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The Effect Of Asset And Liability Management On Stability And Profitability In Islamic Banks

Darmawan[a*], Dafelia Qodhari[a]
[a] *Sunan Kalijaga State Islamic University of Yogyakarta, Indonesia*
darmawan@uin-suka.ac.id

Abstract

This study examines the relationship between Asset Liability Management (ALM) and the stability and profitability of Islamic banks. The research aims to evaluate the impact of ALM while identifying challenges and opportunities within Islamic banking. ALM is represented by Non-Performing Financing (NPF) and Financing to Deposit Ratio (FDR), while stability and profitability are assessed through Capital Adequacy Ratio (CAR) and Return on Assets (ROA), respectively. Employing a quantitative approach, this research uses time-series data from 2013–2022, analysed through multiple linear regression with E-views software. Results indicate that NPF and FDR significantly negatively impact CAR, while NPF negatively and significantly affects ROA. Conversely, FDR shows a positive but insignificant effect on ROA. These findings highlight the critical role of efficient asset and liability management in maintaining financial stability and enhancing profitability. Islamic banks can leverage these insights to improve credit risk management and liquidity strategies. Policymakers are encouraged to refine regulations that support sustainable and Sharia-compliant banking practices.

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1. Introduction

Along with the rapid growth of the global financial industry, Islamic banks have played an increasingly significant role in providing financial solutions that are compliant with Sharia principles. (Shen & Zhao, 2023). Islamic banks operate based on Islamic ethical rules, which include the prohibition of usury (interest) and business practices that comply with Shariah principles. The Islamic finance industry has specific characteristics and principles that affect the operation and management of Islamic banks. (Wekwete et al., 2023) One of the main challenges is ensuring that Islamic banks adhere to Shariah principles in all aspects of their operations, including the management of assets and liabilities, also known as asset-liability management (ALM). Asset-liability management is an important aspect of bank operations, including Islamic banks. (Li et al., 2018).

Bitar et al. (2017) stated that the influence of Asset-Liability Management on the stability of Islamic Banks is vital, because stability is the main foundation that allows banks to continue operating safely and maintain the trust of customers and other stakeholders. In this context, prudent Asset-Liability Management will help Islamic banks avoid risks that could potentially disrupt their operational continuity, such as credit, liquidity, and operational risks (Smaoui et al., 2014). (Smaoui et al., 2020). In addition, proper liability management will also have a positive impact on bank stability, by maintaining a balance between available sources of funds and the need for financing (Michelangeli & Piersanti, 2020). (Michelangeli & Piersanti, 2023). There is no single formula that covers the entire concept of ALM, but rather there are several metrics used in asset and liability management in the form of financial ratios. This is because this approach is highly dependent on the bank's objectives and policies as well as the characteristics of their portfolios (Kouwenberg & Zenios, 2008).. Asset management can be described by the NonPerforming Financing (NPF) ratio, this ratio shows the risk associated with the possibility of customer failure to pay their obligations. The higher this ratio, the worse the quality of a bank's financing so this indicates that the bank is not professional in managing its financing. (Romdhoni & Chateradi, 2018). Bank liquidity can be described by the Financing To Deposit Ratio (FDR) which is the bank's ability to channel its funds to parties who need capital (Kasmir, 2005). (Kasmir, 2005). The high and low FDR ratio shows the level of bank liquidity (Pramudhito & Sampurno, 2014).

Base on OJK report shows the trend of increasing the Capital Adequacy Ratio (CAR) of Sharia Commercial Banks during the observation period (OJK, 2023). The high CAR ratio, above 8%, reflects adequate capital health following international regulatory standards and provisions from the Financial Services Authority (OJK), which requires banks in Indonesia to have a minimum CAR of 8% following the provisions of Basel III. In the context of Sharia Commercial Banks, the increasing value of CAR yearly indicates an increase in the bank's ability to cover potential losses from risky assets. For example, if the CAR was at 10% in the first year, this figure continues to increase until it reaches 14% in the last year on the chart. The 4% increase in CAR during this period shows the success of Sharia Commercial Banks in increasing their capital adequacy ratio through

increasing equity, better credit risk management, and more prudent asset portfolio management.

From a risk management perspective, CAR is a marker of a bank's capacity to deal with credit, market, and operational risks. With the high CAR, Sharia Commercial Banks show their commitment to maintaining their financial stability, which is in line with Islamic banking theory, which emphasizes the importance of the principle of prudence and resilience to risk as part of Sharia Compliance. In addition, in OJK regulation No. 11/POJK.03/2016, concerning the Obligation to Provide Minimum Capital for Commercial Banks, it is stated that banks must have sufficient minimum capital to maintain stability and mitigate the impact of potential credit and market risks. This increase in CAR indicates that Islamic banks meet these obligations and have more than enough capital buffers to support business growth and maintain liquidity. Thus, it can be concluded that the positive trend in the CAR ratio of Sharia Commercial Banks shows good capital growth and a commitment to remain within regulatory standards and risk management principles following Sharia values. This shows that Islamic commercial banks have good performance because they have large enough reserves to overcome risky assets and as a business capital facility so that profits will increase. (Romdhoni & Chateradi, 2018).

Meanwhile, the aspect of profitability also has a key role in the sustainability of Islamic banks. According to Kasmir (2009), Profitability is a key indicator of financial performance that reflects efficient asset management can increase bank income, while prudent liability management can help control the cost of funds (Kaganova & Nayyar, 2012). (Kaganova & Nayyar-Stone, 2000).. Therefore, the effect of asset and liability management on the profitability of Islamic banks is crucial to maintaining their growth and competitiveness in the market. In the context of bank profitability, the researcher will investigate the level of profitability by analyzing the Return on Assets of Islamic Commercial Banks operating in Indonesia.

Base on OJK report shows the development of Return on Assets (ROA) of Sharia Commercial Banks during the observation period (OJK, 2023). The fluctuating ROA on this chart indicates variations in the effectiveness of banks in managing assets to generate profits. For example, in the first year of observation, ROA was recorded in the range of 0.79%, which is categorised as quite good by Bank Indonesia regulations. However, throughout 2019, ROA showed a significant increase to around 1.5% before decreasing in 2020. ROA reflects the bank's management's ability to leverage assets to generate net profits. In the context of Sharia Commercial Banks, changes in ROA can be caused by several factors, such as asset management efficiency, the quality of financing provided, and credit risk management. For example, if banks maintain a low level of Non-Performing Financing (NPF), the quality of the bank's assets is maintained, which in turn supports profit stability. From a regulatory perspective, the Financial Services Authority (OJK) through POJK No. 6/POJK.03/2015 concerning Transparency and Publication of Bank Reports stipulates that ROA is one of the crucial indicators that banks must report to reflect the level of financial health. Stable and increased ROA reflects operational

efficiency and sound risk management, per Islamic banking principles prioritising integrity and low-risk management.

The decline in ROA in 2020 can be further analyzed by looking at the broader economic context, including the impact of the COVID-19 pandemic, which can potentially increase credit risk and reduce the bank's overall profitability. This decline shows the challenges faced by Sharia Commercial Banks in maintaining profitability when economic conditions are unstable. This situation is in line with the view of risk management theory which states that the performance of banks' profitability can be affected by external economic fluctuations. Overall, the trend of ROA fluctuations in Sharia Commercial Banks illustrates the bank's efforts to optimize assets despite facing challenges. In addition, it shows how effective asset management and risk mitigation are needed to maintain profitability sustainably, following the standards set by regulations and sharia principles in the banking business.

From these various descriptions there are gaps with different results, the difference in these results raises the problem of inconsistency of the results of research on the effect of Asset and Liability Management on the profitability of Islamic banking. For this reason, further research or testing is still needed to emphasize the results of previous research and answer questions related to how Islamic banks carry out the management of assets and liabilities; Is there a significant effect of asset and liability management on the profitability of Islamic banks; Can effective asset and liability management improve the financial stability of Islamic banks. So that it is expected to achieve the objectives of identifying how Islamic banks manage their assets and liabilities within the Sharia framework; Assessing the effect of asset and liability management on the stability and profitability of Islamic banks; and Identifying challenges and opportunities in asset and liability management in Islamic banks. And will have benefits such as Optimum strategies and practices in asset and liability management by Islamic banks; The relationship between asset and liability management with profitability and stability of Islamic banks; and recommendations for the development of more effective and Sharia-compliant asset and liability management strategies.

2. Literature Review

Assets-Liabilities Management

Assets-Liabilities Management (ALM) is a general term used to refer to a number of things by different market participants. The main purpose of the ALM function is to manage interest rate risk and liquidity risk. ALM is concerned with the optimal investment of assets to meet current objectives and future obligations. M. Choudhry (2010) says that the definitions of assets, liabilities, and risks are specific to each institution, but, in general, assets can be viewed as expected cash flows, and liabilities as expected cash outflows. While short-term risks arising from the possibility that an institution's assets may not cover its short-term liabilities are important to assess and measure, ALM is usually conducted from a long-term perspective. As such, ALM is considered a strategic discipline rather than a tactical one. (Novickytė & Petraitytė, 2014).

Mitra & Schwalger (2011) explain that ALM is a financial (analytical) tool for decision-making that aims to maximize stakeholder value. The overall goal is to make prudent investments that increase capital value, offset liabilities, and protect against financial risks. The integrated Asset-Liability Management model aims to find the optimal investment strategy by considering assets and liabilities together. Simply put, the goal of such an approach is to reduce risk and increase returns. (Hosseininesaz & Jasemi, 2022).

Financial Ratio

The financial statements report the activities that the company has carried out in a certain period. The numbers in the financial statements are components that can assess management performance in a certain period, this component we know as financial ratios. According to Fahmi (2014) in research (Rustiani & Wiyani, 2017) financial ratios are the results obtained from the comparison between the amount of one entity and another. Meanwhile, financial ratio analysis is a method of analysis carried out by comparing one element in the financial statements with other elements, either individually or together, to understand the relationship between certain elements, both in the financial position and income statement. Subahamanyam (2010) explains that financial statement ratio analysis is continuous research, so it is not only done once in a certain period but must be carried out every year periodically. This aims to assess how the company is developing from year to year. Financial ratio analysis is an analytical tool used to reveal diverse financial relationships and indicators, which aims to describe changes in financial condition and operational performance in the past, and ultimately, assist in identifying the risks and opportunities inherent in the company concerned (Dhiaulhaq, et al., 2014). (Dhiaulhaq, et.al, 2023)

Financial Stability

A robust financial system can allocate financial resources and absorb the impact of unexpected events, thereby preventing disruptions to real economic activity and the financial system. A stable financial system is resilient and able to withstand various economic disruptions, allowing it to continue to fulfill its role as a financial intermediary, handle payment transactions, and manage risks well. (Fauziah et al., 2020).. One of the ratios projected to describe the financial stability of banks is the Capital Adequacy Ratio (CAR), which is a financial ratio used to assess the health and capital adequacy of a financial institution, especially banks. CAR measures the proportion of core capital and total capital concerning risk-weighted assets held by the bank. This ratio is used to ensure that the bank has sufficient capital to protect itself from credit, operational, and market risks that may arise during its business activities. (Kasmir, 2013).

The basic formula of CAR is as follows:

$$CAR = \frac{Core\ Capital}{Risk - Weighted\ Asset} \times 100\%$$

In this formula, Tier 1 Capital includes truly resilient capital, such as share capital, retained earnings reserves, and other permitted capital instruments. Risk-Weighted Assets is the sum of a bank's assets weighted by the risk associated with each asset. This means

that riskier assets will have a higher weight, while safer assets will have a lower weight. Generally, banks are required to comply with minimum CAR levels set by regulatory authorities. These minimum levels vary by jurisdiction and can depend on the level of risk faced by the bank. A high CAR indicates that the bank has sufficient capital to deal with risks, while a low CAR may raise concerns about the adequacy of capital to deal with risks (Kasmir, 2013). (Cashmere, 2013).

Bank Profitability

According to Cashmere (2013), profitability is a ratio that measures how effectively the company utilizes existing investments and economic resources to achieve a profit, so as to provide profit to investors. The ratio to see the company's profitability is one of the Return on Asset (ROA) (Lubis et al., 2017). According to Yuliani (2007), Return on Asset (ROA) reflects the capability of bank management in generating profits from the management of its assets. ROA is used to assess bank profitability, the higher the ROA of a bank, the greater the level of profit earned by the bank, and the more optimal the utilization of bank assets in its context. ROA is calculated by dividing profit before tax by average total assets during a certain period, with the following formula (Mokoagow & Fuady, 2015):

$$ROA = \frac{Net\ Income}{Total\ Asset} \times 100\%$$

Asset Management

Asset management means operating a group of assets over the entire technical life cycle that guarantees appropriate returns and ensures specified service and safety standards. (Schneider et al., 2006). In this case, Non-Performing Load (NPF) is one of the financial ratios used in banking to measure the quality level of a bank's loan portfolio. This ratio measures how much part of the bank's total loans or credit is considered as Non-Performing Ls (NPL) or Non-Performing Assets (NPA) in a certain period. A high level of NPF can lead to a decline in the value of the bank's assets as NPF reflects loans that may not be paid in full. This can reduce the value of the bank's total assets. The basic formula of the NPL Ratio is (Cashmere, 2013):

$$NPF = \frac{Non - Performing\ Financing}{Total\ Financing} \times 100\%$$

Liability or Liquidity

According to Hery (2015) Liquidity ratio is an indicator that reflects the company's capability to meet its approach obligations that are due in a short time. Liquidity ratios are used for credit analysis and financial risk evaluation purposes. (Aisyah et al., 2017). The liquidity ratio commonly used in the world of Islamic banking is the Financing to Deposit Ratio (FDR) which measures the extent of third party funds provided by Islamic banks for financing. In banking institutions, liquidity problems occur on two sides of the bank's balance sheet. As a trust entity, the bank must have the ability to carry out its role in raising funds and allocating funds to achieve reasonable profits. (Festiani, 2016). In terms of the liabilities side, banks must be able to fulfill obligations to customers when

there is a withdrawal of customer deposits, and in terms of assets, banks must be able to ensure the availability of funds to disburse promised credit. The formula for FDR is as follows (Cashmere, 2013):

$$FDR = \frac{Total\ Financing}{Total\ Deposit} \times 100\%$$

Based on the studies that have been carried out, the following hypothesis is prepared:
H_1: Non-performing financing (NPF) has a significant negative influence on the Capital Adequacy Ratio (CAR) of Islamic Commercial Banks.
H_2: Non-performing financing (NPF) has a significant negative influence on Return on Assets (ROA) in Sharia Commercial Banks.
H_3: Financing to Deposit Ratio (FDR) has a significant negative influence on the Capital Adequacy Ratio (CAR) in Islamic Commercial Banks.
H_4: Financing to Deposit Ratio (FDR) has a positive but not significant effect on Return on Assets (ROA) in Sharia Commercial Banks.

3. Research Methods

This study adopts a quantitative research approach, utilising time-series secondary data collected from the annual Islamic Commercial Banks (ICBs) annual reports in Indonesia from 2013–2022. The data sources include official reports from the Financial Services Authority (OJK) and relevant publications. The research employs multiple linear regression analysis using the Ordinary Least Squares (OLS) method to assess the relationships between the variables. The independent variables in this study are Nnon-Performing Financing (NPF) represents asset management efficiency and financing to Deposit Ratio (FDR) reflecting liquidity management. The dependent variables include: Capital Adequacy Ratio (CAR) indicates financial stability and Return on Assets (ROA) measuring bank profitability.

The study uses E-Views 12 software for statistical analysis and ensures the robustness of the model by conducting classical assumption tests, including normality, multicollinearity, heteroscedasticity, and autocorrelation tests. The selection of multiple linear regression with OLS is justified by its capability to examine the linear relationships between multiple independent variables and dependent variables. The classical assumption tests ensure that the model meets the requirements of unbiasedness, consistency, and efficiency. This methodological framework is aligned with the study's objectives to identify the effects of ALM strategies on the stability and profitability of ICBs. By employing this robust approach, the study provides statistically reliable results that can guide Islamic banking practices and policies.

4. Results and Discussion

The Effect of Asset and Liability Management on Financial Stability

Table 1. Output of Classical Assumption Test Results

NO	Test Type	Indicator	Testing Requirements	Test Results	Conclusion
1	Normality Test	Prob. Jarque Bera	Prof JB > 0.05	0.9815	No problem
2	Multicollinearity Test	VIF value	VIF < 10	X_1 (1.2); X_2 (1.2)	No problem
3	Heteroscedasticity Test	Prob. Chi Square	Prob > 0.05	0.0864	No problem
4	Autocorrelation Test	Prob Chi Square	Prob > 0.05	0.2005	No problem

Source: E-views output (processed)

From the results of the tests carried out, it can be concluded that in model 1, the data to be used in the study passes the classical assumption test and can continue to the Multiple Linear Regression stage.

Table 2. Output of Multiple Linear Regression Analysis Results

Dependent Variabel: Financial Stability				
Variabel	Coefficient	Std. Eror	t-statistic	Prob.
C	0.548054	0.032211	17.01470	0.0000
NPF	-1.816355	0.551646	-3.292611	0.0133
FDR	-0.349593	0.043513	-8.034141	0.0001
R- Squared			0.9488	
Adjusted R-Square			0.9342	
F-statistic			64.9555	
Prob(F-statistic)			0.0000	

Source: E-views output (processed)

$$FS = 0.548054 - 1.816355NPF - 0.349593FDR + e$$

Table 2 shown that he value of β_0 is 0.548054, meaning that when the independent variables NPF and FDR are constant, the CAR is 0.55%. The coefficient value of NPF (β_1) is -1.816, meaning that every 1% increase in the NPF ratio will cause a decrease in CAR by -1.8% assuming that the other independent variables are constant. The coefficient value of FDR (β_2) is -0.349, meaning that every 1% increase in the FDR ratio will cause a decrease in CAR by -0.3% assuming that the other independent variables are constant. Based on table 2, the R-Square value is 0.9488, which means that all independent variables can explain the dependent variable by 94.88% and the remaining 5.12% explains other variables outside the study. That numbers demonstrating the strong influence of these factors on financial stability. Islamic banks should prioritise credit risk management to reduce NPF levels, thereby maintaining adequate capital buffers and ensuring stability. Additionally, policies aimed at optimising liquidity management, such

as diversifying funding sources, are essential to mitigate risks associated with high FDR values.

From Table 2, it is known that the probability value of all independent variables is smaller than the alpha value of 0.05, which means that asset management described by NPF value and liability management described by FDR value each have a significant effect on CAR. Where the NPF variable produces a value of 0.0133 and FDR of 0.0001. From Table 2 it is known that the probability value (F-Statistic) is smaller than the alpha value of 0.05, which means that NPF and FDR together have a significant effect on CAR, where the value obtained is 0.000030.

Effect of Asset and Liability Management on Bank Profitability

Table 3 Output of Classical Assumption Test Results

NO	Test Type	Indicator	Testing Requirements	Test Results	Conclusion
1	Normality Test	Prob. Jarque Bera	Prof JB > 0.05	3.179	No problem
2	Multicollinearity Test	VIF Value	VIF < 10	X_1 (1.2); X_2 (1.2)	No problem
3	Heteroscedasticity test	Prob. Chi Square	Prob > 0.05	0.6635	No problem
4	Autocorrelation Test	Prob Chi Square	Prob > 0.05	0.1869	No problem

Source: E-views output (processed)

From the results of the tests carried out, it can be concluded that in model 2 the data to be used in the study passes the classical assumption test and can continue to the Multiple Linear Regression stage.

Table 4. Output of Multiple Linear Regression Analysis Results

Dependent Variabel: Bank Profitability				
Variabel	Coefficient	Std. Eror	t-statistic	Prob.
C	0.026280	0.004578	5.740821	0.0007
NPF	-0.623062	0.078399	-7.947322	0.0001
FDR	0.010173	0.006184	1.645085	0.1439
R- Squared			0.9079	
Adjusted R-Square			0.8816	
F-statistic			34.5206	
Prob(F-statistic)			0.0002	

Source: E-views output (processed)

$$PRO = 0.026280 - 0.623062NPF + 0.010173FDR + e$$

Table 4 shown that the value of β_0 is 0.026280, meaning that when the independent variables NPF and FDR are constant, ROA is 0.02%. The NPF coefficient (β_1) is -0.623062, meaning that every 1% increase in the NPF ratio will cause a decrease in ROA of -0.62% assuming that the other independent variables are constant. The coefficient value of FDR (β_2) is 0.010173, meaning that every 1% increase in the FDR ratio will cause a decrease in ROA by 0.01% assuming that the other independent variables are constant. Based on Table 4, the R-Square value is 0.9079, which means that all independent variables can explain the dependent variable by 90.79% and the remaining 9.21% explains other variables outside the study. Islamic banks can enhance profitability by minimizing NPF through stricter credit approval processes and robust monitoring systems. Although the impact of FDR on profitability is limited, maintaining an optimal FDR ratio ensures sufficient liquidity without excessive risk.

From Table 4 it is known that the probability value of all independent variables obtains a value of 0.0001 <0.05, which means that asset management described by the NPF value has a significant effect on ROA. As for the liability management variable described by the FDR value, it gets a value of 0.1439 <0.05, which means it has no significant effect on ROA. From table 4, it is known that the probability value (F-Statistic) is smaller than the alpha value of 0.05, which means that NPF and FDR together have a significant effect on ROA, where a value of 0.000273 is obtained.

Discussion

Effect of Non- Non-Performing Financing on Capital Adequacy Ratio

From the regression results and hypothesis, it is known that Non-Performing Financing has a significant negative effect on the Capital Adequacy Ratio. This means that any increase in the Non-Performing Financing aspect will reduce the Capital Adequacy Ratio of Islamic Banks. This is in line with the hypothesis built in this study. Where NPF has a negative and significant impact on CAR because NPF reflects the financing risk faced by banks or financial institutions. The higher the NPF level, the greater the risk of loss that may be faced by the bank. While CAR measures the bank's ability to bear the risks that may arise from its assets so that if the NPF level increases, the bank must face higher credit risk. This can reduce the bank's capital if the bank experiences losses from high NPF. In this case, the CAR may decrease because the relative capital decreases due to losses caused by NPF. These findings are the same as research conducted by Rahadian & Permana (2021) that NPF has a negative effect. However, there are differences in terms of significance to CAR

Effect of Non- Performing Financing on Return on Assets

From the regression results and hypotheses, it is known that Non-Performing Financing has a significant negative effect on Return on Assets. This is in line with the hypothesis, which means that any increase in Non-Performing Financing will reduce Return on Assets. This research is also in line with research Qolbi et al., (2020) which concluded that Non-Performing Financing has a significant negative effect on Return on Assets. An

increase in the NPF level can have a negative impact on ROA due to two main factors: First, NPF can result in banks incurring losses, which reduces net income. Second, NPF can require banks to allocate more capital to cover credit risk, which can reduce ROA.

Effect of Financing to Deposit Ratio on Capital Adequacy Ratio

From the regression and hypothesis results, it is known that the Financing to Deposit Ratio has a significant negative effect on the Capital Adequacy Ratio. This finding supports the hypothesis built earlier in this study. This is in line with CAR is an important indicator of the soundness of a bank's capital and its ability to protect itself from losses. An increase in the level of FDR can have a negative impact on CAR. This is because the higher the FDR, the greater the bank's dependence on third-party funds. If third-party funds are suddenly withdrawn (for example, if customers withdraw their deposits), the bank may experience liquidity difficulties and require more capital to overcome this problem. These findings show similarities with research by Fajriati et al. research, (2021) that the Financing to Deposit Ratio has a negative effect on the Capital Adequacy Ratio, but it is not in line here showing insignificant effect., which makes the effect insignificant because the high and low Financing to Deposit Ratio on the Capital Adequacy Ratio which has no impact on the level of capital adequacy occurs due to restrictions from Bank Indonesia that banks can distribute financing above third party funds collected by the bank as long as they can distribute financing not exceeding 110%.

Effect of Financing to Deposit Ratio on Return on Assets

From the regression results and hypothesis, it is known that the Financing to Deposit Ratio has a negligible positive impact on Return on Assets. This means that any increase in the financing-to-deposit ratio will increase Return on Assets but the impact is not significant. These findings are not in accordance with the hypothesis built in this study, because the results show that the effect is not significant. This finding is different from the findings of Mahmudah & Harjanti, (2016) that the Financing to Deposit Ratio has no significant positive effect on Return on Assets. Financing in Islamic Banks can be divided based on the nature of its use into productive and consumptive financing. In addition, based on its needs, funding can be divided into working capital financing and investment financing. The Financing to Deposit Ratio (FDR) reflects the extent to which the bank can pay back funds withdrawn by depositors, by controlling the financing provided as a source of liquidity. The higher this ratio, the lower the liquidity level of the bank.

Islamic Perspective on Asset and Liability Management

The results of this study explain that Islamic banks have been able to carry out asset and liability management towards stability and profitability according to standard procedures designed to control financial position. Thus, if an Islamic bank succeeds in optimising profits from sources of funds and financing that are managed efficiently and structured, and is able to manage risks optimally, then the Islamic bank is considered successful in its asset and liability management strategy. This also shows in line with the words of Allah SWT described in the literature review that the ability of Islamic banks to design and manage their assets and liabilities will have an impact on the quality of the company,

which in turn will also affect the reputation or image of the bank. A good image is an attraction for customers to invest their funds in the Islamic bank..

5. Conclusion and Suggestion

The study aims to examine the effect of asset and liability management on stability and profitability in Islamic banks using time series data and multiple linear regression analysis methods. The variables used in this study are Non-Performing Financing, Financing to Deposit Ratio, Capital Adequacy Ratio, and Return on Assets. The tests conducted, it show that Non-Performing Financing has a significant negative effect on Capital Adequacy Ratio, Financing to Deposit Ratio has a significant negative effect on Return on Assets, Non-Performing Financing has a significant negative effect on Capital Adequacy Ratio and Financing to Deposit Ratio has a positive but insignificant effect on Return on Assets. In summarizing the results of the study, the authors hope to provide an understanding of how Islamic banks manage their assets and liabilities within the Sharia framework; Assessing the effect of asset and liability management on the stability and profitability of Islamic banks; Identifying challenges and opportunities in asset and liability management in Islamic banks. And will have benefits among others Optimum strategies and practices in the management of assets and liabilities by Islamic banks.

References

1. Agus Widarjono. (2017). Econometrics. Open University.
2. Aisyah, N., Kristanti, F., & Zutilisna, D. (2017). The effect of liquidity ratio, activity ratio, profitability ratio, and leverage ratio on financial distress (Case study of textile and garment companies listed on the Indonesia Stock Exchange in 2011-2015). EProceedings of Management, 4(1).
3. Bitar, M., Madiès, P., & Taramasco, O. (2017). What makes Islamic banks different? A multivariate approach. Economic Systems, 41(2), 215-235. https://doi.org/https://doi.org/10.1016/j.ecosys.2016.06.003
4. Choudhry, M. (2010). Chapter 9 - Trading and Hedging II: Asset & Liability Management (ALM) (M. B. T.-T. R. H. (Second E. Choudhry (ed.); pp. 235-263). Butterworth-Heinemann. https://doi.org/https://doi.org/10.1016/B978-0-7506-8159-9.50018-X
5. Dhiaulhaq, Muhammad RafiAchmad Jufri, D. (2023). Company Financial Performance During the Covid-19 Pandemic in Islamic Studies (Case Study: PT Surya Toto Indonesia Tbk.). Journal of Economics and Accounting Publications. https://doi.org/https://doi.org/10.55606/jupea.v3i2.777
6. Fajinmi, C., Ifeanyi Onuka, O., & Ayeni, E. (2023). Portfolio management and performance of deposit money banks (Dmbs) in Nigeria (1990-2020). Research in Globalization, 7, 100139. https://doi.org/https://doi.org/10.1016/j.resglo.2023.100139
7. Fajriati, L. A., Ab Rahman, A., & Maharani, S. (2021). Effect of Financing To Deposit Ratio and Non-Performing Financing of Return on Assets With a Capital Adequacy Ratio As Intervening Variable in Islamic Banking in Indonesia in 2012-2019. Niqosiya: Journal of Economics and Business Research, 1(2), 286-302.
8. Fauziah, F., Febriyanti, A., & Nisa, N. H. (2020). Financial Inclusion and Financial System Stability (Bank Z-Score) in Asia. Optimal: Journal of Economics and Entrepreneurship, 14(1), 30-47.

9. Festiani, E. R. (2016). Analysis of the Effect of CAR, NPF, BOPO, ROA and FDR Ratios on the Health level of Islamic Commercial Banks in Indonesia. El Dinar: Journal of Islamic Finance and Banking, 4(2), 196-211.
10. Hosseininesaz, H., & Jasemi, M. (2022). Development of a new asset liability management model with liquidity and inflation risks based on the Lower Partial Moment. Expert Systems with Applications, 210, 118427. https://doi.org/https://doi.org/10.1016/j.eswa.2022.118427
11. Kaganova, O., & Nayyar-Stone, R. (2000). Municipal real property asset management: An overview of world experience, trends and financial implications. Journal of Real Estate Portfolio Management, 6(4), 307-326.
12. Cashmere. (2013). Financial Statement Analysis. Rajawali Press.
13. Cashmere, S. E. (2005). Basics of banking. PT RajaGrafindo Persada.
14. Kouwenberg, R., & Zenios, S. A. (2008). Stochastic programming models for asset liability management. Handbook of Asset and Liability Management, 253-303.
15. Li, D., Shen, Y., & Zeng, Y. (2018). Dynamic derivative-based investment strategy for mean-variance asset-liability management with stochastic volatility. Insurance: Mathematics and Economics, 78, 72-86. https://doi.org/https://doi.org/10.1016/j.insmatheco.2017.11.006
16. Lubis, I. L., Sinaga, B. M., & Sasongko, H. (2017). The Effect of Profitability, Capital Structure, and Liquidity on Firm Value. Journal of Business and Management Applications (JABM), 3(3 SE-Articles), 458. https://doi.org/10.17358/jabm.3.3.458
17. Mahaputra, I., & Adnyana, N. K. (2012). The effect of financial ratios on earnings growth in manufacturing companies listed on the IDX. Journal of Accounting & Business, 7(2), 243-254.
18. Mahmudah, N., & Harjanti, R. S. (2016). Analysis of Capital Adequacy Ratio, Financing to Deposit Ratio, Non Performing Financing, and Third Party Funds on the Profitability Level of Islamic Commercial Banks for the Period 2011-2013. Proceedings of the National Seminar on Applied Science and Technology (SENIT) 2016 Development of Science and Technology Based Local Resources, 1(1).
19. Michelangeli, V., & Piersanti, F. M. (2023). Interdependence between assets and liabilities in the banking system: Changes in the last two decades. Finance Research Letters, 58, 104256. https://doi.org/https://doi.org/10.1016/j.frl.2023.104256
20. Mokoagow, S. W., & Fuady, M. (2015). Factors affecting the profitability of Islamic Commercial Banks in Indonesia. EBBANK, 6(1), 33-62.
21. Mustari, M. (2022). Contribution of Islamic Organizational Culture in Efforts to Improve Performance. Journal of Faith and Spirituality Volume 2 Number 2 (2022), 167.
22. Novickytė, L., & Petraitytė, I. (2014). Assessment of banks asset and liability management: problems and perspectives (case of Lithuania). Procedia-Social and Behavioral Sciences, 110, 1082-1093.
23. Pramudhito, R., & SAMPURNO, R. D. (2014). Analysis of the influence of CAR, NPF, BOPO, FDR, and NCOM on the Profitability of Islamic Commercial Banks in Indonesia (Case Study on Islamic Commercial Banks in Indonesia for the Period 2008-2012). Faculty of Economics and Business.
24. Qolbi, F. A., Karisma, D. P., & Rosyadi, I. (2020). Macro variable effect analysis and non-performing financing (npf) against the return on assets (roa) of Islamic banks in Indonesia year 2008-2017. Journal of Islamic Economic Laws, 3(1), 32-47.
25. Rahadian, R., & Permana, D. (2021). The Impact of Non-Performing Loans, Return on Assets, Return on Equity, and Loan to Deposit Ratios on Minimum Capital Adequacy Requirement Based on Commercial Banks for Business Activities (BUKU) I 2015-2020. European Journal of Business and Management Research, 6(6), 42-46.

26. Romdhoni, A. H., & Chateradi, B. C. (2018). The Effect of CAR, NPF and FDR on the Profitability of Islamic Banks (Case Study at BCA Syariah Bank in 2010-2017). Edunomika Scientific Journal, 2 (02).
27. Rustiani, M. E., & Wiyani, N. T. (2017). Financial ratios as indicators to measure the financial performance of cement companies. Journal of Accounting.
28. Schneider, J., Gaul, A. J., Neumann, C., Hogräfer, J., Wellßow, W., Schwan, M., & Schnettler, A. (2006). Asset management techniques. International Journal of Electrical Power & Energy Systems, 28(9), 643-654. https://doi.org/https://doi.org/10.1016/j.ijepes.2006.03.007
29. Shen, C., & Zhao, X. (2023). How does income inequality affect economic growth at different income levels? Economic Research-Ekonomska Istraživanja, 36(1), 864-884.
30. Smaoui, H., Mimouni, K., Miniaoui, H., & Temimi, A. (2020). Funding liquidity risk and banks' risk-taking: Evidence from Islamic and conventional banks. Pacific-Basin Finance Journal, 64, 101436. https://doi.org/https://doi.org/10.1016/j.pacfin.2020.101436
31. Swandewi, N. K. M., & Purnawati, N. K. (2021). Capital adequacy ratio mediates the effect of non-performing loans on returns on assets in public commercial banks. American Journal of Humanities and Social Sciences Research (AJHSSR), 5(1), 651-656.
32. Syofian Siregar. (2017). Quantitative research methods: Equipped with a comparison of manual calculations & SPSS. Kencana.
33. Wekwete, T. A., Kufakunesu, R., & van Zyl, G. (2023). Application of deep reinforcement learning in asset liability management. Intelligent Systems with Applications, 200286. https://doi.org/https://doi.org/10.1016/j.iswa.2023.200286