPF, with a value of the t-statistic (7.06456), greater than the value of t – table 10% significance level. Then the variable FR equation can account for the long term. Sign of the coefficient of the variable FR is positive, it means that the FR has a positive influence in the long-term equation. It means any increase in FIN (Financing/Financing) of 1% would raise NPF of 5.51%.

On the Granger test FR, it brings long term equations where the FR has influence of 0.86% of the NPF, with a value of the t-statistic (7.06456), greater than the value of t – table 10% significance level. Then the variable FR equation can account for the long term. Sign of the coefficient of the variable FR is positive, it means that the FR has a positive influence in the long-term equation. It means any increase in FIN (Financing/Financing) of 1% would raise NPF of 5.51%.
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term. It means every happening D07 (Global financial crisis) will raise the NPF registration 1.14%.

On the Granger test INF, obtained long term equations where the INF have influence of 0.0499 to the NPF, with a value of the t-statistic (2.25601), greater than the value of t – table 10% significance level. Then the variable INF can explain long term equations. Variable coefficient sign INF is negative, it means that the INF have negative influence long term in the equation. It means any increase (inflation) INF 1% will decrease the NPF of 0.05%. Based on the results of data analysis in statistics, it can be concluded that the Economic performance of the relationship with the NPF in accordance with the proposed hypothesis, i.e. the negative impact on the Economic performance of the NPF.

Statistical analysis of the results in accordance with the opinions expressed in Putong (2002), (Soebagio, 2005: 67), which says that at a time when the economy is in a stable condition, then the Community consumption also stabilized so that the savings will be stable (according to the theory of Keynes). When people have savings then can be used to pay the installment obligation of financing or pay off pembiayaannya. In conclusion the higher economic performance would decrease the chance of occurrence of problematic financing (NPF). Based on the results of data analysis in statistics, it can be concluded that the Total Financing relationship with the NPF in accordance with the proposed hypothesis, i.e. the Total positive effect of Financing of NPF. Statistical analysis of the results in accordance with the opinions expressed in Keeton (1999: 58), namely the reduction in credit standards increase the chances that some borrowers will generally jammed his loan.

Based on the results of data analysis in statistics, it can be concluded that the Financing rate of return relationship with NPF in accordance with the proposed hypothesis, i.e., the rate of return a positive effect against Financing of NPF. Financing rate is the same as the equivalent rate which means the rate of return on investment has been implanted. The equivalent rate in the same role with flowers on a conventional bank, that give you an idea how big the rate of return on investment that is planted. If bank interest directly enforced by contract prior to the beginning of the investment. The equivalent rate is calculated by the bank every end of the month after the investment starts delivering results. Thus, the client can see how equivalent rate the bank months ago to give estimates of how much the

<table>
<thead>
<tr>
<th>Model</th>
<th>Null Hypothesis</th>
<th>Trace Statistic</th>
<th>0.05 Critical Value</th>
<th>Max-Eigen Statistic</th>
<th>0.05 Critical Value</th>
<th>Hasil</th>
</tr>
</thead>
<tbody>
<tr>
<td>r ≤ 0</td>
<td>0.323378</td>
<td>148,0772</td>
<td>117,7082</td>
<td>46,87702</td>
<td>44,49720</td>
<td>TT dan ME mengindikasikan kointegrasi pada tingkat α = 5%</td>
</tr>
<tr>
<td>r ≤ 1</td>
<td>0.265492</td>
<td>101,2002</td>
<td>88,80380</td>
<td>37,02652</td>
<td>38,33101</td>
<td>terdapat 3 persamaan</td>
</tr>
<tr>
<td>r ≤ 2</td>
<td>0.239079</td>
<td>64,17363</td>
<td>63,87610</td>
<td>32,78714</td>
<td>32,11832</td>
<td></td>
</tr>
<tr>
<td>r ≤ 3</td>
<td>0.136240</td>
<td>31,38649</td>
<td>42,91525</td>
<td>17,57521</td>
<td>25,82321</td>
<td></td>
</tr>
<tr>
<td>r ≤ 4</td>
<td>0.070764</td>
<td>13,81128</td>
<td>25,87211</td>
<td>8,807103</td>
<td>19,38704</td>
<td></td>
</tr>
<tr>
<td>r ≤ 5</td>
<td>0.040844</td>
<td>5,004175</td>
<td>12,51798</td>
<td>5,004175</td>
<td>12,51798</td>
<td></td>
</tr>
</tbody>
</table>

Source: data edited, Eviews 6.1
The equivalent rate of banks in the running (Akshay, 2011: 48).

According to Mishkin (2004: 92), the relationship between supply and demand and interest rates of loans as described in Figure 1.1. Change of function of the supply and demand of bonds (bond) into a loan fund (loanable funds) because the company offers bonds actually taking loans from people buying bonds, bonds `a` equal to `requested loan`. Then the curve offer for bonds could be construed as indicating the requested loan amount for each value of the interest rates. Similarly, the demand curves for bonds can be reorganised as lending because funds buy offer (ask) bonds equivalent to offer loans.

Based on Figure 1.1, the higher interest rate then decreases the demand for loan funds. This is due to the higher level of interest rates and the higher the level of refund loans. If the applicant’s loans in banking has or has not made any contractual agreement loan and interest rate hikes occur, then it will give burden to borrowers because of the need to restore the funds its lending to banks in excess of its revenues so that the ability of loan quality will decrease. Based on the results of data analysis in statistics, it can be inferred that the relationship of the Global financial crisis with the NPF in accordance with the proposed hypothesis, that the onset of the Global financial crisis a positive effect to the NPF. These results are in accordance with the description of the condition of Indonesia’s economy, when the global financial crisis, as the Economic Outlook described in Indonesia in 2008.

The impact of the global financial crisis in mid-2007, based on the Economic Outlook of Indonesia in 2008, the growth of the world economy is experiencing a slowdown, conflicts on the economic conditions of world, inflation pressure, increasing the world oil and food prices. In addi-

![Figure 1. Supply and Demand of interest and financing fund](image)

tion to the increased inflation pressure occurs, the condition of the economy is also accompanied by a declining world trade volume.

Based on the report the development of Islamic banking in 2008, published by Bank Indonesia, shows that if the global financial crisis continues to deteriorate, then it is very likely it will be Indonesia’s economy was disrupted in more seriously. Furthermore, the slowdown in global economic growth at the end of 2008 is affecting the performance of the domestic economy in 2009. The weakening condition of the economy of the developed countries, like the United States, Europe and Japan, as the main purpose of Indonesian export, it will affect the performance of the national exports. The financial crisis happened has led to declining demand for the export of results of domestic production. It means declining revenues for many domestic companies who engaged in fulfillment of goods to exports.

Declining corporate earnings contributed to a decrease in exports of the company’s ability to pay the installment, financing will potentially caused a problem. If the global financial crisis taking place continuously, it will increase the financing that is experiencing congestion. Companies that apply Sharia financing, it is possible that companies not directly affected by the global financial crisis but companies are partnering with other companies who directly import export activities, will have bad effect from it. When companies engaged in the import export affected by the global financial crisis, then the partner companies that have financing in Islamic banking will also be affected by the crisis.

Based on statistically data analysis in this study, explaining that a variable Inflation, giving negative influence to the NPF. Partially, on the t-test statistics show that inflation rate variable significant influence to the NPF. Then this shows that if inflation increases then the NPF has decreased. Results of the analysis of the statistics show that inflation rate influence the relationship of NPF does not correspond to the research hypothesis. Inflation reflects the condition of the economy, in which case the increase in prices of commodities and services. When inflation occurs, then to get goods or services, must issue more funds. Karim (2007: 134) States that in answering the cause of inflation, arguing that there is no one major reason that can be “blamed”. Everything is due to the combined drop in agricultural production, excessive taxes, depopulation, market manipulation, high labor cost, unemployment

A country with high inflation is not always experiencing a slowing down economy. This will explain by the figure 1.2 that describe about the growth of economic growth and inflation rate.

Based on Figure 1.2, shows that in the period 2003 to 2013, initial calculation of the average rate of economic growth – Indonesia from 2003 until early 2013 ranging from 5.56%. This shows that economic growth runs in stable condition and likely to rise. An increase in economic growth followed the national income are also likely to rise. And when the national income increases, then the community’s per capita income has also increased.

Based on Figure 1.3, the development of Indonesia’s 2003 inflation rate until the beginning of 2013 showed the same growth with economic growth. Rise in inflation that accompanied with the increase of economic growth suggests that the rising national income in line with rising prices of goods and
services produced by a country. It can be concluded that the rise in inflation, is not always followed by a decline in national income. Increasing national income will be accompanied by an increase in the per capita income for the community. Therefore the community has the ability to pay liabilities financing though in a State of inflation. Community financing conditions continued to cause kelancarannya NPF awake will move tends to decrease. Based on the analysis of the development of inflation and economic growth in Indonesia, the increase in inflation can lead to a decrease of non current financing.

**Conclusion**

Based on the analysis results and discussion in this study, it can be summed up as follows: 1. Economic performance variables giving negative influence to the NPF. The results of this research suggest that increasing economic performance and increasingly lower the NPF. Supported the opinion of Putong (2002) economic stabil-
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ity that followed the stability in consumption and savings. 2. Total financing provided a positive influence to the NPF. The results of this research show that increasing the total financing of the increasingly improved NPF. Supported by research Keeton (1999: 58). 3. Financing rate of return provided a positive influence to the NPF. Supported analysis the impact of the global financial crisis on economic growth and national income of Indonesia, Indonesia’s Economic Outlook in the year 2008 and report on the development of Islamic banking in 2008. Supported the opinion of Ascaryaya (2009: 33) describes the impact of the financial crisis on the economy. 5. Inflation, giving negative influence to the NPF. The results of this research suggest that if inflation increases then the lower the NPF. Supported opinion Adiwarman Karim (2007: 134) condition of the country that are experiencing inflation does not necessarily imply, the economy experienced a downturn. Comparative analysis of the development of inflation and economic growth, indicates that the rise in inflation that accompanied with the increase of economic growth suggests that the rising national income in line with rising prices of goods and services produced by a country.

REFERENCES


