The Influence of Liquidity on Financial Performance of Islamic Banking in Indonesia

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Abstract

This study aims to find out how the influence of liquidity variables on financial performance variables in Indonesia's Islamic banking. The variables used in this research are CAR, FDR, LR and CR as proxy of liquidity, while ROA and ROE as proxy of Islamic banking financial performance in Indonesia. The data used in this study is secondary data from monthly report of Islamic banking publications in Indonesia from January 2008 to December 2016. As for the samples of this study are all Islamic Commercial Bank (BUS) and Islamic Business Unit (UUS) that exist throughout Indonesia excluding Islamic Rural Bank (BPRS). The data were processed by using multiple linear regression analysis by running test on classical assumption and hypothesis. The result of the research shows that CAR and CR liquidity variables significantly influence financial performance, while FDR and LR have no significant effect. Then the results of the study also show that the relationship between liquidity and financial performance is negative, which means that if Islamic banking liquidity increases so the financial performance of Islamic banking in Indonesia will decrease. The results of this study explain that Islamic banking must be able to maintain its liquidity position not to reach excess condition, so as not to affect the decline in financial performance.

Keywords: Liquidity, Financial Performance, Islamic Bank
1. **Introduction**

The growth of the Islamic banking industry in Indonesia began in 1991 with the establishment of Bank Muamalat Indonesia (BMI). The establishment of the Islamic financial industry is fueled by the opinion that bank interest is the same as that which is confirmed by the release of Fatwa of the Indonesian Ulama Council on the bank interest of the bank which was the result of a workshop on scholars of bank and banking interest in Cisarua, Bogor on 19-22 August 1990 (Anshori, 2008). In addition, sociologically Indonesia is also the country with the largest Muslim majority in the world, so an Islamic bank is required to respond and facilitate the business and economic activities undertaken by Muslim communities in Indonesia.

Liquidity is a very important thing for the bank to manage well as it will affect profitability as well as business sustainability and continuity. It is also reflected in Bank Indonesia regulations that set liquidity as one of the eight risks that banks must take care of. The concept of liquidity in the business world is defined as the ability to sell assets in the shortest time with minimal losses. But the understanding of liquidity in the banking world is more complex compared to the business world in general (Alshatti, 2015). In terms of assets, liquidity is the ability to convert all assets into cash, while from the perspective of liquidity, liquidity is the ability of banks to meet the fund's needs through increased portfolio liabilities. For the case in Indonesia, banking liquidity issues are still a serious concern for the government, as data are based on data on failure in banking management in Indonesia which affects massive liquidity in 1997 which has a chain link to macroeconomics that ultimately leads to a crisis economy. At the time of economic crisis in 1997, conventional banking had to raise interest rates and interest rates up to 70%. Consequently, conventional banks are experiencing negative spread and liquidity difficulties to pay for deposits while loans are being disbursed very little because entrepreneurs are not willing to pay credit interest rates and even if loans can be disbursed, the potential of non-performing loans (NPLs) is huge.

In liquidity theory, banking needs to continue to do and offset its liquidity, (Zhu, 2001). If the liquidity balance is not maintained, then the banking financial performance will be disturbed and will cause much risk for the bank, (Ismal, 2010). The influence of liquidity management on the financial performance of conventional banking and Islamic banking has been examined by several studies conducted in

Previous Research

The vast majority of empirical studies on the relationship between bank performance and bank liquidity were conducted in Europe among his studies were about the factors of the performance of the eighteen European banks of 1986 and 1989. The findings show that the ratio of liquid assets to total assets is related negative with Return on Asset (ROA), (Molyneux, P. & Thornton, J., 1992). Similarly, studies conducted in the UK on the commercial banking industry during the period 1995-2002 which examine the effects of bank characteristics, macroeconomic conditions and financial market structures on bank margin net margin and return on average asset (ROA). The results show that the ratio of liquid assets to customers and short-term financing is positively correlated with average return on assets (ROAA) and negatively associated with Net Interest Margin (NIM), (Kosmidou, K., Tanna, S. & Pasiouras, F., (2005).

The study of internal and external determinants of twelve countries in Europe, North America and the Australian banks has also been carried out with the results of the study showing that the liquidity ratio measured by liquid assets against total assets is positively related to Return On Assets (ROA) (Bourke, P., 1989). Another study of banking performance factors seen from the perspective of liquidity risk banking. Using the commercial bank panel datasets from 12 countries with advanced economies (Australia, Canada, France, Germany, Italy, Japan, Luxembourg, Netherlands, Switzerland, Taiwan, England and the United States) during the period 1994-2006. The results show that liquidity risk is an endogenous determinant of bank performance measured by the average ROA, the average ROE and net interest margin, and the associated negative liquidity risk associated with the average the return on ROA assets and the ROE and positive returns associated with net interest margin (NIM), (Chen, Y.K., Kao, L.F., Shen, C.H., & Yeh, C.Y., 2009).

The study of the relationship between liquidity risk and financial performance of Islamic banks in Malaysia over the period 2006-2008 found that, in times of crisis, liquidity risk and asset return rate (ROA) and ROE levels tend to behave in the opposite way and liquidity risk can lower ROA and ROE, (Ariffin, NM, 2012). A study in Egypt that analyzed a sample of 28 banks during the period 1989-2004. This study examines the impact of capital regulations on the performance and stability of banks in Egypt. The study found that the liquidity measured by the customer’s net credit
ratio and short-term financing, statistically significant and positively correlated with the profitability of domestic banks and bank liquidity did not determine the return on assets or equity (ROA) significantly, (Naceur, SB & Kandil, M., 2009).

Other studies analyze banks from various countries that fall within the OECD category, developing countries and countries in the course of economic transitions. The study examines the determinants of banking interest rates in 80 countries. The results show that liquidity risk measured by the ratio of credit to total assets is negatively associated with asset returns (ROA) and is positively correlated with net interest margin levels (NIM), (Kunt, AD, Laeven L. & Levine R., 2003). In Indonesia there are also many studies on liquidity and relationships with banking and Islamic banking performance, among which are studies aimed at knowing the effect of capital and liquidity risk on profits on Rural Banks in Indonesia. The independent variables in this study were the Capital Adequacy Ratio (CAR) and the Loan Deposit Ratio (LDR), while the dependent variable was Return on Assets (ROA). The results show that capital risk (CAR) and liquidity (LDR) have a significant effect on ROA on Indonesian Rural Banks. Partially, the results show that the Capital Adequacy Ratio (CAR) and Ratio LDR (LDR) have a positive and significant impact on the ROA on Indonesian Rural Banks (Purnamawati, I.G.A., 2014).

The next study is a study that examines the effect of liquidity and solvency on Indonesian banking financial performance which is listed on the Indonesia Stock Exchange period 2010-2012. This study uses liquidity variables consisting of Non Performing Loans (NPLs) and Loan Dept Ratio (LDR) while solvency is proxied with the Capital adequacy ratio (CAR) and Dept Equity Ratio (DER), for financial performance is proxied by Return On Asset ROA. The results of this study indicate that NPLs have no effect on ROA while for LDR, CAR and DER simultaneously affect ROA, (Sandy, G.E., 2015). Other studies are about the effects of bank size, net working capital, ROA, ROE, CAR, NPLs, Interest rates on deposits and interest rates on bank liquidity in Indonesia. The findings show that Net Working Capital, ROA, ROE, CAR, Deposit Rate, and Interest Rate Rate have significant influence on banking liquidity. Meanwhile, Bank Size and NPLs have no effect on banking liquidity, (Santoso, A.L., & Sukihanjani, T., 2012).

Further studies on banking performance are about the performance of Bank Perkreditan Rakyat (BPR) in Indonesia. The variables used in this study include the
ratio of payments (BOPOs), capital adequacy ratios (CAR), Non Performing Loans (NPLs), Loan To Deposit Ratio (LDR) as independent variables. Return On Assets (ROA) and Net Interest Margin Ratio (NIM) used for BPR performance proxies. The data used are from 164 BPRs operating in Java between 2009 and 2012. The findings show that BOPOs and NPLs have an important role in explaining the performance of BPRs in Indonesia. The findings in this study show that efficiency and prudence in management policy for the banking industry in Indonesia should be of great importance, (Chou T., & Buchdadi A.D, 2016). Another study on the effect of Capital adequacy ratio (CAR), liquidity (LDR), operational efficiency (ROI) on profit (ROA) of banking companies listed on the Indonesia Stock Exchange (BEI). The results show that CAR has a positive and insignificant effect on ROA on the listed companies in IDX, LDR has a positive and insignificant effect on ROA on the listed companies in the BEI, and has a negative and significant impact on ROA on listed banking companies in the BEI, (Defri, 2012).

**Differences With Previous Research**

This research complements some previous studies, because in this study used different liquidity and financial performance variables to measure the use of better monetary instruments for liquidity management and financial performance. This study also contributes to the existing literature by providing a new addition to the previous literature on the role of sharia monetary instruments in managing liquidity and improving the financial performance of sharia banking in Indonesia.

2. **Literature Review**

**Concepts of Liquidity Management in Banking**

Liquidity management is part of a larger financial industry risk management framework, which deals with all conventional or Islamic financial institutions. In fact, most bank failures are caused by difficulties in managing its liquidity problems. Every public, conventional or Islamic bank, is required to constantly control and manage liquidity positions effectively and carefully, (Islamic, M. M., & Chowdhury, H.A, 2007). Liquidity is the most important instrument for each bank. This means that the bank may change liabilities into assets. At the same time, bank liquidity is dependent on the bank’s operational confidence. Customers place deposits at banks with
confidence that they can withdraw their money. Liquidity capability reflects the performance of banking institutions and a decrease in banking liquidity can affect the country's financial stability. Therefore, it is important for the bank to manage sufficient liquidity so as to cope with any changes in financial and economic conditions. Liquidity management issues are problems related to a company's ability to meet its immediate financial obligations. The amount of payment instruments (liquid assets) owned by a company at one time represents the pay force of the company concerned. A company that has a pay force is not necessarily able to meet its immediate financial obligations or in other words the company does not necessarily have the ability to pay, (Ichsan, N, 2014).

Liquidity is the ability to sell assets in a short time with minimal losses. Liquid assets are assets held in cash or invested in an instrument that can be converted into cash forms such as deposits in the form of demand deposits, deposits and investments in short-term liquid securities of government. Bank liquidity is also recognized as a bank's ability to meet its obligations, particularly short-term funds obligations. In terms of assets, liquidity is the ability to convert all assets into cash. While from liability side, liquidity is the ability to meet the fund's needs through increased portfolio liabilities. While according to a large Indonesian dictionary the sense of liquidity in general is about a company's cash position and its ability to meet obligations (pay the debt) due on time. When linked to a bank institution, it means the ability of the bank at all times to repay its short-term debt when suddenly billed by the customer or related parties. So, the liquidity here is the convenience of converting the assets into cash from the respective banks concerned.

**Sharia Banking Liquidity**

Operational barriers faced by Islamic banking are difficulties in controlling their liquidity effectively, it is seen in some of the symptoms, among others, (Arifin, 2000): (1) There is no immediate investment opportunity available to the funds it receives. Funds are accumulated and are unemployed for several days to reduce their average income. (2) Difficulties in liquidating current investment funds, at the time of withdrawal of funds in critical situations. As a result, Islamic banks held their liquid assets in amounts greater than the conventional banking average. In general, Islamic banks have two different barriers when compared to conventional banks: lack of
access to short-term financing, (Sulaiman, AA, 2013), particularly from BI as central bank, and lack of access to money markets until Islamic banks can only maintaining liquidity in cash. To anticipate the problem, there are some options most practiced by the managers of emergency Islamic banks ie: refusing to take interest, taking money and using it for social purposes,) investing in gold or other precious metals in cash with a commercial contract and allow themselves to lose opportunities in the money market and keep their funds in conventional banks without receiving interest in the balance of the services it earns, (Bidabad B., & Allahyarifad, M., 2008).

Financial Performance of Sharia Banking
The Islamic banking industry has experienced rapid growth, (Kasri, 2010). With the issuance of Law No.21 Year 2008 on Islamic Banking on July 16, 2008, the development of the national Islamic banking industry is increasingly inadequate and it will encourage growth more quickly (Hasan, 2011). The growth of Islamic banks is quite impressive, with an average asset growth of more than 45.48% per annum in the last five years (2011-2015), it is hoped that the role of the Islamic banking industry in supporting the country’s economy will be increasingly significant. The growth of the Islamic banking office network has also grown rapidly (see table 1).

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Sharia Commercial Bank</td>
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<td></td>
<td></td>
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<tr>
<td>- Number of Banks</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>12</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>- Number of Offices</td>
<td>1.401</td>
<td>1.745</td>
<td>1.998</td>
<td>2.151</td>
<td>1.990</td>
<td>1.869</td>
<td>1.825</td>
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<tr>
<td>Sharia Business Unit</td>
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<tr>
<td>- Number of Conventional Commercial Banks which have Sharia Business Units</td>
<td>24</td>
<td>24</td>
<td>23</td>
<td>22</td>
<td>22</td>
<td>21</td>
<td>21</td>
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<tr>
<td>- Number of Offices</td>
<td>336</td>
<td>517</td>
<td>590</td>
<td>320</td>
<td>311</td>
<td>332</td>
<td>344</td>
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<tr>
<td>Sharia Rural Bank</td>
<td></td>
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<td></td>
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<tr>
<td>- Number of Banks</td>
<td>155</td>
<td>158</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td>166</td>
<td>167</td>
</tr>
<tr>
<td>- Number of Offices</td>
<td>364</td>
<td>401</td>
<td>402</td>
<td>439</td>
<td>449</td>
<td>453</td>
<td>441</td>
</tr>
<tr>
<td><strong>Total Office</strong></td>
<td><strong>2.101</strong></td>
<td><strong>2.663</strong></td>
<td><strong>2.990</strong></td>
<td><strong>2.910</strong></td>
<td><strong>2.750</strong></td>
<td><strong>2.654</strong></td>
<td><strong>2.580</strong></td>
</tr>
</tbody>
</table>

The growth of Bank Islam's total number of services is quite fast, growing more than 22.79% over 2001-2017 on the number of Islamic Commercial Banks (BUS), Islamic Business Unit and Islamic Citizens Financing (SRB) offices. Growth in Islamic Public Bank has also grown rapidly. On BUS grew its number from 11 in 2011 to 13 BUS in 2017, or reached 18.18% growth during 2011-2017, Islamic Business Unit (UUS) growth reached -14.28% and SRB reached 7.74% in the same year. The growth of this sufficient office service proves that the attractiveness of Islamic Banking in Indonesia is quite good. This growth is expected to continue as Islamic banking assets have not reached 5% as set by Bank Indonesia (BI) at the end of 2008, (Hasan, 2011).

The existence of Bank Islam in Indonesia since 1991 up to now proves that Bank Islam is strong enough to face the various Indonesian economic conditions that are likely to be less stable since its inception, (Syafrida, I., & Zulmaita, 2011). Especially at the time of the 1998 financial crisis which caused most of the conventional public banks to be dissolved. The strength of Islamic banks was evident with the growing Islamic banking in the country, where the function of Islamic banking intermediation continued to increase with the average Financing to Deposit Ratio (FDR) above 100%, and then the accelerated financing outflow (PYD) by Islamic Banking continued to grow significantly until december reached Rp 285.185 trillion, this amount was not too far from the growth of Third Party Fund (DPK) which reached Rp 334,719 trillion. The achievement has increased the assets of the Islamic banking industry to Rp 424,181 trillion per December 2017, thus placing Islamic Banking shares on total national banking assets to 4.59%. Islamic banking financial performance in Indonesia can be summarized in Table 2 below:

Table 2
Asset Developments, Current Profit, Financing and Deposits of Islamic Banking 2011-2017 in Billions of Rupiah

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2011</th>
<th>2012</th>
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<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>Asset</td>
<td>145.467</td>
<td>195.018</td>
<td>242.276</td>
<td>272.343</td>
<td>296.262</td>
<td>356.504</td>
<td>424.181</td>
</tr>
<tr>
<td>Growth</td>
<td>34.06</td>
<td>24.23</td>
<td>12.41</td>
<td>8.78</td>
<td>20.33</td>
<td>18.98</td>
<td></td>
</tr>
<tr>
<td>Profit</td>
<td>289.4</td>
<td>3.423</td>
<td>4.364</td>
<td>2.049</td>
<td>1.420</td>
<td>1.691</td>
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</table>

4 Data diolah dari Statistik Perbankan Islam Otoritas Jasa Keuangan (OJK) Republik Indonesia 2017.
5 Data diolah dari Statistik Perbankan Islam Otoritas Jasa Keuangan (OJK) Republik Indonesia
The existing data indicate that Islamic banking continues to grow well in terms of assets, earnings and third party fundraising. During 2011 to 2017, Islamic banking assets grew from Rp145.467 trillion to Rp424.181 trillion. This figure shows positive growth each year which is even 34% more in 2011 and 24.23% in 2013. As for the next year the growth ranges from 8% to 20% per year, and averaging over seven years of growth (2011-2017) reached 19.79%. Growth in Islamic banking assets shows that a number of government policy packages and related agencies are relatively capable of raising the awareness of the Indonesian Muslim community to be actively involved in the Islamic banking industry. In addition to the development of assets, Islamic banking during 2011 to 2017 it also recorded achievements in gaining profits marked by the positive gains in the current year despite the negative growth. As seen from the profit side, profit grew positively in 2011, 2012, 2013, 2016 and 2017 and experienced negative growth in 2014 and 2015. However, nominal value is still very significant for a banking industry, which is above Rp 8 trillion over the past three years. This implies that in the economy, business in this industry is still very profitable so it is open opportunity for business actors both at home and abroad to participate in the acceleration process of Islamic banking. (Andriansyah, 2009).

The development of third-party funds in Islamic banking also showed significant improvements. From Rp115, 415 trillion in 2011, third-party funds rose to Rp334.719 trillion in 2017. Each year, DPK growth is positive. The development of assets, profitability, and third party funds on Islamic banking as described above is also supported by Islamic banking capabilities to safeguard the stability of financing. From the data it can be seen that the financing given by Islamic banking aggregated by Rp102, 655 trillion in 2011 increased to Rp424.181 trillion in 2017.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth</strong></td>
<td>1.083</td>
<td>27.49</td>
<td>(53.04)</td>
<td>(40.93)</td>
<td>17.35</td>
<td>19.08</td>
<td></td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td>102,655</td>
<td>147,505</td>
<td>184,122</td>
<td>199,330</td>
<td>203,894</td>
<td>249,051</td>
<td>286,850</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td>43.69</td>
<td>24.82</td>
<td>8.26</td>
<td>2.29</td>
<td>22.14</td>
<td>15.17</td>
<td></td>
</tr>
<tr>
<td><strong>Third-party funds</strong></td>
<td>115,415</td>
<td>147,512</td>
<td>183,534</td>
<td>217,858</td>
<td>231,175</td>
<td>279,335</td>
<td>334,719</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td>27.81</td>
<td>24.42</td>
<td>18.70</td>
<td>6.11</td>
<td>20.83</td>
<td>19.82</td>
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</table>

Relationships between Liquidity Management and Financial Performance

Liquidity ratios indicate the company’s ability to meet its short-term obligations, this ratio also shows that the organization will face difficulty in meeting its short-term financial obligations, (Amengor, C., 2010). This in turn will have a negative impact and will affect the company’s total activity, thereby disrupting its financial performance. In addition, the increase in the value of these ratios can indicate the recovery of the company’s liquidity, which may reflect a positive effect on the volume of activity, and thus ultimately affect financial performance, (Gibson, C., 2009). Liquidity problems can affect the bank’s profits and capital and in extreme circumstances liquidity can lead to bank collapse. most microfinance institutions lend from the market even at a very high level during the liquidity crisis. This in turn led to a decrease in bank profits. In addition, further bank loans will be able to apply to meet the demand of depositors. As such, the debt-to-equity ratio will rise and affect the bank’s efforts to maintain optimum capital structure, (Njeri, M.M., 2013).

Liquid assets such as cash and government securities generally have relatively low returns, therefore, holding the liquidity tool will reduce the opportunity cost of the bank. In the absence of a rule, it is desirable to expect that banks will have a liquid asset as far as they can help to maximize profitability of the company. Since then, policymakers have chosen to seek greater ownership than liquid assets, (Maaka Z.A., 2013). Profitability can be enhanced by banks when banks hold some liquid assets, however, at some point the liquid assets may also reduce the bank’s profit, just as before. The findings are conceptually consistent with relevant literature and are consistent with the idea that the opportunity cost of holding low-end assets ultimately exceeds the benefit of any increase in bank liquidity. Likewise, it is estimated there is a similar benefit of holding a more liquid asset when the economy is down. The main purpose of each commercial bank is to maximize profits. But, keeping bank liquidity is as important as the primary goal. The dilemma faced by bank management is that increased profitability on liquidity can bring serious problems to the bank. Therefore, there must be a trade-off between the two destinations from the company.

Many previous studies have examined the relationship between liquidity ratios and financial performance indicators or liquidity ratios and profit ratios, among others, investigating the relationship between liquidity and bank profit listed on the Ghanaian exchange during the period 2005-2010, resulting in a decline in the liquidity ratio and
registered bank profits, also indicates that there is a weak positive relationship between liquidity and profitability (Lartey, V., Antwi, S., & Boadi, E., 2013). However, other studies show significant relationships between liquidity and profit in commercial companies listed on the stock market in Sri Lanka for five years from 2008 to 2012, (Ajanthan, A., 2013). Other research also reinforces that there is an important role of the liquidity ratio in the performance of the company and indicates that there is a significant influence of liquidity ratio against profits in Polish companies, (Zygmunt, J., 2013). Likewise, the study of the relationship between liquidity and achievement in Indonesia has resulted in a liquidity ratio having a positive impact on the gross profit margin of Islamic banking in Indonesia, (Wiyono, S., 2012). Other studies have found that the current ratio and cash ratio are significantly related to Return on Assets (ROA), (Priya, K., & Nimalathasan, B., 2013). Other research shows that the liquidity ratio has a significant positive effect on Return on Asset (ROA), (Ruziqa, A., 2013).

Another study examined three CAMEL indicators (Liquidity Ratio, Capital Adequacy Ratio, and Bad Credit Rate) affect Habib Bank AG Zurich’s profits in terms of ROE, ROA and fee income. Liquidity affects ROE, ROA and cost-to-income ratio positively and implies that increased liquidity will lead to an increase in the profitability of a commercial bank. In addition, the bad credit ratio affects ROE, ROA and fee income negatively affecting. This research suggests that financial managers should pay attention to the liquidity of commercial banks to increase profits. Profitability and liquidity strengthen each other and therefore financial managers should not consider these two variables as independent variables. The study also suggests that the Bank should establish liquidity management processes through introduction, measurement, monitoring, and financial institutions faced with efforts to continuously increase margins, maintain the required capital ratios, strengthen financial balance and improve efficiency in the organization, (Abraham, T., 2015).

3. Research Methodology

   Research Design

The research design in this study is descriptive research. While in terms of time dimension of this study is the cross sectional study. Descriptive research design is appropriate for this study as it helps in understanding the influence of liquidity management on the financial performance of Islamic banking in Indonesia by
answering some research questions on "What" and "How". Descriptive research is conducted to ensure and reflect the characteristics of interest variables in the circumstances. The main purpose of descriptive research is to offer a profile of the researcher or to illustrate relevant aspects of an interesting phenomenon from an individual, organization, industrial or other perspective, (Sekaran, U., & Bougie, J. R. G., 2016). Descriptive research has several advantages like; helps in understanding the characteristics of a group in a given situation, helping systematic thinking about certain aspects of a particular situation. Offer ideas for further investigation and research and help in making simple decisions. Descriptive research is to illustrate the characteristics of objects, people, groups, organizations, or the environment. In other words, descriptive research attempts to draw a picture of a particular situation by discussing who, what, when, where, and how the question, (Cooper, D.R., & Pamela S., 2014).

Research Data
The data used in this study are monthly from January 2008 to December 2016 by 108 months. Data usage from Year 2008 to December 2016 is due to see how the liquidity and financial performance of Islamic banking in Indonesia after the global financial crisis in 2008. The data collected in this study is secondary data so that data collection techniques use documentation. Data in the form of liquidity variables comprises the Capital Adequacy Ratio, Financing to Deposit Ratio, Liquid Ratio, Cash Ratio are obtained by collecting statistical reports on Islamic banking that reported the Financial Services Authority (OJK) Indonesia which has been issued to the public. Data in the form of Return On Assets and Return on Equity are obtained by collecting statistical reports on Islamic banking reported by the Financial Services Authority (OJK) Indonesia issued to the public from 2008 up to 2016. This study selects Islamic banks with categories of banks with the form of Sharia Commercial Bank (BUS) and Sharia Business Unit (UUS) for example without entering the Sharia Rural Bank (BPRS). The sample of this research data is 13 BUS and 21 UUS with the number of Islamic banks used as the sample in this study are 34 Islamic banks. This research uses quantitative, descriptive and econometric approaches to answer the study on the liquidity management and financial performance of the Islamic banking industry in Indonesia over the period (2008-2016). The analysis tool used is the multiple
linear regression analysis calculated using the Least Squares Method-OLS method. In calculating all the econometric models above the SPPS statistics program is used to calculate the liquidity management and financial performance of the Islamic banking industry in Indonesia. So the objective of the study can be answered well.

**Research Model**

In this study, we use two linear regression models that are used to answer the objective of the study, between two models:

\[ Y_1 = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4 + \varepsilon \]  \hspace{1cm} \text{..........................(1)}

\[ Y_2 = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + \varepsilon \]  \hspace{1cm} \text{..........................(2)}

Where:

- **Y1**: Is a representative of the financial performance of the Islamic Banking industry in Indonesia represented by ROE.
- **Y2**: Is a representative of the financial performance of the Islamic Banking industry in Indonesia represented by ROA.
- **x1**: Capital Adequacy Ratio (CAR)
- **x2**: Financing to Deposit Ratio (FDR)
- **x3**: Cash Ratio (CR)
- **x4**: Liquid Ratio (LR)

- **a0**: is the Intersep value / constant of the ROE model
- **b0**: is the Intersep value / constant of the ROA model
- **a1, a2, a3, and a4**: is the coefficient value of five independent variables ROE
- **b1, b2, b3, and b4**: is the coefficient value of five independent variables ROA

**Definition of Variables**

a. **Capital Adequacy Ratio (CAR)**: A ratio used to measure the capital adequacy of the asset's total assets. Capital adequacy ratio is obtained through the Capital / Total Asset formula.
b. Funding to Deposit Ratio (FDR): The amount of the ratio between the amount of third party funds and the funds that can be channeled. Financing Rate to Deposit Ratio is obtained through the Formula Total Third Party Fund / Total Financing.

c. Cash Ratio (CR): The ratio of current assets to current liabilities is much greater. The Cash Ratio value is obtained through the Current Assets / Current Liabilities formula.

d. Liquid Ratio (LR): Liquid ratio is the ratio of total assets. The Liquid Ratio value is obtained through the Liquid Asset Formula / Total Assets.

e. Return on Assets (ROA): is a ratio of return on investment when compared to Assets owned. The Return on Assets value is obtained through the Net Revenue / Total Asset formula.

f. Return on Equity (ROE): is a ratio of return on investment compared to paid-in capital. The Return on Return on Equity is obtained through the Owner / Net Income Revenue formula.

4. Findings and Interpretation

Statistical Analysis and Interpretation

1. Classic Assumption Test

Based on assumption classic tests (normality test, heterocedasticity test, multicolinearity test, and autocorrelation test) resulted that data are normally distributed, because the significance value of Kolmogorov-Smirnov test is bigger than the significance level at 0.05 both in conventional banks (0.341) and Islamic banks (0.185). In addition, there are no heterocedasticity, multicolinearity, and autocorrelation in the regression model so this model is suitable to predict liquidity risk that is measured by cash to total assets which are influenced by CAR, profitability ratios, NIM, LG, and RLA.

2. Hypothesis Testing

<table>
<thead>
<tr>
<th>Equation</th>
<th>Variables</th>
<th>Coefficient</th>
<th>Sig (α=5%)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)/ROA</td>
<td>CAR</td>
<td>-0.334</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td></td>
<td>LR</td>
<td>-9.600</td>
<td>0.010</td>
<td>Accepted</td>
</tr>
<tr>
<td></td>
<td>FDR</td>
<td>0.005</td>
<td>0.294</td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td>CR</td>
<td>-1.495</td>
<td>0.174</td>
<td>Rejected</td>
</tr>
<tr>
<td>(2)/ROE</td>
<td>CAR</td>
<td>-1.925</td>
<td>0.044</td>
<td>Accepted</td>
</tr>
<tr>
<td></td>
<td>LR</td>
<td>-130.696</td>
<td>0.003</td>
<td>Accepted</td>
</tr>
<tr>
<td></td>
<td>FDR</td>
<td>0.272</td>
<td>0.027</td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td>CR</td>
<td>18.817</td>
<td>0.517</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: Output of SPSS, (2018)
Based on both the models used in this research and the results of various regression analysis in the table above which have been undergoing data repairs because there are some problems in classical assumptions and statistical tests then the coefficients for each variable are as follows:

\[
\text{ROA} = 8,460 - 0.334 \text{CAR} - 9,600 \text{LR} \quad \text{----------(1)}
\]
\[
\text{ROE} = 70,092 - 1,925 \text{CAR} - 130,696 \text{LR} \quad \text{----------(2)}
\]

For equation 1 constant value (ROA) is 8,460. This means that if CAR (Capital Behavior Ratio) and LR (Liquidity Ratio) are equal to zero (0), the total value of ROA (Return on Assets) will have a value of 8,460 units. For equation 2 constant value (ROE) is 70,092. This means that if CAR (Capital Behavior Ratio) and LR (Liquidity Ratio) are equal to zero (0), ROE (Return on Equity) will have a value of 70,092 units. The CAR regression coefficient (Capital Eligibility Ratio) from the calculation result in equation 1 obtained a coefficient value -0.334. This means that there is an increase of CAR (Capital Adequacy Ratio) by 1 percent, so the value of ROA will decrease by -0.334 percent. Whereas for the equation 2 CAR regression coefficient (Capital Eligibility Ratio) from the calculation result in equation 2 gets coefficient value equal to -1,925. This means that every CAR increase (Capital Adequacy Ratio) is 1 percent, then ROE value will decrease by -1.925 percent. The LR (Liquidity Ratio) regression coefficient from the calculation result in equation 1 gets the coefficient value equivalent to -9,600. This means that each CAR (Capital Adjustment Ratio) increases by 1 percent, then the ROA value will decrease by -9,600 percent. The equation 2 of the LR (Liquidity Ratio) regression coefficient from the calculation result in equation 2 gets the coefficient value equivalent to -130,696. This means that every LR increase (Liquidity Ratio) is 1 percent, then ROE value will decrease by 130,696 percent.

Results

This research wish to mengatehaui and mengeummnkan penagruh from liquidity variable to kinjera keunagan perbanak syariah in Indonesia. Specifically inigin see how the relationship terbeduka anatar likuidiyas with the performance kuangan syariah bank. Based on previous research that there is a significant influence

The results of the study show that if there is a surge in change or an increase in the capital adequacy ratio and the liquidity component in Islamic banking, it will result in its financial performance in the form of reduced profit returns and vice versa. The results of this study are supported by other studies in developed countries, developing countries with mostly Muslim population and research conducted in Indonesia, although there are also different research results. Then from both factors between capital and liquidity can be seen that the liquidity factor has a big impact on the profit rate when compared to the capital adequacy ratio. Then, the liquidity and capital adequacy ratio has a greater impact on ROE than ROA. Then if Islamic banking is too tight to manage its liquidity then it will be impressed at the profit level to be earned. Liquidity issues can affect the income and capital of banks and in extreme circumstances liquidity can lead to bank collapse. Efforts to manage the liquidity of Islamic banking can benefit from Islamic monetary instruments which is a way for Islamic banking to do so as portfolio adjustments. The dominant factor that drives Islamic banking into the portfolio is streamlined in relation to the desired profits. On the contrary, the level of capital can help the lack of liquidity experienced by Islamic banking in Indonesia.

5. Conclusion and Suggestion

The main purpose of this study is to answer the research problems that have been proposed that is to determine whether there is influence between liquidity variables on the performance of Islamic banking in Indonesia. Then to explain how the
influence of liquidity variables on the performance of sharia banking in Indonesia. Based on the results of the study found that the variables CAR and LR are variables that have a significant influence on the performance of Islamic banking in Indonesia in the form of ROA and ROE. Then the influence is negative ie apabilai terjadai [enlargement of lukuiditas hence will menutunkan performance of syariah banking in indonesia. Then, the researcher suggested to syariah banking in Indonesia to be able to menjaag lesimbnagan liquidity in the condition of non-excess liquidity agra not berkaru to decrease performance keunagannya. To overcome the excess liquidity of syariah banak in Indonesia can memenfataakn facilities offered by Indonesian banks in the form of placement of funds in Bank Indonesia Sharia Certificates or can also memenfataakn interbank money market based on sharia principles. The marijuana in this syariah monetary instrument will help the sharia bank in Indonesia to reduce the risk of decreasing the profit and performance of keunagan syariah bank, so that the performance of syariah banking in Indonesia can be better.


