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Research Article

BASEL III Pilar and Internal Capital Adequacy Assessment Process (ICAAP) : Implementing ICAAP in Indonesian Banking Sector

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Abstract

The Basel III policy essentially aims to improve banks' ability to absorb potential risks to improve the health and durability of banks through capital adequacy factors. The Internal Capital Adequacy Assessment Process (ICAAP) approach is also used to assess capital adequacy where the ICAAP approach conducts supervision from the Board of Commissioners and Board of Directors to assess capital adequacy. This research aims to analyze how implemented from Basel III and ICAAP to assess capital adequacy in banking in Indonesia, this research is also supported by several underlying theories such as Agency theory and Signaling theory, with problem management and profitability as indicators in factors that affect capital adequacy. The results of this study explained that profitability has a positive effect on the level of capital adequacy but the problem is not an effect on capital adequacy.

Keywords : improve the health, durability of banks, Basel III, ICAAP

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1. Introduction

The 2008-2009 Global Financial Crisis refers to the massive financial crisis that faced the world from 2008 to 2009. The financial crisis impacted individuals and institutions around the world, with millions of Americans deeply affected. Financial institutions began to sink, many were absorbed by larger entities, and the U.S. Government was forced to offer bailouts that exposed the weaknesses of the international financial system and led to the creation of Basel III. Basel III regulations were created in November 2010 after the financial crisis; However, they have not yet been implemented. Implementation has been continuously delayed in recent years and is expected to occur in January 2022.

Basel III identified the main reasons that led to the financial crisis. These include poor corporate governance and liquidity management, an overly high capital structure due to lack of regulatory restrictions, and misaligned incentives in Basel I and II. Basel III strengthens the minimum capital requirements outlined in Basel I and II. In addition, it introduces various requirements of capital ratio, leverage, and liquidity.

The Subprime Mortage phenomenon that collapsed the success of investment giants Lehman Brother, JP Morgan, Morgan Stanley, Goldman Sanch who focused more on the financial business made banking players aware that the Basel I and Basel II deals were not enough to anticipate the risks of banking businesses. The Basel I Agreement sets out about the standard of how much capital the Bank should set aside as protection against the financial and operational risks that the Bank will face, which in essence Basel I takes into account Market Risk Credit and Operational Risk but is still in a simple stage, and is refined in detail through the Basel II agreement with quantitative and definitive risk parameters.

Related to capital according to Basel III rules there are three additional capital that must be prepared by banks, namely countercyclical buffer, capital conservation buffer, and capital surcharge. The three additional capitals are prepared to deal with changes and shocks that affect the performance of banks. Under the Basel III agreement, banks are required to reserve high quality capital (core toer-1) of 4.5% of its assets, plus buffer capital of 2.5% in the event of a shock, or to 7% in 2016, and must provide buffer capital again of 2.5% or a total of 9.5% in 2019.

In banking there is often a recurring problem where when the economy is growing banks tend to loosely to credit expansion, commonly referred to as pro-cyclicality with other intentions where it often happens that when the economy is improving banks often forget how difficult it is to control risks in crisis conditions (Bakar et al., 2021). Therefore, in Basel III it is necessary to take an internal capital adequacy assessment process (ICAAP) approach to assess capital adequacy where the ICAAP approach is to conduct supervision from the Board of Commissioners and Board of Directors, assess capital adequacy, conduct monitoring and reporting, and control the internal part of CEBS (2006). The purpose of this process is to ensure that risks are properly identified, assessed and monitored, that adequate levels of capital for risk and a rigorous risk management system are used and remain up-to-date. Supervisory authorities are required to conduct a Supervisory Review and Evaluation Process (SREP), which is intended to verify and assess ICAAP as well as the quality and health of internal government processes in which such processes are carried out efficient and effective internal control systems are essential for ICAAP, (Cerrone 2013).

2. Literatur Review

2.1. Basel III

Basel III Global Regulatory Framework for More Resilient Banks and Banking Systems published by BCBS in December 2010 in principle aims to address banking issues, among others, Indonesian Bankers Association (2016):

1. Improve the ability of the banking sector to absorb potential risks of losses due to financial and economic crises, and prevent financial sector crises from spreading to the economic sector
2. Improve the quality of risk management, governance, transparency, and openness. provide protection against potential risks from systemic bank failures.

To improve the comparability of bank capital ratios, the new version of Basel III limits the use of the internal capital method and requires that the minimum risk measure be not less than 72.5% of the standard method size, (Xiatong 2021). Basel III is expected to streng then regulations at the microprudential level to improve the health and resilience of individual banks in the face of crises. as illustrated in Basel III, will lead to a transition to a shortage of bank capital (in the form of a gap between actual and target capital ratios). This effect can be amplified by procyclicality if asset losses and risk weights increase in an economic downturn. As regulators will sanction bank undercapitalization, banks are forced to react by changing resource allocations and loan prices to increase their capital levels at least until they reach regulatory minimums, (Fidmurc and Lind 2020). On the other hand, Basel III also introduced short- and long-term liquidity standards, namely, OJK (2014):

1. Liquidity Coverage Ratio (LCR) for the short term
2. Long-term Net Stabel Funding Ratio (NSFR).

Basically, these two liquidity standards are intended to complement existing toois monitoring to monitor bank liquidity while also being used as a comparison of liquidity conditions between

banks. Basel III's capital and liquidity framework gradually came into effect in January 2013 until full implementation in January 2019, Indonesian Bankers Association (2016) .

2.2. ICCAP Principles

To meet the core principles contained in the ICAAP, the five main features of a rigorous process become a reference for management as follows, (Cerrone 2013):

1. Supervision of the board and senior management, a good risk management process is the basis of an effective assessment of the adequacy of the bank's capital position. Bank management is responsible for understanding the nature and extent of risk taken by banks and how they relate to adequate capital levels.
2. Sound capital assessment. Basic elements of sound capital assessment include: policies and procedures designed to ensure that banks identify, measure, and report all material risks; a process that links capital to the level of risk, and states the objectives of capital adequacy to risk, taking into account the bank's strategic focus and business plan.
3. Comprehensive risk assessment. All material risks facing banks must be addressed within the ICAAP which must be developed to estimate the risk. Therefore, at the very least, the following risk exposures, which in no way constitute an exhaustive list of all risks, should be considered. Banks should have a methodology that allows them to assess the credit risk involved in exposure to individual borrowers or opposing parties.
4. Monitoring and reporting. Banks should establish adequate systems to monitor and report risk exposure and assess how a bank's changing risk profile affects capital requirements. The report should enable senior management to evaluate the level and trends of risk and its effect on capital levels and the sensitivity and fairness of key assumptions used in capital valuation measurement systems.
5. Internal control review. The internal control structure of the bank is very important for ICAAP. Effective control of the capital assessment process includes an independent review and, if necessary, the involvement of internal or external audits.

2.3. Agency Theory and Capital Adequacy

Agency theory explains that the occurrence of agency relationships arises when investors as company owners give confidence to management to manage the company and delegate decision-making authority to management. On the bank side, mudharabah funds are very important because they can be channeled in financing and profiting. Therefore, banks and investors have a commitment in the form of a period of withdrawal that can be made by investors.

2.4. Signaling Theory and Capital Adequacy

Signaling theory is an action taken by management to provide direction to investors on how the company's management prospects (Brigham, 2015). In its development, signal theory was used to answer questions related to matters specifically inherent in the company.

2.5. Adequacy of Bank Capital

The capital adequacy ratio (CAR) was first declared at the Bank for International Settlement (BIS) by The Basel of Comittee on Banking Supervision (BCBS) for international banking supervision in 1974 Basel II and Basel III. The Capital Adequacy Ratio (CAR) provisions must be followed by banks around the world, as a level game with fair competition in global financial markets. Implementation of Basel III is expected in 2019 every bank has the adequacy of capital. This is stated in Bank Indonesia Regulation No. 15/12/PBI/2013 on Minimum Capital Provision Obligations and then through POJK No. 11/POJK.03/2016 which is in substance the two are no different.

The level of adequacy of bank capital is a capital provision that must be met by the bank by comparing it with risk-weighted assets. In assessing the bank's capital to the level of health of the bank based on risk contained in the Circular Letter of the Financial Services Authority No.14 / SEOJK.03 / 2017 described in Table 1

Table 1 : Capital Adequacy Ratio (CAR)

Rating	Criteria

1	CAR > 11%
2	9,5% ≤ CAR ≥ 11%
3	8% ≤ CAR ≥ 9,5%
4	6,5% ≤ CAR ≥ 8%
5	CAR ≤ 6,5%

Source: Financial Services Authority, 2017

2.6. Profitability and Adequacy of Bank Capital

Profitability is a ratio to assess a company's ability to seek profit or profit in a given period. This ratio also provides a measure of the level of effectiveness of a company's management. This is indicated by the profit generated from sales and investment income. The bottom line is that the use of this ratio shows the efficiency of the company in earning profits. In assessing the bank's profitability against the level of health of the bank based on risk contained in the Circular Letter of the Financial Services Authority No.14 / SEOJK.03 / 2017 with the criteria outlined in Table 2.

Table 2 : Return of Asset (ROA)

Level of Bank's Profitability	Criteria
1	ROA > 1,450%
2	1,215% < ROA ≤ 1,450%
3	0,999% < ROA ≤ 1,215%
4	0,765% < ROA ≤ 0,999%
5	ROA ≤ 0,765%

Source : Financial Services Authority, 2017

2.7. Problematic Financing and adequacy of Bank Capital

According to POJK Number 15 /POJK.03/2017 on Bank supervision states a healthy bank's problem financing ratio of 5%. This problematic financing gauge is expressed by the Non Performing Financing Net ratio. According to the Circular Letter of the Financial Services Authority No.14/SEOJK.03/2017 the risk profile is an assessment of the inherent risk and quality of the application of risk management in bank operations carried out against eight risks, namely, credit risk, market, liquidity, operations, law, strategic, compliance and reputation. Table lays out the criteria for determining the level of credit risk.

Table 3 : Non Performing Financing (NPF)

Rating	Criteria
1	NPF ≤ 7%
2	7 % < NPF ≤ 10%
3	10% < NPF ≤ 13
4	13%< NPF ≤ 16%
5	NPF > 16%

Source : Financial Services Authority, 2017

3. Method

CAR (Capital Adequacy Ratio)

CAR is a capital adequacy ratio that indicates the ability of banks to provide funds used to overcome possible risk of loss. This ratio is important because keeping CAR at a safe limit (at least 8%), it also protects customers and maintains the stability of the overall financial system. The greater

the value of CAR reflects the better the ability of banks in the face of possible risk of loss. (SE BI No. 6/23/DPNP of 2004)

$$\text{CAR} = \frac{\text{Tier One Capital} + \text{Tier Two Capital}}{\text{risk weighted assets}} \times 100\%$$

NSFR (Net Stable Funding Ratio)

The liquidity risk measurement standard is an obligation to meet the Net Stable Funding Ratio (NSFR) which aims to reduce liquidity risk related to funding sources for a longer period of time by requiring the Bank to fund activities with adequate stable funding sources in order to mitigate the risk of future funding difficulties. Banks are required to maintain adequate stable funding calculated using the Net Stable Funding Ratio (NSFR) and set at least 100% (one hundred percent). NSFR is a comparison between available stable funding (ASF) and required stable funding (RSF). (POJK No.50/POJK.03/2017)

$$\text{NSFR} = \frac{\text{Available stable Funding}}{\text{Required stable funding}} \times 100\%$$

Liquidity Coverage Ratio, hereinafter abbreviated as LCR, is a comparison between High Quality Liquid Asset and total net cash outflow for the next 30 (thirty) days in a stress scenario. High Quality Liquid Assets, hereinafter abbreviated as HQLA, are cash and/or financial assets that can be easily converted into cash with little or no reduction in value to meet the Bank's liquidity needs over the next 30 (thirty) days in a stress scenario. Total Net Cash Outflow, hereinafter referred to as Net Cash Outflow, is the total estimated cash outflow minus the total estimated cash inflow expected to occur over the next 30 (thirty) days in a stress scenario. Lcr fulfillment is set at least 100% (one hundred percent) on an ongoing basis (POJK No.42/POJK.03/2015).

ROA (Return On Assets)

ROA is a ratio that measures the ability of banks to generate profits or profits (can be called profitability) by comparing net income with resources or total assets owned. Its function is to see how effective banking is in using its assets in generating income. The greater the value of ROA means that the better the ability of banking in generating profits. According to the provisions of Bank Indonesia the best standard for ROA in the size of Indonesian banks is at least 1.5%. (SE BI No. 6/23/DPNP of 2004)

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

4. Discussion

Impact of Profitability and Capital Adequacy

According to the results of research conducted by Luthfi Kurniawan et al in 2021 showed the value of t−calculated > t−table which is 4.929420 > 2.00856 and probability (p-valuie) of 0.0000 < the level of significance of 0.05 so that profitability (ROA) has a positive influence on capital adequacy (CAR), this result states that profitability has a positive effect on the level of capital adequacy.

The Effect of Problematic Financing on Capital Adequacy Levels

According to the results of research conducted by Luthfi Kurniawan et al in 2021, the results of regression of panel data in Table 10 for problematic financing show the value of t−calculated < t−table of -0.580090 < 2.00856 and probability (p-valuie) of 0.5654 > the significance level of 0.05 so that problematic financing (NPF) has no effect on capital adequacy (CAR), hence the second hypothesis (H2) of this study was rejected. The results of this study showed that problematic financing had no effect on capital adequacy. This risk is called credit risk, bus management must reserve credit risk or in a bank asset account called The Elimination of Productive Assets Allowance (PPAP). PPAP included in the ATMR calculation is 15% for collectability-3 (DPK), 50% for Collectability-4 (D), and 100% for Collectability5(M). The existence of government policies to prevent problematic financing such as providing a Maximum Credit Limit (BMPK), establishing Non Performing Financing (NPF) of 5%, the establishment of reserves for the allowance of productive assets, and the elimination of credit. Where the elimination of credit is the eraser of books so that billing efforts are still carried out.

5. Conclusion

The study conducted an analysis of the impact of basel III capital application on banking performance in Indonesia based on capital, liquidity and profitability factors. The purpose of the study is to find out the impact raised from Basel III to then formulate a strategy to anticipate the possible negative impacts that arise and on the one hand utilize the potential positive impact of this policy.

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