

## Chapter 4

### CHALLENGES AND OPPORTUNITIES OF BASEL III IMPLEMENTATION: CASE OF INDONESIA

By

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#### 1. Introduction

##### 1.1 Objective and Scope of Study

As a response to the recent global financial crisis of 2007/08, the Basel Committee on Banking Supervision (BCBS) issued a publication widely known as Basel III in December 2010. Through the Basel III framework, the BCBS aims to improve the banking sector's ability to absorb shocks arising from financial and economic stress, thus reducing the risk of spillover from the financial sector to the real economy.

The Basel III publications were triggered by the realisation that the recent financial crisis which began as a subprime mortgage crisis in the United States had subsequently spread and morphed into a sovereign crisis in Europe and contributed to a lower economic growth for many countries around the globe. An increasing interconnectedness between financial institutions, financial products, financial markets and trading activities across countries was one among several other reasons behind this condition. The crisis had contributed to an economic contraction (-2.24%) for the world economy in 2009, and the developed countries in Europe and Central Asia were the ones which experienced the biggest impact (-6.01%)<sup>2</sup>. The crisis also had cost tax payer's money in the form of government intervention, bail-out funds for the too-big-to-fail financial institutions, and austerity measures, such as lowering of government expenses and increasing income tax.

The main benefits of the Basel III implementation in reducing the probability of occurrence and severity of financial crisis are well acknowledged. We also

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2. World Bank data available at [www.worldbank.org](http://www.worldbank.org)

need to take into consideration its implementation to what cost. In order to meet the Basel III requirements, banks most likely need to increase their liquid asset position and their capital level which translates to a lower profitability level (i.e. current year profit) and lower performance indicators (i.e. return on equity ratio). Assuming that banks' management will be striving to maintain their performance indicators in the eyes of their shareholders, they have an incentive to increase lending rates as a way to balance the negative impact of lower income from (i) rising liquid assets and (ii) lower loan volumes due to an increase in minimum capital and liquidity requirement.

For most of the emerging countries, such as Indonesia, which rely heavily on the banking sector as the source of funding for investment activities in both public and private sectors, the decision to adopt Basel III framework should also take into consideration its impact on the role of the banking sector in supporting the country's domestic economic growth. The primary objective of this study therefore is to:

1. Identify the challenges of implementing Basel III for the Indonesian economy, both for individual banks and financial system, as well as the implications for bank supervision;
2. Review the impact of Basel III on the supervisory concerns and its potential impact; and
3. Assess the interconnectedness of the domestic financial system in the regional and global contexts in view of Basel III and its impact on cross-border supervision.

## **1.2 General Outline of Paper**

This paper will be divided into six sections. Section 1 provides the background and objective of this study. Section 2 presents an overview of the Indonesian financial system, risk assessment and the status of the Basel framework. Section 3 discusses and analyses the impact of the Basel III implementation, while Section 4 covers the issues and challenges of implementing the Basel III framework in Indonesia. In Section 5, we explore the way forward identifying the strategic options for supervisory authority in the implementation of the Basel framework, followed by the conclusion in Section 6.

## 2. Overview of Financial System and Risk Assessment

### 2.1 General Overview of Indonesian Financial System

Indonesia is the third largest emerging country in the world. It has a population size of 242 million which makes it become the fourth largest country by population<sup>3</sup>. In terms of economic output, Indonesia's gross domestic product is only the 16th biggest in the world at US\$846 billion, or far below all the other larger countries by population, such as India (US\$1,847 billion), China (US\$7,289 billion) and USA (US\$15,094 billion)<sup>4</sup>.

Based on the Indonesian Banking Act<sup>5</sup>, there are two types of banks in Indonesia, namely commercial banks and rural banks, both of them operate based on either conventional or syariah principles. By the end of June 2012, there were 120 commercial banks (15,372 branches) and 1,667 rural banks (4,286 branches) in Indonesia. In terms of total asset, the non-Islamic banks still dominate Indonesia's banking industry by 95.97% compared to 4.03% of the Islamic banking. Table 1 below provides further details on the structure of the banking industry in Indonesia.

**Table 1**  
**Composition of Indonesian Banking Industry<sup>6</sup>**

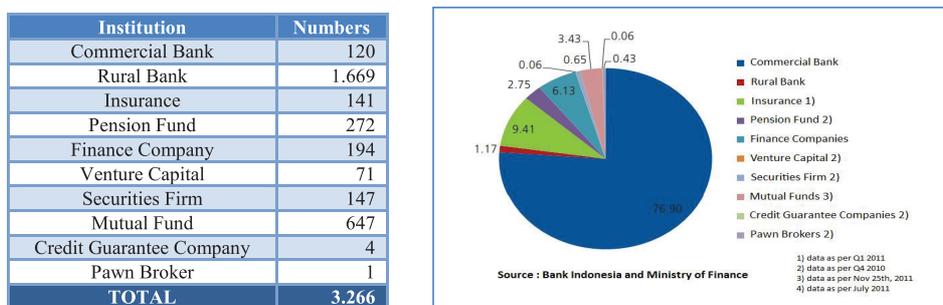
No	Type of Banks	Number	Number of Branch	Total Asset (billion IDR)	% share
1.	<b>Commercial Banks</b>	<b>120</b>	<b>15,372</b>	<b>3,891,116</b>	<b>98.48</b>
	a. Non-Islamic Banks	109	13,843	3,735,704	94.55
	b. Islamic Banks*	11	1,529	155,412	3.93
2.	<b>Rural Banks</b>	<b>1,667</b>	<b>4,286</b>	<b>60,034</b>	<b>1.52</b>
	a. Non-Islamic Banks	1,511	3,908	55,973	1.42
	b. Islamic Banks	156	378	4,061	0.10
	<b>TOTAL</b>	<b>1,787</b>	<b>19,658</b>	<b>3,951,150</b>	<b>100.00</b>

\* There are 11 Islamic commercial banks and 24 non-Islamic commercial banks having an Islamic business unit.

3. The other three bigger countries by population in 2011 are China (1,344 million), India (1,241 million) and United States of America (311 million). Source: World Bank, available at [www.worldbank.org](http://www.worldbank.org)
4. See Table 1 in Appendix 1 for more detailed data on GDP and population in year 2011 for all countries in the world.
5. Act of Republik Indonesia Number 7 of 1992 Concerning Banking As Amended by Act Number 10 of 1998, available at [www.bi.go.id/web/en/tentang+BI/Undang-undang+BI](http://www.bi.go.id/web/en/tentang+BI/Undang-undang+BI)
6. Bank Indonesia, Indonesian Banking Statistics, June 2012, Table 1, available at <http://www.bi.go.id/web/en/Statistik/Statistik+Perbankan/Statistik+Perbankan+Indonesia/>

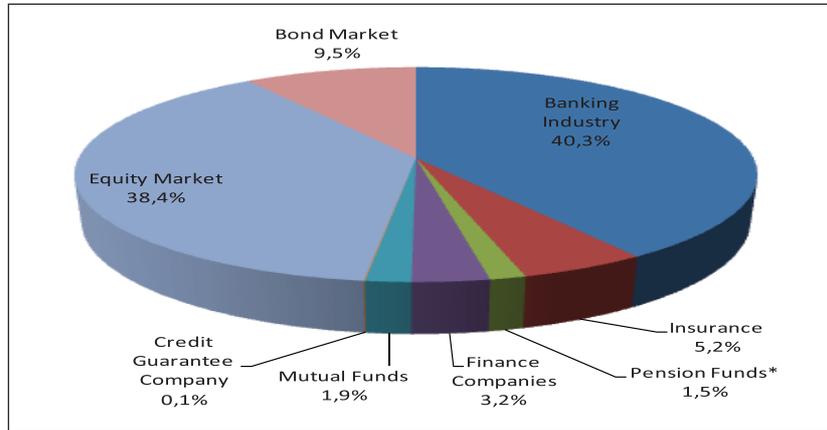
The banking industry plays a critical role in the Indonesian economy because banks have been the primary source of funding for the Indonesian real sectors. As in other developing countries, the banking industry dominates the financial institutions in Indonesia. The total assets of the banking industry (commercial banks and rural banks) represent 78.07% of the total assets of the Indonesian financial institutions (see Figure 1). Even after we take into consideration the contributions from the equity market and bond market as a source of funding for the Indonesian real sectors, the banking industry still provides the highest contribution equal to 40.3% of the total Indonesian financial system, while the contribution of equity market and bond market are 38.4% and 9.5% respectively (see Figure 2).

**Figure 1**  
**Composition of Indonesia's Financial Institution Assets<sup>7</sup>**



7. Bank Indonesia, Financial Stability Review, No.18 March 2012, available at [www.bi.go.id](http://www.bi.go.id)

**Figure 2**  
**Composition of Indonesia's Financial System<sup>8</sup>**



Prior to the legislation of the Financial Service Authority (FSA) Act, Number 21 in 2011, there were two authorities having power to regulate and supervise financial institutions in Indonesia. Bank Indonesia (BI) has the authority to regulate and supervise the commercial banks and rural banks, while Bapepam-LK (BLK) under the Ministry of Finance has the authority to regulate and supervise the other financial institutions and capital markets.

Under the FSA Act, the BLK will be transferring its power to the Financial Service Authority (FSA) by the end of 2012 while the deadline for BI is by the end of 2013. Currently the supervision of financial institutions in Indonesia is under transition and the Indonesian FSA is expected to be fully operational by 1 January 2014.

BI prescribes different regulations for banks categorised as (i) non-Islamic commercial banks, (ii) Islamic commercial banks and Islamic rural banks and (iii) non-Islamic rural bank, taking into consideration the differences in how they do their business. The non-Islamic commercial banks are the banks that fall under the regulations related to the Basel framework. For the purpose of this study, “banks” terminology will be used to describe the non-Islamic commercial banks in Indonesia.

8. Compiled from (i) Bank Indonesia, Indonesian Banking Statistics, June 2012, Table1, available at [www.bi.go.id](http://www.bi.go.id) and (ii) Bapepam-LK, Annual Report 2011, available at [www.bapepam.go.id](http://www.bapepam.go.id)

## 2.2 Risk Oversight Assessment and Vulnerabilities

During 2011, the Indonesian economy demonstrated considerable resilience amid the increasing uncertainties in the global economy. Its economic performance was reflected in strong growth at 6.5%, an all-time high for the past ten years, and mild inflation at 3.79%. There was also an improvement in the quality of growth, reflected in the substantial role of investment and export as sources of economic growth, and a falling level of unemployment and poverty. In the financial sector, as a result of the worsening crises in Europe and United States, the decision made by some investors to liquidate and pull out the foreign capital during the second half of 2011, putting pressure on the rupiah, government yield and share prices. However, the stabilisation measures pursued by BI and the government averted a turmoil in the financial market and cushioned the impact of the global financial crisis on Indonesia's real sectors and reduced it to a minimal degree<sup>9</sup>.

A relatively similar conclusion is mirrored by the Financial Stability Index (FSI) which measures the level of systemic risk in Indonesian financial system; the FSI was quite stable and stood at 1.65 in June 2011 and at 1.63 in December 2011, below the forecast estimation at 1.68. This level is far below the level of the FSI during the Asian financial crisis 1997/1998 at 3.23, or during the mini-global crisis in November 2008 at 2.43<sup>10</sup>.

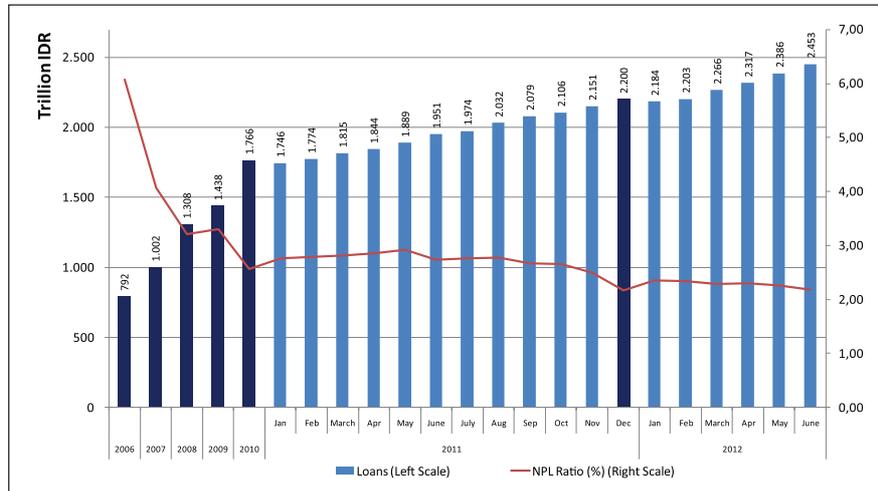
In terms of non-performing loans, in the last six years since 2006, the Indonesian banks have been successful in improving their loans quality and in maintaining non-performing loans at a low level, as shown by a declining trend of NPL ratio, even in the midst of the global financial crisis which was occurring over the same period (see Figure 3). Loans had been growing at 22.66% CAGR (Compound Annual Growth Rate) while non-performing loans relatively in stable position with 0.12% CAGR, making it possible for the NPL ratio to reach its lowest level of 2.18% in the past six years.

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9. Bank Indonesia, 2011 Economic Report on Indonesia

10. Bank Indonesia, Financial Stability Review No.18, March 2012.

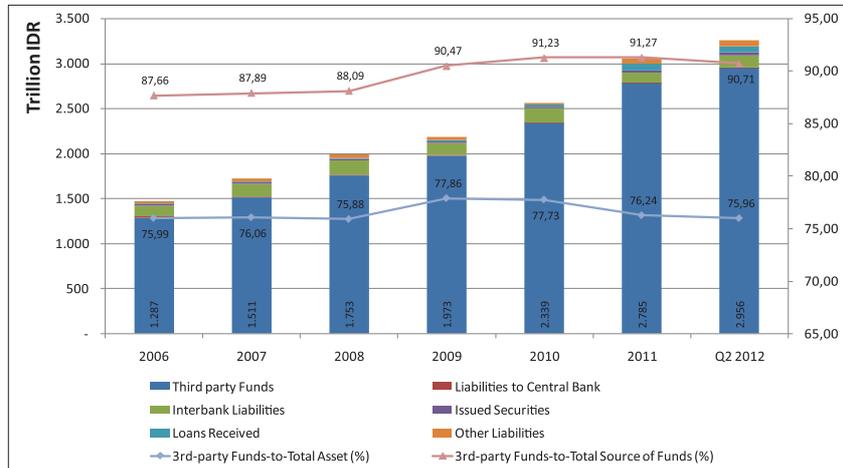
**Figure 3**  
**Loans and Non-performing Loans Ratio, 2006 - 2012<sup>11</sup>**



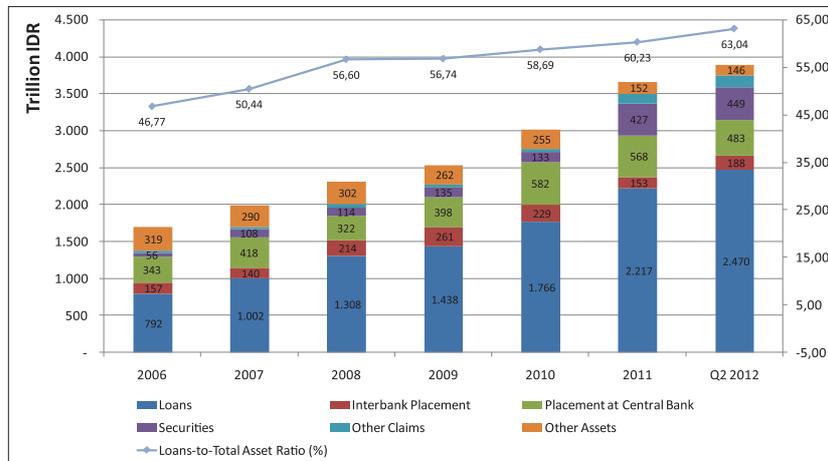
The majority of banks in Indonesia can be considered as conservative and less complex financial institutions. Intermediation and loan origination have been the major business activities in the Indonesian banking system, as shown by the following indicators. First, third-party funds consisting current accounts, saving accounts and time deposits are the main source of funding for Indonesian banks. It dominates and contributes to an average of 90% of bank’s total funding, or equal to an average of 76% of bank’s total asset (Figure 4). Second, loans are the main financial assets in banks’ balance sheet, as shown by an increasing trend of loans-to-total asset ratio since 2006, reaching the level of 63.04% as of June 2012 (Figure 5). Third, interest income has been the main income for Indonesian banks and contributes an average of 61.91% of the banks’ total income (Figure 6).

11. Bank Indonesia, Banking Statistics, June 2012, Table 1.34, Table 4.9.a, available at [www.bi.go.id](http://www.bi.go.id)

**Figure 4**  
**Liabilities Composition of Indonesian Banks<sup>12</sup>**



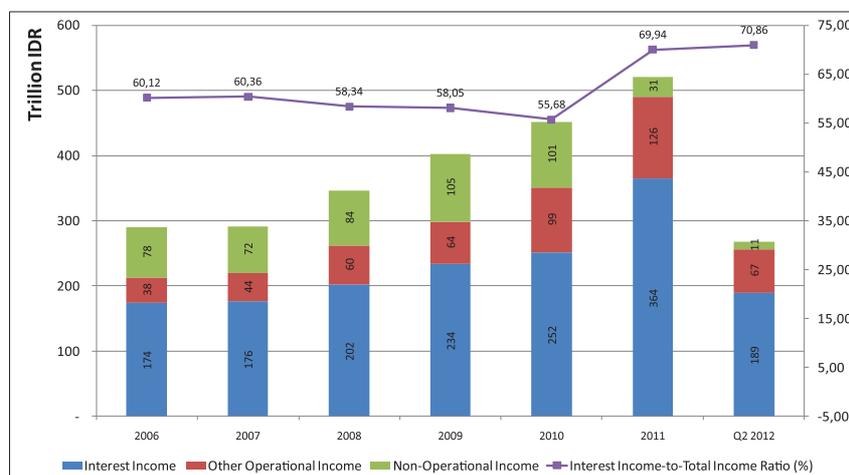
**Figure 5**  
**Asset Composition of Indonesian Banks<sup>13</sup>**



12. Bank Indonesia, Indonesian Banking Statistics, Table 1.1 and Table 1.1.a available at [www.bi.go.id](http://www.bi.go.id)

13. Bank Indonesia, Indonesian Banking Statistics, Table 1.1 and Table 1.1.a available at [www.bi.go.id](http://www.bi.go.id)

**Figure 6**  
**Income Composition of Indonesian Banking Industry**



Taking a closer look at the loan composition of Indonesian banks, the majority of the bank loans are used for productive activities, such as working capital purposes (50.27%) and investment activities (20.09%), and only 29.63% is used for consumption purposes<sup>14</sup>. By economic sector, (i) trade, hotel and restaurant, (ii) manufacturing industry, and (iii) financial, ownership and business services are the three largest sectors that received funding from banks, with share of 20.04%, 15.60% and 8.44%, respectively, as of June 2012.

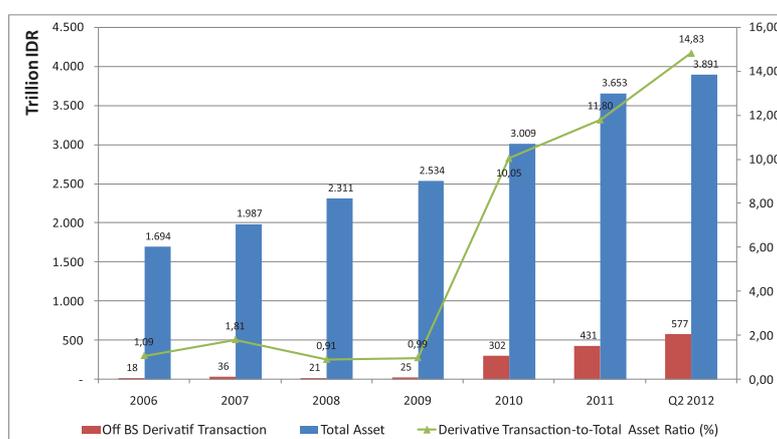
With regard to foreign exchange exposure, the Indonesian banks have learned valuable lessons from the Asian crisis of 1997/1998 when an exchange rate shock and an interest rate shock caused the insolvency of many bank borrowers in Indonesia. Currently only 16.4% of the total loans of Indonesian banks are in foreign currency denomination while the other 83.6% are in domestic currency. The same condition applies in the funding structure side, foreign currency funding only constitutes 14.9% of bank's total third-party fund while the others is in domestic currency.

In terms of complex financial instruments such as derivatives, there is an increasing trend on the usage of derivative transactions (including transactions on behalf of customers and for proprietary trading purposes) in Indonesian banks

14. Bank Indonesia, Indonesian Financial Statistics, Table I.6, Table I.8 and Table I.10, available at [www.bi.go.id](http://www.bi.go.id)

for the last 2.5 years (Figure 7). Nevertheless, this figure is still in line with BI's expectation of increasing financial market deepening especially in foreign currency money market and reducing banks' dependence on the spot market to fulfill their foreign currency need. Another factor contributing to a significant increase in derivative transactions during 2009 – 2010 (more than a ten-fold jump) was due to the implementation of a new regulatory reporting system which enables BI to better capture derivative transactions than the previous regulatory reporting system.

**Figure 7**  
**Development of Derivative Transactions in Indonesian Banks**

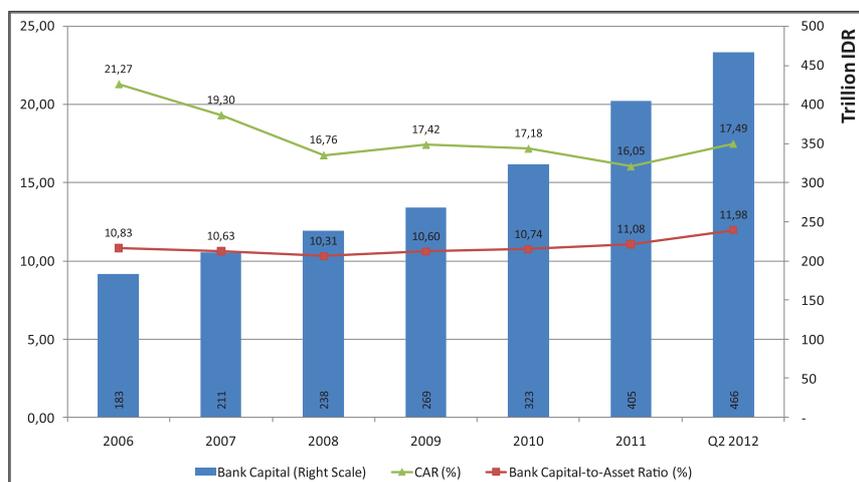


Having the ability to maintain Net Interest Margin (NIM) at 3.47% and Return on Asset (ROA) at 2.77% in June 2012, the Indonesian banks did not face any difficulties in maintaining their capital level above the regulatory requirement which is 8% of the risk weighted asset (RWA). Since 2006, the aggregate CAR level of Indonesian banks are above 16% level at all times, with an average of 17.68% level (Figure 8). Indonesian banks are considered to be well capitalised going by this CAR level. Their capital-to-asset ratio is 11.98% which is above the average of middle income countries at 10.2% level, high income countries at 7.15% level and euro area countries at 6.7% level<sup>15</sup>. Nevertheless, Indonesia's capital-to-asset ratio is still lower compared with countries such as Serbia (21%), Armenia (19.3%), United Arab Emirates (17.2%), Saudi Arabia (12.9%) and Hong Kong SAR, China (12.2%)<sup>16</sup>.

15. Definition of middle income countries, high income countries, euro area countries is based on World Bank publication. Source: World Bank's data, indicator available at [www.worldbank.org](http://www.worldbank.org)

16. World Bank statistics, available at [www.worldbank.org](http://www.worldbank.org)

**Figure 8**  
**Capital, CAR Ratio and Capital-to-Asset Ratio of Indonesian Banks**



Under the current regulation, the calculation of RWA and CAR ratio, is based on the Basel II framework which covers a standardised approach for credit risk, a basic indicator approach for operational risk, and either a standardised or an internal model method for market risk. Specifically for credit risk RWA, the standardised approach was implemented since January 2012. In terms of values, credit risk is the highest contributor for RWA (84.92%) compared with operational risk (14.05%) and market risk (1.03%). This condition is in line with the fact that Indonesian banks rely on intermediation activities and interest income as a source of their performance. On the capital side, the definition of financial liabilities and equities instruments that could be considered as regulatory capital has been based on the Basel II framework since 2008.

### **2.3 The Status of Application of Basel Capital Adequacy Framework**

In 1993, BI adopted the 1988 Basel I framework for the Indonesian banking system, both in relation to capital definition and calculation of credit risk RWA. This framework had been applied for 10 years until 2003. By then, BI introduced a standard model for calculation of market risk capital requirement as an adoption of the 1996 Basel I amendment.

Unlike credit risk capital requirement which applied to all banks, market risk capital requirements only applied to banks in meeting certain thresholds. The thresholds for market risk capital requirements are as follows:

1. Banks as an individual entity meet one of the following criteria:
  - a. Banks with total assets of IDR 10 trillion or more;
  - b. For banks categorised as foreign exchange bank, having financial instruments such as securities and/or derivative transactions in trading book by IDR 20 billion or more;
  - c. For banks categorised as non-foreign exchange bank, having financial instruments such as securities and/or interest rate derivative transactions in trading book of IDR 25 billion or more.
2. Banks as a consolidated entity with its subsidiaries meet one of the following criteria:
  - a. For banks categorised as foreign exchange bank, having (i) financial instruments such as securities including equity related securities, and/or derivative transactions in trading book and/or (ii) commodity risk related financial instruments in trading and banking book, by IDR 20 billion or more.
  - b. For banks categorised as non-foreign exchange bank, having (i) financial instruments such as securities including equity related securities, and/or derivative transactions in trading book and/or (ii) commodity risk related financial instruments in trading and banking book, by IDR 25 billion or more.
3. Banks having a branch(s) and/or subsidiary(s) in foreign country(s), as well as a branch office(s) of foreign banks located overseas.

Banks meeting any of the requirements above during one point in time are obligated to continuously calculate market risk capital charge even though the banks no longer meet the required conditions in future time. Considering that the banks need a preparation period for implementing the market risk capital requirement, BI provided a two-year transition period prior to its effective implementation in 2005. By June 2012, there are 73 banks out of 120 banks that are subject to market risk capital requirements in Indonesia.

Related to the Basel II implementation, BI initiated a preparation process for the implementation of Basel II framework in Indonesia since 2006 with the establishment of Working Group Basel II (WGB II)<sup>17</sup>. Prior to its establishment,

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17. WGB II's member are representatives from the 15 biggest banks and representatives from all banking associations in Indonesia.

BI (in collaboration with the “future” members of WGB II) conducted a survey in August 2004 to ascertain bank perceptions of Basel II and the expectations and preferences of banks for the implementation of Basel II in Indonesia. The survey also sought information on levels of preparedness, obstacles and constraints faced by the Indonesian banks with regard to the planned implementation of Basel II. Based on results of the survey<sup>18</sup>, BI decided that the Basel II framework will be implemented for all banks<sup>19</sup> using the most simplest approaches, such as a standardised approach for credit risk, a basic indicator approach for operational risk, and a standard model for market risk. The usage of more advanced approaches are not mandatory and subject to a supervisory approval process.

As part of the Basel II implementation process, BI amended the regulation on market risk capital requirement in 2008 and 2012, allowing banks to use the internal model for the purpose of calculating the regulatory capital requirement. Afterward in 2010, BI issued the regulation on the basic indicator approach for the calculation of operational risk capital requirement. There was a transition period of 18 months for the gradual implementation of operational risk capital charge<sup>20</sup>, thus allowing the banks to fulfill the new capital requirement through current year profit accumulation. As for credit risk, the standardised approach was implemented in 2011 with a one-year transition period allowing banks to enhance their management information system. This regulatory enforcement by BI enabled Indonesia to comply with Pillar 1 of Basel II by 1 January 2012.

Regarding Pillar 2 - Basel II, the relevant regulation is expected to be issued by the end of Q3:2012. Through the impending Pillar 2 regulation, BI will use the result of risk-based bank rating assessment (from the supervisory process) for the calculation of minimum capital requirement. There will be an additional 1% up to 6% capital requirements, depending on the rating of bank’s risk profile, from the current 8% minimum capital requirement.

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18. The results of the survey are as follows:

1. Most banks expressed the preference for Basel II to be applied to all commercial banks. However, 34.7% of the banks wanted Basel II to be mandatory for banks meeting certain criteria as internationally active banks, while compliance with Basel II for other commercial banks should be voluntary.
2. Concerning the expected time needed to implement Basel II, the time frames put forward by banks varied widely from 2005 to 2012, depending on the approach to be followed.
19. For the purpose of this study, the definition of banks is non-Islamic commercial banks.
20. During the transitional period, capital requirement for operational risk was based on 5%, 10% and 15% of bank’s gross income as at January 2010, July 2010 and January 2011, respectively.

Regarding the implementation of Pillar 3 – Basel II, BI is in the process of revising the current regulation on the publication and transparency of bank financial condition, which is expected to be issued in Q3:2012. The additional scope of disclosure in the Pillar 3 regulation covers: (i) qualitative and quantitative disclosure regarding capital level, and (ii) qualitative and quantitative disclosure regarding the exposure level and risk management quality. The disclosure is to be available through the bank’s annual report and website.

As regards the capital aspect, since 2008, the definition of capital has been based on the Basel II framework but with several conservative adjustments, such as:

- “current year profit and loss” is calculated only 50% of its value during profit condition, while during loss condition is calculated 100% of its value.
- “revaluation reserve from fix assets” being calculated only 45% of its value.
- treatment of “deferred tax asset” is deducted from Tier 1 capital, instead of being part of risk weighted asset (RWA) calculation.

### **3. Assessment of the Impact of Basel III Standards**

#### **3.1 Definition and Type of Banks**

For the purposes of assessing the impact of the Basel III framework on the different type of banks, this study will categorise Indonesian banks under the following types:

- (1) State-owned Banks: banks that are owned and controlled by the Indonesian government;
- (2) Regional Development Banks: banks that are owned and controlled by the Indonesian local governments and generally operate in its regions or municipal areas.
- (3) Foreign-owned Banks: banks that are branch of foreign banks.
- (4) Other Locally Incorporated Banks: banks that do not fall into one of the above categories.

The market share of each type of the banks in terms of total asset and number of branches, based on the June 2012 data, are shown in Table 2. The state-owned banks play the most significant role in the banking industry where four banks contribute up to 36.33% of share of the industry total asset. This means that each of the state-owned banks in average contributes around 9%

of the market share. This contribution is more than 10 times higher than the average contribution of each bank in the category of foreign-owned banks (0.759%), other locally incorporated banks (0.579%) and regional development banks (0.376%).

**Table 2**  
**Total Asset and Total Branch for Each Bank Type in Indonesia**

No	Type of Banks	Number of Banks	Total Asset		Total Branch	
			Value (Billion IDR)	Share (%)	Number	Share (%)
1.	State-owned Banks	4	1,369,752	36.33	4,781	31.10
2.	Regional Development Banks	26	368,804	9.78	1,518	9.88
3.	Foreign Owned Banks	10	286,262	7.59	191	1.24
4.	Other Locally Incorporated Banks	80	1,745,616	46.30	8,882	57.78

## 3.2 Assessment of Impact on Current Capital Ratios

### 3.2.1 Description of Current Capital Rules

Under the current regulations, BI has been implementing the definition of capital in line with the BCBS documents preceding the Basel III framework. Generally, the regulation on capital instruments is in accordance with the Basel II framework where banks' capital instruments consist of three types of capital, i.e. Tier 1, Tier 2 and Tier 3. Also, there are certain thresholds related to Tier 2 and Tier 3 instruments, such as the amount of Tier 2 plus Tier 3 capital being limited up to 100% of Tier 1 capital. Under the current regulations, the minimum regulatory requirements for the Tier 1 ratio is 5% of RWA, while for the total capital is 8% of RWA.

Although BI's regulation on capital is not Basel III compliant, there are certain elements in our current regulation which are more conservative than the Basel III recommendations, e.g. the current year profit, investment in capital instruments of other financial institutions, and deferred tax asset. In the near future, BI is going to adopt the Basel III recommendation on capital definition by amending its regulation in 2013, prior to the deadline in transferring its supervisory and regulatory authority over the Indonesian banking sector to the newly-established FSA.

Similar to the previous policy being made regarding the implementation of the Basel I and Basel II framework, the framework of Basel III is going to be implemented for all non-Islamic commercial banks. Through the implementation of identical framework for all non-Islamic commercial banks, BI aims to reduce the burden which may occur in our supervisory process, for instance the need

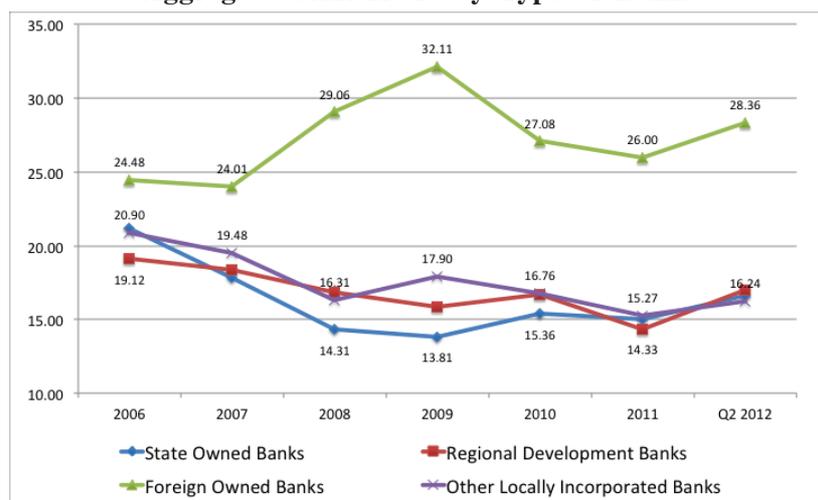
to further differentiate banking supervisors and its supervisory approach based on the bank segments. As of June 2012, the non-Islamic commercial banks represent 94.55% of the total Indonesian banking assets.

### 3.2.2 Status of Current Level and Adequacy of Capital of Individual Banks or Banking Groups in Terms of Key Performance Indicators for Capital

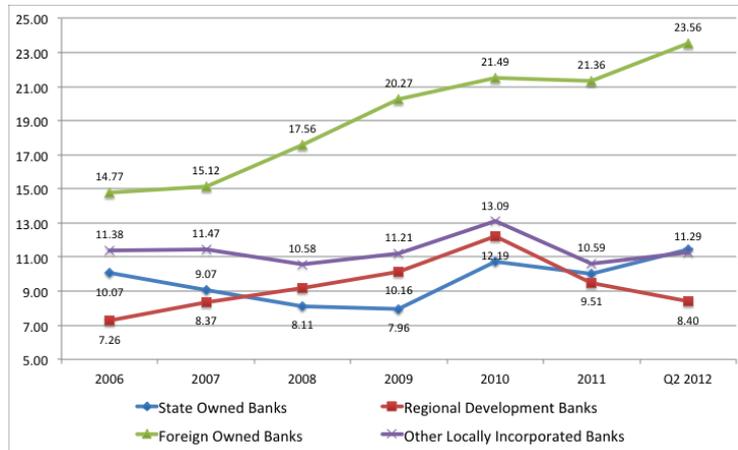
As shown in Figure 8, in the last 6 years, the aggregate CAR level of Indonesian banks is above 16% at all times. In terms of the nominal value, the banks' capital has been growing rapidly and more than tripled their value from IDR 183 trillion (2006) to IDR 466 trillion (Q2: 2012). Banks' capital is growing about the same rate as their total asset, enabling them to maintain the ratio of banks' capital to total asset at a stable level around 11%.

Based on the June 2012 data, by type of banks, the foreign-owned banks have the highest CAR ratio at 28.36%, followed by the regional development banks at 17.00%, state-owned banks at 16.58% and other locally incorporated banks at 16.24% (Figure 9). All types of banks are able to maintain their "ratio of capital to total asset" at a relatively stable level, or, in other words, their capital is growing at the same pace as their total asset growth, with the exception of foreign-owned banks. Foreign-owned banks were able to increase their capital at a higher growth rate than their total assets, contributing to a higher "capital to total asset ratio" from 14.77% in 2006 to 23.56% in Q2:2012 (see Figure 10).

**Figure 9**  
**Aggregate CAR Ratio by Type of Banks**

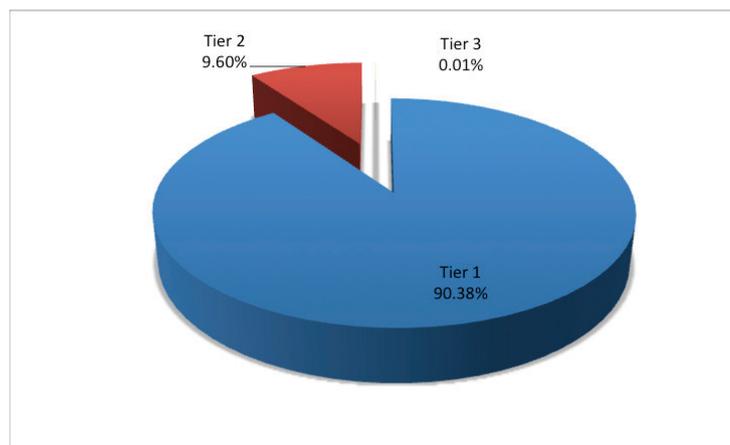


**Figure 10**  
**Capital-to-Total Asset Ratio by Type of Banks**



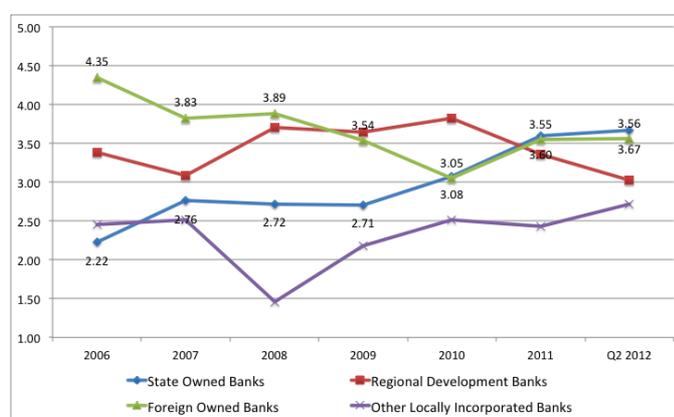
Looking deeper into the capital structure of Indonesian banks using the banks' financial data in June 2012, Tier 1 capital significantly dominates all other capital types at 90.38%, compared with Tier 2 capital at only 9.60% and Tier 3 capital at 0.02% (see Figure 11). This made the aggregate Tier 1 ratio stand at 15.42%, or slightly below the aggregate CAR ratio at 17.49% level. This level of Tier 1 ratio was far above the Basel III requirement of 4.5%, or 7% after the calculation of conservation buffer, or 9.5% after the calculation of conservation buffer plus the maximum amount of countercyclical capital buffer.

**Figure 11**  
**Composition of Capital in Indonesian Banking Industry**



The definition of Tier 1 capital under the “current” BI regulation meets the definition of Common Equity Tier 1 in the Basel III framework. In other words, all Tier 1 instruments in the Indonesian banks are also CET1 instruments in the Basel III framework. This condition constitutes the basis for BI to assume that the Indonesian Banks will not face difficulty in meeting the higher capital requirements and the new Common Equity Tier 1 requirement in the Basel III framework.

**Figure 12**  
**Return on Asset (ROA) by Type of Banks**



Another factor supporting the conclusion is related to the revenue generating power of the Indonesian banking system. As we can gather, the current year profit and losses (current P/L) is included in the calculation of capital, making the indicator of revenue generating power, such as the ROA, reflect the banks’ natural ability in increasing their capital level through normal operating activities. The foreign-owned banks have the highest revenue generating power as indicated by their average ROA during the period of 2006 to 2012, at 3.68%, followed by the regional development banks at 3.43%, state-owned banks at 2.97% and other locally incorporated banks at 2.33%. Although the foreign-owned banks have the highest average ROA, they experienced a declining trend from 4.35% in 2006 to 3.56% in Q2:2012. Whereas the state-owned banks experienced a significant trend increase in their revenue generating power since 2010 from 2.71% to 3.67% in 2012 (see Figure 12).

### 3.2.3 Assessment of Capital Levels Based on Basel III Enhanced Capital Requirements

Although Basel III's implementation aims to increase the quality and quantity of banks' capital, there are certain elements in the Basel III framework that are more loose compared with BI's current regulation on capital definition and regulatory adjustments as shown in Table 3 below.

**Table 3**  
**Comparative Analysis between Basel III Framework and Bank Indonesia's Regulation Regarding Component of Capital and Regulatory Adjustment**

No	Component of Capital	Basel III	Bank Indonesia Regulation	More Conservative
1.	Current Year Profit and Loss	Fully included (100%) in the capital calculation as Tier 1 capital, either during a profit or loss conditions.	<ul style="list-style-type: none"> <li>Partially included (50%) during profit condition; and</li> <li>Fully included (100%) during loss condition, in the capital calculation as Tier 1 capital.</li> </ul>	Bank Indonesia
2.	Deferred Tax Assets (DTA)	<ul style="list-style-type: none"> <li>DTAs relate to temporary differences will be deducted from CET1 for the proportion of DTAs exceeding 10% of bank's CET1 or threshold deductions (15% of bank's CET1);</li> <li>DTAs that rely on future profitability of banks to be realised are to be fully deducted from CET1.</li> </ul>	<ul style="list-style-type: none"> <li>Same treatment for both (i) DTAs that relates to temporary differences and (ii) DTAs that rely on future profitability of banks to be realised.</li> <li>In the calculation of capital, retained earnings (i.e. current year P/L and/or previous years P/L) need to be neutralised from the impact of DTAs.</li> </ul>	Bank Indonesia
3.	Investment in other Financial Institutions where Bank owned more than 20% share.	For investment in form of: <ol style="list-style-type: none"> <li>Common Shares : deducted from CET1 for the portion of investment exceeding 10% of bank's CET1 or threshold deduction (15% of bank's CET1);</li> <li>Other Than Common Shares: fully deducted through a corresponding deduction approach.</li> </ol>	For investment in form of: <ol style="list-style-type: none"> <li>Common Shares: fully deducted from Tier 1 (50%) and Tier 2 (50%);</li> <li>Other Than Common Shares: fully deducted through a corresponding deduction approach if banks also issued similar instruments. If not, will be subject to RWA calculation.</li> </ol>	Bank Indonesia  Basel III
4.	Investment in other Financial Institutions where Bank has 10% - 20% share.	For investment in form of: <ol style="list-style-type: none"> <li>Common Shares: deducted from CET1 for the portion of investment exceeding 10% of bank's CET1 or threshold deduction (15% of bank's CET1);</li> <li>Other Than Common Shares: fully deducted through a corresponding deduction approach.</li> </ol>	For investment in form of: <ol style="list-style-type: none"> <li>Common Shares: RWA</li> <li>Other Than Common Shares: fully deducted through a corresponding deduction approach if banks also issue similar instruments. Subject to RWA if banks do not issue similar instruments.</li> </ol>	Basel III
5.	Investment in other Financial Institutions where Bank does not own more than 10% share.	Deduction from the capital using a corresponding deduction approach for the proportion of total investment exceeding 10% of bank's CET1.	Subject to RWA calculation.	Basel III

As a result of a more conservative approach on the regulation of capital definition, Indonesia is among five countries<sup>21</sup> where the Basel III implementation has a positive impact on banks' capital level and capital adequacy ratio. This result is based on a comprehensive quantitative impact study<sup>22</sup> conducted globally by BCBS, using the banks' financial data in December 2011.

There are two banks from Indonesia that participated in this study as Group 2 banks<sup>23</sup>. These two banks represent 24.14% of the market share of the Indonesian banking industry. Individually the Basel III's framework contributes to an increase in capital amount by 21.24% and 21.21%, an increase in RWA by 0.74% and 5.50%, and an increase in the CAR ratio by 287 bps and 229 bps. Among several aspects of the Basel III framework that provide a more relaxed treatment, (i) current year profit and loss and (ii) investment in other financial institutions where bank own more than 20% share, are the most significant factors that contribute to an increase in capital amount and capital adequacy ratio.

BI also conducted a similar study at national level using financial data reported by banks through the regulatory reporting system. Based on this study, BI found similar results concerning the impact of the Basel III implementation on banks' capital level in the Indonesian banking industry. This study was conducted regularly using banks' financial data during period of January 2012 to June 2012. Most of the Indonesian banks would experience an increase in CAR ratio if the Basel III framework was implemented on the reporting date.

The implementation of Basel III contributes to an increase in RWA by around 3% while it also contributes to an increase in total capital around 9% to 11%, during the first half of 2012. As seen in Table 4, the positive gap between the Basel III CAR and current CAR ratio was increasing steadily from 99 bps in January 2012 to 152 bps in June 2012. This phenomenon is caused by an increasing amount of accumulated current year profit being included in the calculation of total capital for each reporting period.

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21. Five countries where Basel III implementation have positive impact are Hong Kong, Indonesia, Luxemburg, Mexico and Russia.

22. Bank for International Settlement, available at <http://www.bis.org/publ/bcbs231.pdf>

23. Group 1 banks are those that have Tier 1 capital in excess of •3 billion and are internationally active. All other banks are considered Group 2 Banks

**Table 4**  
**Result of National Quantitative Impact Study**  
**on Basel III Implementation**

No	Basel III impact	Jan-12	Feb-12	Mar-12	Apr-12	May-12	June-12
1.	Increase in Capital (%)	9.23	9.63	10.01	10.86	11.36	11.62
2.	Increase in RWA (%)	3.68	3.39	2.96	2.89	2.87	2.72
3.	Increase in CAR (bps)	99	111	125	139	146	152

Using banks' financial data in June 2012, the impact of Basel III implementation by type of banks can be seen in Table 5. Foreign Banks is the type of bank that did not show the benefit of capital increase from current year profit accumulation, because they usually transfer most, if not all, of their profit back to their corporate headquarters.

**Table 5**  
**Impact of Basel III Implementation by Type of Banks**

in Million IDR

	State Owned Banks	Regional Development Banks	Foreign Owned Banks	Other Banks
<b>Total Capital</b>				
Current Capital	158,699,065	31,016,604	67,848,143	209,911,789
Basel III Capital	181,842,447	36,418,973	67,696,085	235,839,966
Tier 1 Capital	164,100,129	33,289,705	67,696,085	203,619,110
<b>RWA</b>				
Current Regulation	947,248,145	184,130,011	237,445,869	1,298,556,125
Basel III	983,600,891	186,735,575	238,721,567	1,330,905,767
<b>CAR</b>				
Current Regulation	16.75%	16.84%	28.57%	16.17%
Basel III	18.49%	19.50%	28.36%	17.72%
Tier 1 ratio	16.68%	17.83%	28.36%	15.30%
<b>Increase in</b>				
Capital	14.58%	17.42%	-0.22%	12.35%
RWA	3.84%	1.42%	0.54%	2.49%
CAR	1.73%	2.66%	-0.22%	1.56%

### 3.3 Assessment of Current Level of Leverage

Through usage of the leverage ratio, the BCBS introduced a simple, non-risk based indicator aimed at constraining the build-up of leverage in the banking sector. Learning from the lesson of the latest financial crisis, in the effort to stem losses faced by them, banks were forced by the market to reduce their leverage level in a manner that amplified downward pressure on asset prices,

further exacerbating the positive feedback loop between losses and triggering declines in banks capital and contraction in credit availability.

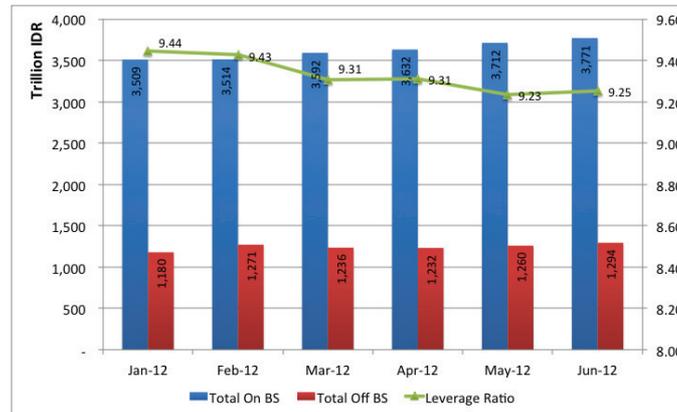
Based on a study conducted by BI using its regulatory reporting system, in aggregate the Indonesian banks have a leverage ratio of 9.25%, well above the Basel III minimum requirement of 3%. Under this simulation, BI applied higher weight for unconditionally cancellable line of credit (“uncommitted line of credit”) at 100% compared with the Basel III recommendation of 10%. There is no significant difference in the leverage ratios by type of banks, with foreign-owned banks having the highest leverage ratio at 10.15%, based on the June 2012 data (see Table 6).

**Table 6**  
**Basel III Impact on Bank’s Leverage Ratio by Type of Banks**

No	Type of Banks	Tier 1	On and Off BS	Leverage Ratio (%)
1.	State-owned Banks	164,100,129	1,672,482,212	9.81
2.	Regional Dev. Banks	33,289,705	395,878,067	8.41
3.	Foreign-owned Banks	67,696,085	666,696,180	10.15
4.	Other Locally Inc. Banks	203,619,110	2,329,859,410	8.74
	<b>TOTAL BANKS</b>	<b>468,705,029</b>	<b>5,064,915,870</b>	<b>9.25</b>

For the Indonesian banking sector, the off balance sheet exposure is not too significant. The off-balance sheet exposure represents one-third or around 33% of the on-balance sheet exposure (see Figure 13). Thus, the Indonesian banks are not conducting the leveraging process through off-balance sheet exposure like other international banks in the more advanced economies. As shown in Figure 7, the value of the notional amount of derivative transactions comprises approximately 15% of banks’ total assets which means the other form of off-balance sheet exposure, such as undrawn line of credits, represents around 18% of banks’ total assets.

**Figure 13**  
**On-BS Exposure, Off-BS Exposure and Leverage Ratio**  
**during 1<sup>st</sup> Half of 2012**



### 3.4 Assessment of Liquidity in Terms of New Liquidity Ratios

#### 3.4.1 Description of Current Liquidity Rules

Basel III introduced and formalised the usage of two indicators for measuring the level of liquidity risk in the banking sector. The indicator of Liquidity Coverage Ratio (LCR) serves to promote the short-term resilience of a bank’s liquidity risk profile by ensuring that the bank has sufficient high-quality liquid asset to survive a significantly stressed scenario lasting for 30 days. Whereas the indicator of Net Stable Funding Ratio (NSFR) serves to promote longer term resilience by creating additional incentives for banks to fund their activities with more stable source of funding on an on-going basis.

The ultimate objective of Basel III’s liquidity measures are understandable for all supervisory authorities, including BI. Nevertheless, under the current supervisory framework, BI still uses the other tools to measures banks’ liquidity risk profile, such as liquid-asset-to-liquid-liabilities ratio and loan-to-deposit ratio.

- (a) **Liquid-asset-to-liquid-liabilities ratio.** This ratio is used to measure whether a bank has sufficient high-quality liquid asset to meet its short-term or liquid liabilities. The definition of “liquid asset” consists of cash, placement to BI (in form of current account and BI Certificate), and placement to other banks (in form of current account and deposit). The definition of “liquid liabilities” consists of third-party fund (in form of current account,

saving account and time deposit), and liabilities to other banks (in form of interbank call money and deposit on call). Going by this ratio, a higher ratio means a lower liquidity risk, and vice versa.

- (b) **Loan-to-deposit ratio.** This ratio is used to measure whether a bank was using third- party funds as a stable source of funds to provide loan originating activities. Going by this ratio, a higher ratio means higher liquidity risk, and vice versa.

In view the BCBS has not finalised the recommendation on liquidity parameters of LCR and NSFR, BI has not yet issued any relevant consultative paper or regulation on the same. During the monitoring period set by the BCBS, BI will continue to monitor the level of LCR and NSFR in the banking sector through regular study.

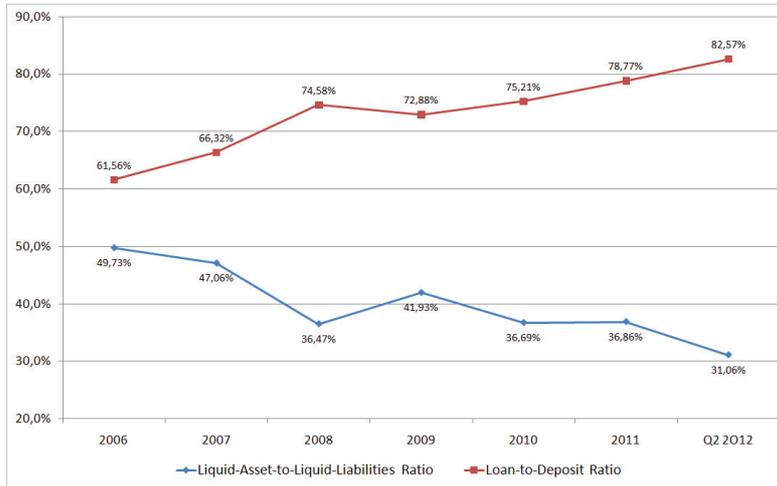
#### ***3.4.2 Current Level and Adequacy of Liquidity of Individual Banks or Banking Groups in Terms of Key Performance Indicators for Liquidity***

Using the indicator of liquid-asset-to-liquid-liabilities ratio during period of 2006 until Q2:2012, there is a declining trend of this ratio from 49.73% in 2006 to 31.06% in Q2:2012. This trend is in line with a increasing trend of loan-to-deposit ratio (LDR) over the similar period (Figure 14). This condition can be explained by the increasing contribution from the banking sector to domestic economic growth through loan origination, albeit it also increased the level of liquidity risk faced by the banks. Under the current regulation on monetary reserve requirement<sup>24</sup>, BI imposed a disincentive for those banks having LDR ratio under 78% or above 100% which made them subject to a higher reserve requirement than banks having LDR ratio between 78% to 100%. This policy aims to enlarge the intermediation process and reduce the monetary cost faced by BI because banks place their liquidity excess in monetary instruments.

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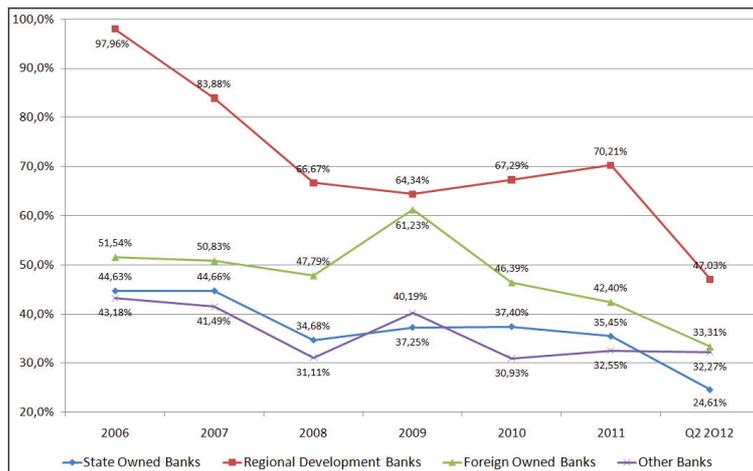
24. Bank Indonesia Regulation Number 13/10/PBI/2011, available at [www.bi.go.id](http://www.bi.go.id)

**Figure 14**  
**Aggregate Liquid-Asset-to-Liquid-Liabilities Ratio and LDR Ratio**



As seen in Figure 15, , the regional development banks which have the highest liquid-asset to liquid-liabilities ratio, faced the lowest liquidity risk, followed by the foreign-owned banks, other locally incorporated banks and state-owned banks, based on the June 2012 data.

**Figure 15**  
**Liquid-Asset-to-Liquid-Liabilities Ratio by Types of Banks**



In proportion to bank's total asset, as of June 2012, the amount of liquid asset owned by banks is around 11% - 27%, depending on the bank type (Table 7). In the last six years, the ratio declined from 27.44% in 2006 to 13.29% in Q:2012. Although in value terms, the volume of liquid assets expanded and recorded a 11.26% growth from IDR 464,735 billion in 2006 to IDR 517,071 billion, but the banks' total assets grew at a faster pace. During the same period, the growth rate of third-party funds, which grew at 16.32% CAGR, was unable to catch up with the loan originating growth rate at 22.81% CAGR, thus contributing to lower the level of the banks' liquid asset coverage.

**Table 7**  
**Liquid Asset-to-Total Asset Ratio, by Type of Banks**

Type of Banks	2006	2007	2008	2009	2010	2011	Q2 2012
State Owned Banks	23.64%	24.02%	19.16%	20.58%	22.01%	18.13%	12.39%
Regional Development Banks	56.29%	46.10%	34.91%	27.87%	31.78%	28.14%	27.10%
Foreign Owned Banks	24.78%	27.30%	19.90%	26.28%	20.05%	16.77%	14.25%
Other Banks	25.02%	23.53%	17.74%	22.36%	19.74%	15.93%	11.07%
ALL BANKS	27.44%	25.98%	19.86%	22.42%	21.60%	17.81%	13.29%

### **3.4.3 Quantification of LCR and NSFR and Assessment Of Future Liquidity Requirements**

Currently, BI does not have the required data structure needed to calculate and monitor the LCR and NSFR of the Indonesian banking system through its regulatory reporting system. Even in case of the two banks participating in the comprehensive quantitative impact study of the BCBS, they have to make certain assumption about their funding structure to enable them to calculate the LCR and NSFR.

The banks' information systems currently are inadequate in providing the requisite data needed to calculate both the liquidity indicators as required by Basel III, for them to differentiate their funding structure based on certain definitions, e.g. stable vs less-stable, retail vs wholesale, operational relationship vs non-operational relationship. Although the banks may use these terms for their daily risk monitoring and risk management in relation to liquidity risk, the definitions may differ from the Basel III definitions.

Using data from the two banks which participated in the quantitative impact study of the BCBS, both of them meet the Basel III requirement with their LCR levels at 240% and 487% and their NSFR levels at 131% and 100%.

**Table 8**  
**Basel III Impact on Bank's Liquidity Risk Profile**  
**Based on National Study**

	LCR	NSFR
Bank 1	597%	147%
Bank 2	597%	147%
Bank 3	528%	130%
Bank 4	334%	111%
Bank 5	300%	212%
Bank 6	234%	119%
Bank 7	209%	129%
Bank 8	109%	102%
Bank 9	100%	110%

BI is also conducting a national study to measure the impact of Basel III on the banks' liquidity risk profile. This study purposes to cover the 14 biggest banks (excluding the two banks which have participated in the comprehensive impact study done by the BCBS) and use the banks' financial data of December 2011. However, due to certain conditions, e.g. data limitation and capabilities, the result only covers nine banks as seen in Table 8. All the Indonesian banks in this study meet the requirements of Basel III and have LCRs and NSFRs of more than 100%. The study on the impact of the liquidity framework, taking together both the studies by the BCBS and BI, covers 11 banks and represents 57.38% of the Indonesian bank total assets.

#### **4. Issues and Challenges pf Implementing Basel III Standards**

##### **4.1 Regulatory Constraints and Infrastructure Issues**

The Basel III document covers the recommendations for strengthening the global capital framework and introducing a global liquidity standard. There are several recommendations in Basel III that have to be implemented effectively by 1 January 2013. As a member of the G20, Indonesia has confirmed its commitment to implement Basel III in line with its time schedule. Nevertheless, there are certain issues and constraints faced by BI concerning its implementation.

The first issue is the result of challenges faced by the banks in measuring and calculating the liquidity indicators of LCR and NSFR. As previously mentioned, certain assumptions regarding banks' funding structure need to be

made in order for the banks to measure and calculate the LCR and NSFR. The banks will continue to deal with this challenge until they improve their data structure and information system. Meanwhile, it is incumbent upon BI to ensure that the banks' underlying assumptions regarding the LCR and NSFR calculations are based on sound basis and commensurate with the banks' business activities and their funding risk profile.

The second issue relates to the ability of BI to improve its regulatory reporting system as a result of LCR and NSFR implementation. The implementation of the Basel III liquidity parameters requires both the banks and BI to improve their information systems. Enhancement of the regulatory reporting system is a prerequisite for improving BI's capability in analysing the consistency of the banks' underlying assumptions and their calculation over time, through its offsite supervision process. As BI is in the process of transferring its authority over to the newly established FSA, BI is restricted in overhauling its reporting system in view of the jurisdictional change.

The third issue relates to the concept of countercyclical capital buffer about how it may burden the banks to support domestic economic growth. As Basel III aims to reduce the impact of cyclicity in economic condition through the usage of countercyclical capital charge, it is essential that BI has the required ability to analyse whether the current level of aggregate credit growth in the domestic economy represents a build-up of system-wide risk that warrants a capital charge. Also, in the case where the excess of credit growth is coming from the non-banking sectors, the banks will receive a "penalty" and subjected to an increasing capital requirement that will limit their ability in supporting the Indonesian economy.

## **4.2 Capital Augmentation and Related Issues**

As shown in Tables 4 and 5, the Indonesian banks can be considered well capitalised with their current CAR ratio well above the Basel III requirements. Assuming Basel III was implemented in June 2012, their aggregate CAR ratio did not decline as a result of the implementation. On the contrary, there would be an increase in the CAR ratio around 152 bps in aggregate, with the regional development banks experiencing the highest benefit at 266 bps, followed by the state-owned banks at 173 bps and other banks at 156 bps. This would register the CAR ratio "after Basel III implementation" for foreign-owned banks, regional development banks, foreign owned banks and other locally incorporated banks at 18.49%, 19.50%, 28.36%, and 17.72%, respectively. On individual basis, using

the banks' financial data as of June 2012, each of the Indonesian banks has:

- Tier 1 ratio above 4.5% or 7% of RWA (after considering a capital conservation buffer);
- CAR above 8% or 10.5% of RWA (after considering a capital conservation buffer).

Although none of the banks in Indonesia need to issue capital instruments either in the form of common equity or subordinated obligation for meeting the Basel III capital requirements, it does not mean that the banks "still" have the same capability to support their strategic plans related to loan growth. The Basel III requirements on the capital conservation buffer and countercyclical capital buffer would reduce the level of excess capital they have above the minimum requirement. Hence, the banks would need to increase their internal capital target level in order to maintain their previous level of excess capital.

It is expected that, in aggregate, the Indonesian banks would need a period of 18 months to neutralise the impact of the additional 2.5% capital buffer requirement on their loan originating capabilities, through the accumulation of their current year profit<sup>25</sup>. The period will be double to 36 months if we consider another 2.5% capital requirement for the countercyclical capital buffer. Hence the 3-year transition period given by the BCBS to implement the conservation buffer and countercyclical capital buffer is adequate for the banks in Indonesia, in order to assure that the implementation will not negatively contribute to the banks' loan growth and domestic economic growth.

### **4.3 Review of Asset and Liabilities Management Strategies**

Although the impact of Basel III on Indonesian banks' capital adequacy level is quite clear, it is not the case with regard to the banks' liquidity risk profile. Even though the results of (i) the comprehensive quantitative impact study done by BCBS and (ii) the national quantitative impact study done by BI have shown that the sample banks are able to meet the requirements, the assessment is yet to cover all the banks in Indonesia.

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25. Based on profit and loss figure of the first half of 2012.

Hence, more studies are required to measure its accurate impact. A more comprehensive study is currently underway and the results will be available no sooner than the end of this year. Nevertheless, there is good reason to assume all the other banks will also be able to fulfill the LCR and NSFR requirements, just like the current sample banks.

#### **4.4 Implication on Cost and Profitability**

For banks which are unable to meet the increased minimum capital requirements from the Basel III framework, they need to raise new capital instruments either through the issuance of common shares, additional Tier 1 or other Tier 2 instruments, in order to meet the new requirements. Assuming that the shortfall in the capital amount is happening to several banks, it will increase the competition in the market to attract new investors, thus increasing the cost of capital for these banks. These banks have two options available to them. First, transfer this additional cost of capital to their debtors through an increase in the interest rate for loans, as a way to maintain the banks' current level of profitability. Second, the banks may choose to maintain their competitiveness by maintaining the current loan rates and absorbing the additional cost, albeit this will lower their net interest margin and profitability level.

The same consequences apply to the banks which are unable to meet the liquidity requirements of the LCR and NSFR. For the banks that are incapable of meeting the LCR requirement, they need to set aside more cash and liquid assets. Since liquid assets generally yield a lower level of return compared with the more-illiquid asset, this will reduce the banks' rate of return and their profitability.

As for the banks that are unable to meet the NSFR requirements, they need to adjust their funding structure by increasing the composition of retail deposit and tapping into wholesale funding with operational relationship or longer term funding, for their sources of funds. Considering that Indonesia has a quite diversified demography, an effort to better improve the banks' funding structure will require the banks to increase the number of branches and improve their information systems in order to provide more services to retail and wholesale customers and maintain operational relationship with them. Hence, this effort will increase the banks' overhead cost, lowering their profitability level.

On the other hand, if the banks' effort in adjusting their funding structure through increasing the composition of retail deposit to total deposit and improving operational relationship with their wholesale depositors is successful, they will

gain a benefit in the form of lower interest cost for funding, because of two reasons. First, the retail depositors generally have lower bargaining power compared with wholesale depositors, thus the banks will be able to lower their funding cost without having to worry about their retail depositors defecting and transferring their funds to the other banks. Second, wholesale depositors with operational relationship usually place their funding in the form of current account to service their operational and business activities. This type of account will have bear a lower interest rate and is more stable, compared with time deposits. Thus, the implementation of the Basel III liquidity framework may have different impact among the banks, depending on how successful are the banks in adjusting their funding structure and in competing for more retail depositors as well as wholesale depositors and to increase their operational relationship with.

Fortunately, several banks participating in our study do not face the above conditions and difficulties. On the capital side, the Indonesian banks have an adequate level of capital and the Basel III framework will not lower their capital level due to enforcement of more conservative regulation in our jurisdiction. Nevertheless, BI is expecting the banks to accumulate their current year profit for at least three years in order to increase their capital level by 500 bps and neutralise the impact of the capital conservation buffer and countercyclical capital buffer requirements. Even if the banks choose to increase their capital level through the inorganic process, they still have ample time and can avoid tight competition which contributes to higher cost of capital. On the liquidity side, the implementation of the liquidity parameters is expected to have no impact on the banks' business model since all the banks in our sample are able to meet the requirements of the LCR and NSFR more than 100%.

#### **4.5 Implication on Financial Markets/Economy**

Since the Basel III implementation is expected to increase the demand from the banks for securities and bonds meeting the definition of Level 1 and Level 2 assets, the increase in demand will reduce bond yield and lower the economic cost for the government and private sectors in the financing of their funding needs through future bond issuance. Assuming that the private sectors respond to the yield reduction shifting their funding sources from the banks to the capital market, it is expected that the Basel III framework will increase the level of financial deepening in the Indonesian economy and improve the efficiency of our financial system.

However, some challenges still remain. The non-financial sectors in Indonesia still rely heavily on the banks as their funding sources. This is shown by the data of Bapepam-LK<sup>26</sup>. Out of 203 bonds issued and traded in the Indonesian capital market up to June 2012, the financial sector dominates all the other sectors with 82 issuance, representing share of 40.39%. In value terms, the share of the financial sector is even higher at 58.65% (IDR 173.64 trillion out of the total bonds of IDR 296.04 trillion issued by the private sectors). Considering that the bonds issued by the financial institutions are not recognised in the calculation of the LCR and NSFR, there is a need to gradually increase the amount of bonds issued by the non-financial corporates with good rating condition.

Due to the low level of liquidity assets from non-financial institutions in the bond market, the banks have to increase their liquid assets through accumulation of government bonds as the source of Level 1 and Level 2 assets. In June 2012, the amount of government bonds outstanding is IDR 786.49 trillion. Even though the amount of government bonds outstanding is more than 4.8 times the total bonds outstanding from private sectors at IDR 162.10 trillion, it is still far from being considered as adequate since it only represents 21.05% of the Indonesian banks' total assets. Even if we take into consideration the amount of BI's Certificate at IDR 101.44 trillion<sup>27</sup> as a tradeable and liquid instrument, the amount of government bonds and BI's certificate only represent 23.46% of the Indonesian banks' total assets. Hence, the Indonesian banks probably meet the liquidity requirements through cash and placement in BI which generate much lower rates of return.

#### **4.6 Human Resource Constraints**

The implementation of the Basel III framework will require BI and the banking industry to improve the skill of their human resources to understand the essence of the Basel III recommendations, with the purpose of improving risk management practices in the banks and supervisory practice in BI. The Basel III recommendations not only attempt to formalise standards to measure liquidity risk and increase quality and quantity of capital, but also to enhance risk coverage for more complex and structured products in the calculation of RWA, e.g. the calculation of credit valuation adjustment (CVA). Although most of the Indonesian

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26. Bapepam-LK, Capital Market Statistic, 4th week June 2012, available at [www.bapepamlk.depkeu.go.id](http://www.bapepamlk.depkeu.go.id)

27. Bank Indonesia, Indonesian Financial Statistics, June 2011, available at [www.bi.go.id](http://www.bi.go.id)

banks are not deeply involved in these types of transactions, there are several foreign-owned banks which are heavily involved, thus raising the need for BI to improve and provide the requisite training for its supervisors.

For BI as a regulator, this training gap will be reduced and fulfilled through regular training programmes for its banking supervisors arranged by its human capital development department. This approach is similar with the approach taken by BI during the preparation process for the Basel II implementation. As for the banks, they can improve the skills of their employees through training given and provided by the banking associations and by several training providers in Indonesia.

#### **4.7 Impact on Cross Border Supervision**

Under the current structure, BI generally acts as host supervisor and not as home supervisor where banks in Indonesia (and there are several) are owned by foreign financial institutions. Indonesian banks having investments in foreign financial institutions are not material. Taking this into consideration, it is believed that the implementation of Basel III will not raise additional issues on cross-border supervision than from the current status.

BI will continue to enhance cooperation and coordination with foreign regulators through signing of Memorandum of Understanding (MoU) on cross-border banking supervision. Currently BI has signed the MoUs with the Monetary Authority of Singapore (MAS), Bank Negara Malaysia (BNM), China Banking Regulatory Commission (CBRC), Financial Services Commission (FSC-Korea) and the Australian Prudential Regulatory Authority (APRA).

#### **4.8 Issues in Implementation of Countercyclical Capital Buffer**

The Basel III framework requires the national authority to monitor and measure the indicator of aggregate credit growth in the domestic economy. That indicator represents a build-up of system-wide risk which warrants a countercyclical capital charge. For the developing countries, such as Indonesia, which rely heavily on banking sector funding to support domestic growth, this requirement is expected to have a negative impact on loan growth as well on economic growth. Thus, it will be more challenging for BI to decide when an aggregate credit growth is considered to be excessive.

Also, the document requires the national authority to publish its decision on the countercyclical capital buffer one year prior to its effective implementation, meaning that there is a possibility the decision on the capital buffer amount may

become obsolete due to changes in economic conditions and external factors during that one-year period. Over the past decades, globalisation and technology development have improved the ability of market participants to react and respond to public information and changes in economic condition, making the financial market more volatile and hard to predict. Thus, the regulators will be burdened to decide on the amount of countercyclical capital buffer commensurate with the expected condition of the banking industry in the next one-year period.

## **5. The Way Forward and Strategic Options**

### **5.1 Strengthening the Regulatory Framework**

Under the current legal framework, BI is vested with adequate power to implement the Basel III framework. The Banking Act and Bank Indonesia Act provide a legal basis for the authority exercised by BI to set the minimum regulatory requirements in the Basel III framework, such as the minimum CET1 ratio, minimum Tier 1 ratio, minimum LCR ratio and minimum NSFR ratio, through the issuance of BI Regulations without prior need to amend the current law and acts.

Specifically, for the implementation of the Basel III liquidity framework, BI will conduct analysis and research in order to provide more detailed guidelines in defining several key terms used in the calculation of the LCR and NSFR, such as stable vs. non-stable, retail vs. wholesale, operational relationship vs. non-operational relationship. These guidelines are to ensure that the banks' approach in calculating the LCR and NSFR are consistent with the characteristic of the funding risk profile in our domestic market.

A lesson learned from the latest global financial crisis is that a high level of capital is not a substitute for lack of risk management and corporate governance practices. Under the current supervisory framework, BI requires the banks to have in place a risk management process for eight types of risk, namely credit risk, market risk, operational risk, liquidity risk, strategic risk, legal risk, compliance risk and reputational risk. This risk management framework has been implemented since 2003 and recently revised in October 2011 to reflect the current progress in risk management practices in the global environment, including the practices in liquidity risk management.

## **5.2 Development of Capital Markets and Instruments**

As mentioned, the Indonesian economy is heavily reliant on the banking industry where the bond market share only represents 9.5% of total Indonesian financial system. Currently, there is a lack of high quality bond issuance in our capital market. This will make the Indonesian banks rely solely on the Indonesian government bonds and BI's certificate as their liquidity instruments, since the Basel III framework requires the liquidity instruments to be of high quality grade and low price volatility.

BI expects the Basel III liquidity requirement to increase the demand from banks for high quality bond instruments. This may lower the required yield in the bond market and provide an incentive for the private sectors with good rating quality to seek financing from the capital market. Considering private institutions seeking financing from the capital market will be subjected to higher requirements set by the capital market regulator, it is necessary for BI to step up its coordination with the other regulatory authority such as Bapepam-LK, to provide adequate incentives for the private sectors with high quality credit rating to issue securities in the capital market.

## **5.3 Balancing Between Conservativeness and Competitiveness of Indonesian Banking Industry**

As previously stated in Section 3, although Basel III aims to improve the quality, quantity and transparency of capital in the banking sector, there are certain elements in the current regulations that are more conservative than the Basel III recommendations. Two of these elements play a significant role in the treatment of (i) current year profit and (ii) investment in other financial institutions where banks own more than 20% share.

Under the current regulation, all investment in the other financial entities where banks own more than 20% share will be deducted from the bank's capital amount<sup>28</sup>. From the study of BI, for most of the Indonesian banks, the amount of the total investments in other financial institutions is less 10% of bank's CET1. Hence the investments will not become a regulatory adjustment in the calculation of bank's capital, but instead become subject to the RWA calculations. While adopting this treatment of Basel III for the Indonesian banks can increase the banks' capital and CAR level, it may reduce the quality of capital in the Indonesian banking sector.

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28. 50% from Tier 1 capital and 50% from Tier 2 capital.

The above impact is also valid if BI is going to adopt Basel III's treatment on banks' current year profit. This implementation will contribute to higher volatility in the value of banks' capital and also their capital ratios. On the other hand, if BI chooses not to implement this recommendation, it will make the Indonesian banks less competitive compared with other banks in the regions, due to their lower level of capital. Also for the purpose of increasing market transparency, it is easier for the market participants to assess the quantitative aspect of capital, e.g. CAR ratio, than the quality aspect of it, e.g. higher requirement for capital instruments.

The implementation of the ASEAN Banking Integration Framework (ABIF) starting in 2015 is also another factor that needs to be considered by BI in its way of adopting the Basel III framework and balancing between conservativeness and competitiveness of the Indonesian banking industry.

#### **5.4 Roadmap for Implementation of Basel III**

BI has issued its policy to implement Basel III's capital framework in 2013 prior to the deadline of transferring its authority to the Indonesian FSA in December 2013. As for the Basel III liquidity framework, BI is going to conduct a research and issue a consultative paper on the Basel III liquidity framework during 2013. It is expected that the formal regulation on the Basel III liquidity requirements will be issued by the newly-established FSA not earlier than 2014.

### **6. Conclusion**

Without any doubt, BI is encouraging the implementation of the Basel III framework in an effort to further improve the ability of Indonesian banks to absorb losses from their business activities, thus reducing the risk of bank failure that can have a negative effect on the stability of the Indonesian financial sector and real sector economy. The Asian financial crisis of 1997/1998 had provided valuable lessons for BI about how banks' failure can have a significant negative impact on the economy and the long period of time needed by Indonesia to recover from it.

Although in terms of capital amount, the Basel III's definition of capital will have a positive impact on the capital level of Indonesian banks, BI expects that the implementation of the capital buffers, e.g. capital conservation buffer and countercyclical capital buffer, will have negative impact on the level of excess capital needed to support the banks' future loan growth and Indonesian economic growth. Nevertheless, based on our study, the period of time needed by the

Indonesian banks to neutralise this negative impact is approximately three years and still in line with the Basel III transitional period for its implementation. Hence, we can expect the Indonesian banks will balance the implementation of the capital buffers through the accumulation of current year profit from their normal business activities.

The implementation of the Basel III capital framework also raises issues regarding the conservativeness and competitiveness of Indonesian banks due to its implementation. In contrast to the developed countries where the Basel III implementation will increase the quality of banks' capital, its implementation in Indonesia - in certain aspects - will reduce the capital quality of Indonesian banks, due to the more conservative requirements of the current regulation. On the other side, if BI decides to maintain its conservative regulation, this will result in a lower capital level for the Indonesian banks, thus lowering the competitiveness of Indonesian banks vis-à-vis their competitors. Hence, BI needs to carefully consider this consequence prior to issuing its final regulation on the Basel III capital framework.

BI views the implementation of the liquidity standards on LCR and NSFR as the most challenging aspect of the Basel III implementation. It will require adequate capability on the part of BI in analysing and monitoring the consistency of the banks' assumption in the calculation of the LCR and NSFR, including the need to improve the infrastructure of its current regulatory reporting system.

Concerning the impact of the Basel III liquidity framework, more studies need to be done in order to measure its impact on all the banks in Indonesia. Based on the current impact study that covers the 11 biggest banks, representing 57.38% of the market share, all the sample banks meet the minimum requirement of the liquidity standards. Going forward, BI should conduct similar study for the remaining banks and harmonise the assumptions made by the banks on their funding structure, thus maintaining the comparability of the LCR and NSFR measurements among the Indonesian banks.

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