The **SEACEN** Centre

SEACEN ECONOMIC LETTER

NO. 4 / NOVEMBER 2013

SEACEN ECONOMIC LETTER

CONTENTS

Articles:

This publication is available on SEACEN's website: **www.seacen.org**.

Executive Director: **MR. HOOKYU RHU**

Editor: **MS SEOW YUN YEE**

Publications Officer: **MR. ZAMRI ABU BAKAR**

For information or queries on this publication, please email **enquiries@seacen.org**

MACROPRUDENTIAL FRAMEWORK AND MEASURES: INDONESIAN EXPERIENCE[1]

BY SUKARELA BATUNANGGAR[2]

1. Overview of Financial System Stability Framework

Following the Asian crisis of 1997/98, there was growing awareness regarding the importance of maintaining financial system stability. The roles of maintaining monetary stability and promoting financial system stability are closely related. Both roles aim at the same objective which is macroeconomic stability (Batunanggar, 2002, 2005).

Bank Indonesia formulated a financial system stability framework and established a unit responsible for overseeing financial system stability in mid-2003. In line with the enactment of Law No. 23 of 1999, Bank Indonesia has incorporated financial system stability in its mission - "to achieve and maintain stability of the Indonesian rupiah through maintaining financial stability and promoting financial system stability for sustainable national development." Corresponding to the mission, Bank Indonesia formulated a framework that contains the objective, strategy and instruments required for maintaining financial system stability. Bank Indonesia's objective is to play an active role in maintaining Indonesia's financial system stability.

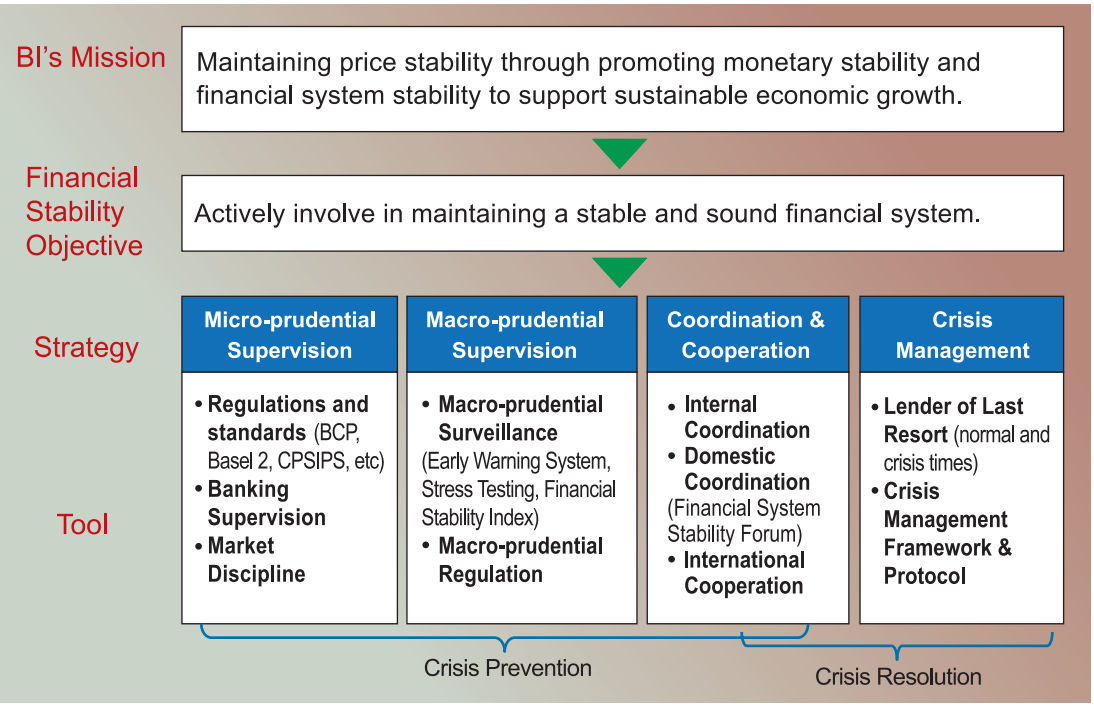
During the last fifteen years, there has been an increasing trend in the establishment of dedicated units in central banks to perform financial stability functions and publish financial stability reports. In mid-2003, Bank Indonesia established a new unit, the Bureau of Financial System Stability, responsible for performing macroprudential surveillance to identify major risks to Indonesia's financial system and proposing macroprudential policies to complement monetary policy. Bank Indonesia also publishes a Financial Stability Review biannually, which discusses development of the financial system and analyses systemic risks, as well as makes policy recommendations to mitigate such risks (Santoso and Batunanggar, 2007).

In order to achieve a stable financial system, Bank Indonesia adopts four strategies, namely, (1) Microprudential Supervision; (2) Macroprudential Supervision; (3) Coordination and Cooperation; and (4) Crisis Management.

1. Revised version of a summary prepared for *Monetary Policy Workshop on Strengthening Macroprudential Frameworks*, Tokyo, March 22-23, 2012.
2. Director, Department of Financial System Stability, Otoritas Jasa Keuangan (Indonesian Financial Services Authority). Previously, Director of Directorate of Banking Research and Regulation at Bank Indonesia. E-mail: batunanggar@.ojk.go.id; batunanggar@bi.go.id

Figure 1

Bank Indonesia's Financial System Stability Framework



(1) **Microprudential Supervision** is aimed at identifying and mitigating the idiosyncratic risks in individual financial institutions, especially banks, in order to create and maintain a safe and sound banking system. Consistent implementation of international prudential regulations and standards are required as a sound basis for both regulator and the market players in conducting their business. In addition, consistent discipline of the market players needs to be fostered. Microprudential supervision is performed by the newly established Financial Services Authority (Otoritas Jasa Keuangan_ (OJK)), with the transfer of banking supervision from BI in January 2014.

(2) **Macroprudential Supervision** is focused on identifying and mitigating systemic risks in the financial system in order to create and maintain financial system stability. Macroprudential supervision covers two areas of macroprudential surveillance and macroprudential regulation. Risks which may endanger financial system stability are measured and monitored by incorporating several tools and indicators including an early warning system which is comprise of microprudential and macroprudential indicators, as well as stress testing. Analysis of the threats to financial stability can be accomplished by focusing on risk factors originating from within and outside the financial system. Research and surveillance are aimed at making recommendations for macroprudential policy and regulations for maintaining financial system stability.

(3) **Crisis Management** comprises a safety net and crisis management framework and protocol required for resolving a financial crisis once it occurs. These include policy and procedures for the lender of last resort and deposit insurance which replaced the blanket guarantee. Prior to 2004, there was no a clear legal framework

for crisis resolution in Indonesia. According to Law No. 23/1999, Bank Indonesia is only allowed to provide lending to address liquidity problems faced by banks during normal times, but not for a systemic crisis situation. The amendment of Bank Indonesia Law of 2004 stipulates Bank Indonesia's role as lender of the last resort in the event of a crisis. Bank Indonesia can provide emergency liquidity assistance for a bank with systemic risk, complemented with a government guarantee.

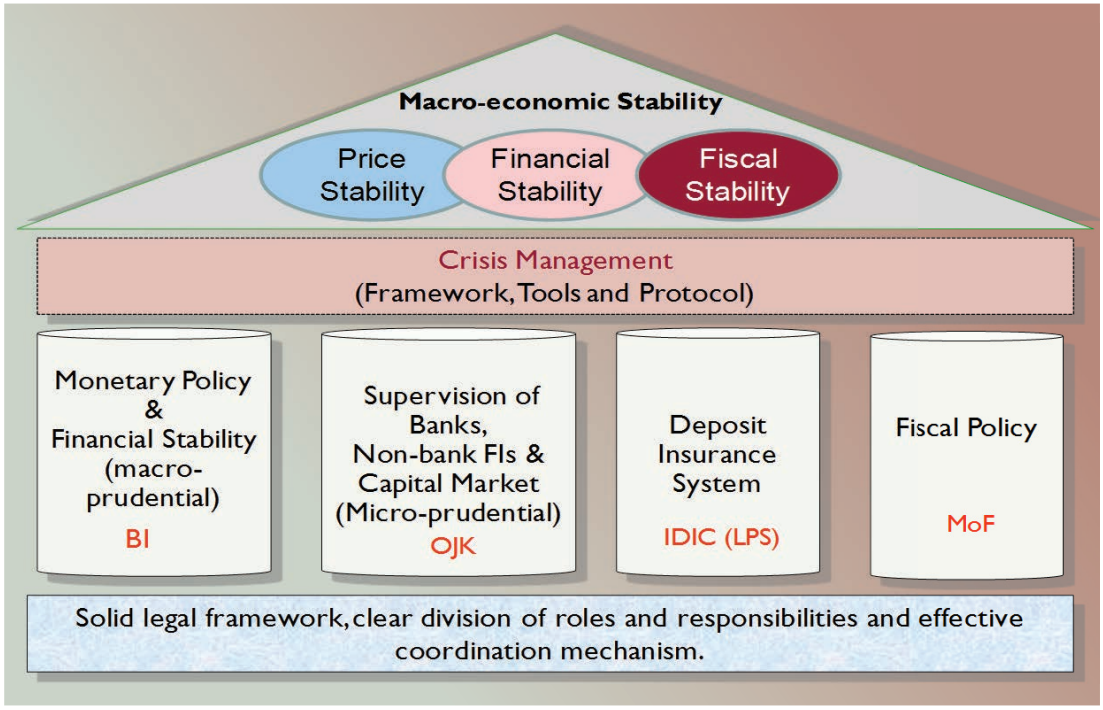
(4) **Coordination and Cooperation** with related agencies is very crucial especially in times of a crisis. The Financial System Stability Forum (FSSF) was formed based on the Memorandum of Understanding signed 30 December 2005 between the Minister of Finance and the Governor of Bank Indonesia as an avenue for coordination and information sharing among the authorities. Recently, under the Financial Services Authority Law of 2011, a Financial System Stability Coordination Forum was established, comprising the Minister of Finance, Governor of Bank Indonesia, Head of Board of Commissioner of Financial Services Authority (OJK) and the Head of the Board of Commissioners of Indonesian Deposit Insurance Corporation (Lembaga Penjamin Simpanan (LPS)).

2. Institutional Arrangement for Maintaining Financial System Stability

There are four authorities for financial safety net in Indonesia - (1) Bank Indonesia (BI) as the monetary authority responsible for monetary stability and financial system stability; (2) Indonesian Financial Services Authority (FSA) or OJK responsible for microprudential of financial institutions and capital markets; (3) Indonesian Deposit Insurance Corporation (IDIC) responsible for administering deposit insurance scheme and resolution of failed banks; and (iv) Ministry of Finance responsible for fiscal stability.

Figure 2

Financial Safety Nets Authorities in Indonesia



With the establishment of the FSA (OJK) in November 2011, banking supervision will be transferred from BI to the FSA on January 2014. The FSA Law states that FSA is responsible for microprudential supervision of financial institutions and capital markets, while BI is responsible for macroprudential aspect. Moreover, BI still can perform a special on-site examination on systemically important banks and specific banks in line with its task for macroprudential policy. However, there needed to be a complete division of authority between macroprudential and microprudential areas, clearly defined by BI and FSA in a MoU.

The division of responsibilities among BI, FSA and IDIC based on the respective Acts is summarised in Table 1.

Table 1

Division of Role and Responsibilities among Financial Safety Nets Authorities in Indonesia

	Bank Indonesia (BI)	Financial Services Authority (FSA/OJK)	Indonesia Deposit Insurance Corporation (IDIC/LPS)
Legal Basis	BI Law No.23 of 1999, amended No.3 of 2004	FSA Law, No. 21 of 2011	IDIC Law No.24 of 2004
Objectives	To achieve and maintain the stability of the rupiah value – "through maintaining monetary stability and financial system stability" (proposed revision)	To ensure that the overall activities in the financial services sector: • Are managed orderly, fairly, transparently, and with accountability • Able to realise a sustainable growth and stable financial system. • Able to protect the consumers and society interest.	• Insuring customers' deposits. • Participate in maintaining the stability of banking system in accordance with its authority
Key Tasks	• To formulate and implement monetary policy • To regulate and safeguard the payment system • To regulate and supervise banks (until Jan 2014 • To promote financial system stability (proposed revision)	• To perform integrated regulatory and supervisory oversight on all activities of the financial service sector, including banking sector, insurance, pension funds, investment companies and other financial institutions, as well as the capital markets.	• Formulate and determine implementation policies of deposit insurance. • Implement the deposit insurance programme • Formulate and implement the resolution policy for failing banks that do not have a systemic impact.
Crisis Manage-ment and Protocol	• To provide liquidity support to the banking system or to individual banks with systemic impact under a government guarantee.	• To provide information and analysis on problem financial institutions that have a systemic impact (risk) to IDIC and BI.	• Handle failing banks that have a systemic impact (risk).
	• Ministry of Finance, BI, FSA/OJK, IDIC/LPS, and FSSK develop a crisis management protocol, both at institutional and national levels in order to prevent and resolve crisis.		

The Indonesian financial safety net framework that includes roles and responsibilities, policy measures and coordination mechanism among the financial safety net players in Indonesia in preventing and resolving crisis, was developed in 2003 (Batunanggar, 2003 and 2007). Initially, the coordination mechanism was stated in a Memorandum of Understanding, later in the draft of Indonesian Financial Safety Net (IFSN) Law (summarised in Table 3), and currently in the FSA Act of 2011. The coordination mechanism among financial safety net players in Indonesia is based on the FSA Law and the draft of IFSN Law as summarised in Table 2.

Table 2

Coordination Mechanism among Financial Safety Net Players in Indonesia

Aspect	Coordination Mechanism
Prudential Regulation	• OJK coordinates with BI in formulating banking regulation, such as capital adequacy, banking information system, offshore borrowing, banking products, determination of systemically important banks, and data that is excluded from secrecy.
On-site Examination and Bank Rating	• BI can perform a special onsite examination on certain banks by sending a prior written notice to the OJK. BI does not derive a bank assessment rating. BI provides the report of examination to the OJK within one month after it is completed. • IDIC can perform onsite examinations of banks in line with its function, tasks and authorities by coordinating first with the OJK.
Problem Bank	• OJK informs IDIC about problem banks. In case the OJK identifies a bank that faces liquidity problems and/or its condition worsens, the OJK will immediately inform BI to take necessary steps according to BI authority.
Information Sharing	• OJK, BI and IDIC must develop and maintain an integrated information sharing mechanism.
Crisis management protocols	• Ministry of Finance, BI, FSA/OJK, IDIC/LPS, and FSSCF develop crisis management protocol, both at institutional and national levels in order to prevent and resolve crisis.
Coordinating Forum on Financial Stability	• Financial System Stability Coordination Forum (FSSCF) is established to maintain financial system stability. • The Forum consists of Finance Minister as Coordinator, Governor of BI, Head of Commissioner Board OJK, Head of Commissioner Board LPS; facilitated by a Secretariat. • Decision making in FSSCF is based on consensus. In case a consensus is not obtained, the decision is made based on majority vote. • During normal conditions, FSSCF will: (i) monitor and evaluate financial system stability; (ii) carry out a meeting at least once every three months; (iii) recommend to all members to make policy in order to maintain financial system stability; and (iv) exchange information. • During irregular conditions to prevent and resolve crisis, should Finance Minister, Governor of BI, Head of Board of Commissioner OJK, Head of Board of Commissioner LPS identify a potential for crisis or crisis in the financial system, they can call for meeting in order for FSSCF to decide on steps for crisis prevention and resolution. • Finance Minister, Governor of BI, Head of Board of Commissioner OJK, Head of Board of Commissioner LPS are authorised to make decisions on behalf of and for the institution he/she represents in the decision making of the FSSCF during irregular conditions.

	• FSSCF determines and executes policy required to prevent and resolve a financial crisis in line with respected authority. • The decision of FSSCF related with settlement and resolution of a failed bank identified with systemic risk binds the LPS. • FSSCF policy related with state finances must be proposed to Parliament for approval. Parliamentary decision must be made within 24 hours from when the proposed policy is accepted by Parliament.

3. Post-Global Crisis Macroprudential Policy Measures

As a response to the global financial crisis, Bank Indonesia adopted macroprudential policy measures integrated with banking supervision (microprudential policy) and monetary policy. The policy measures are aimed at two key objectives. Firstly, to mitigate the risk from short-term and speculative capital inflows as well as the risk of sudden reversals in capital flows. Secondly, to enhance the effectiveness of liquidity management and to mitigate risk from capital inflows by attempting to lock them up longer and thereby also helping to develop the financial markets. Macroprudential policy measures in Indonesia post global crisis are summarised in Table 3.

In Indonesia, the exchange rate policy is directed to ensure that Rupiah's value is stable and consistent with macroeconomic developments. Amid rapid foreign capital inflows and appreciation pressures in 2010, Bank Indonesia undertook exchange rate stability policy to minimise exchange rate volatility. Due to the complexity of the problems, intervention policy alone was insufficient, requiring the complementary adoption of macroprudential policy. In this regard, Bank Indonesia introduced the "One Month Holding Period" (OMHP) for SBI purchases in June 2010. In addition, BI also implemented other policy options to address the rapid pace of foreign capital inflows.

The Indonesian economy faces a number of key challenges, namely rising inflation, rapid inflows of foreign capital, sizable excess liquidity and problems in the real sector. In line with the imbalances in the recovery of the global economy, foreign capital continued to flow into the country during the reporting year. However, inflation has remained well under control.

Financial factors play a crucial role in the transmission of monetary policy through the corporate balance sheet channel, bank balance sheets, as well as the risk-taking behaviour of banks and firms (Satria and Juhro, 2011; Agung, 2010). However, amid the sizable excess liquidity, the role of banks in promoting economic growth was still limited. In addition, Indonesian banks are less competitive in terms of efficiency, capital and assets compared with their regional peers.

These challenges complicated monetary policy and Bank Indonesia faces a trilemma between exchange rate stability, price stability and financial system stability. Bank Indonesia does not only depend on one policy, but has to use a policy mix to maintain a balanced economy, both internally and externally. Monetary and macroprudential policies should be integrated in order to ensure macroeconomic stability. To achieve an internal balance, interest rate policy should be combined with macroprudential policy. Meanwhile, to achieve an external balance, exchange rate policy and macroprudential policy covering foreign capital flows should be integrated. Macroprudential policy is adopted to overcome short-term capital flows, manage liquidity in the domestic economy and mitigate the risk of instability in the financial system.

Policy coordination is also an essential element. Policy coordination with the fiscal authority as well as other sectors is crucial considering that inflation stemming from the supply side creates the majority of inflation volatility. Coordination between monetary policy and macroprudential policy as well as microprudential policy will become more crucial and challenging after the transfer of banking supervision from Bank Indonesia to the FSA (OJK) in January 2014. In addition, an effective communication strategy is also important in the implementation of monetary and macroprudential policies.

Table 3

Post-Global Crisis Macroprudential Policy Measures

Issue/Trigger	Measure	Objectives
The increasing and high demand for BI bills ("SBI") and volatility in demand is vulnerable to external shock. This condition could pressure exchange rate stability and output in the long run.	Minimum holding period on BI bills ("SBI"). One month since July 2010 and changed to six months in 2011.	To put sand in the wheels of short-term and speculative capital inflows, as well as mitigate the risk of sudden reversals.
The increasing volume and trend of short term portfolio holdings (largely off-shore), including for BI bills, which could pressure the exchange rate stability.	Lengthen (from weekly to monthly) auctions and offer longer maturities (3, 6 and 9 months) of BI bills, as of June 2010	To enhance the effectiveness of liquidity management and to mitigate risk from capital inflows, by locking up funds to longer terms and encouraging the development financial markets.
	Shifting BI bills to Term Deposits as of July 2010, since it is a non marketable securities instrument.	• To lock up domestic liquidity for longer terms and limit the supply BI bills in the market. • To facilitate longer term investment of offshore portfolios through the banking system.
The increasing volume and trend of offshore borrowing, especially in the short-term. This condition triggers volatility of capital inflows especially through the banking system.	Reinstate limits on short-term offshore bank borrowing from 20% to 30% of bank's capital.	• To limit short-term and volatile capital inflows. • To limit FX exposure of the banking system stemming from capital inflows.
Relative low FX reserve requirements of banks are not prudent for mitigating shocks in capital inflows. Besides, idle FX liquid assets could trigger volatility of the exchange rate.	Increase FX reserve requirements of banks from 1% to 5% in March 2011 and to 8% in June 2011.	• To strengthen FX liquidity management and thereby the resilience of the banking system in confronting increasing FX exposure emanating from capital inflows. • Help absorb excess domestic liquidity.
Excess liquidity in the banking system and relatively slow lending growth reflected by a low Loan to Deposit Ratio (LDR). Banks tend to invest a large part of their portfolio in liquid and low risk assets (BI bills and government bonds).	Increase Rupiah primary reserve requirement (RR) from 5% to 8% in November 2010. This measure complemented with a minimum LDR for banks. Banks with LDR of 78% to 100% are not obliged to increase their RR ratio and vice versa, as of March 2011.	To absorb domestic liquidity and enhance liquidity management by banks without exerting negative impact on lending, required to stimulate growth.

Source: Modified from Alamsyah, (2011)

Table 3

Key Content of Indonesian Financial Safety Net Law Final Draft

Element	Key Content
Main Objective	• To create and maintain financial system stability • To prevent systemic risk (impact) and to contain financial crisis
Coverage	• Bank and insurance companies with systemic risk (impact) • Crisis in government securities market
Governance Body	• FSS Forum with main functions to determine systemic impact and enactment of crisis status as well as prevention and resolution strategies
Measures - Liquidity problem	• Emergency Liquidity Assistance for banks from BI/Government • Liquidity assistance for insurance companies from IDIC
- Solvency problem	• Temporary investment in banks and insurance companies by IDIC
- Gov. sec. problem	• Gov't and/or BI to buy gov't securities in the secondary market as crisis prevention measures • Gov't to buy-back of gov't securities and/or BI to buy gov't securities in the primary market as crisis resolution measures
Source of Fund	• Bank Indonesia (guaranteed by the government) for systemic liquidity assistance for banks. • State budget for systemic liquidity assistance for banks in a crisis. • IDIC for systemic liquidity and solvency assistance for insurance companies.
Private Sector Solution	• Private sector may be involved in the resolution of bank and insurance companies • Securities issued by banks may be converted into capital (contractual bail-in) • Obligation to policy holder for insurance companies may be restructured (contractual basis)
Crisis Management Protocol	• BI, IDIC, Ministry of Finance, and FSA must have CMP in place
Information Sharing	• BI, IDIC, Ministry of Finance, and FSA share information related to crisis prevention and resolution with the FSS Forum
Accountability and Reporting	• FSA announce their report to FSSF concerning systemic impact of bank/ insurance companies within 3 months after FSSF decisions on crisis prevention and resolution • FSSCF periodically report about the handling of bank/insurance company problems to the President. • The President submits a formal report on crisis prevention and resolution to the Parliament based on FSSF report

References

Agung, Juda, (2010), "Integrating Monetary and Macroprudential Policy: Towards a New Paradigm of Monetary Policy Indonesia Post Global Crisis," Mimeo, Bank Indonesia.

Alamsyah, Halim, (2011), "Post Global-Crisis Monetary Policy in Indonesia: Challenges and Framework,", Paper Presented at 1st SEACEN-CEMLA Conference on "The Implementation of Monetary Policy: Lessons from the Crisis and Challenges for Coming Years," 13-15 October, Kuala Lumpur, Malaysia. http://www.seacen.org/GUI/pdf/news/Halim%20Alamsyahpaper.pdf

Santoso, W. and S. Batunanggar, (2007), "Effective Framework for Financial System Stability," *Occasional Paper,* No.45, SEACEN Centre. http://www.seacen.org/GUI/pdf/publications/occasional/2007/OP45.pdf

Batunanggar, S., (2007), "Financial Safety Nets: A Review of Literature and The Case of Indonesia," *Financial Stability Review*, Bank Indonesia, No.8, March. http://www.bi.go.id/web/en/Publikasi/Perbankan+dan+Stabilitas+Keuangan/Kajian+Stabilitas+Keuangan/fsr32007.htm

Batunanggar, S., (2005), "Indonesia's Banking Crisis Resolution: Process, Issues and Lessons Learnt," *Financial Stability Review*, Bank Indonesia, No.4, April. http://www.bi.go.id/web/en/Publikasi/Perbankan+dan+Stabilitas+Keuangan/Kajian+Stabilitas+Keuangan/fsr42005.htm

Batunanggar, S., (2003), "Redesigning Indonesia's Crisis Management," *Financial Stability Review*, Bank Indonesia, No.1, June. http://www.bi.go.id/NR/rdonlyres/2904BC65-0B1B-4DAA-9E00-2C7F485ACAC2/13294/fsr_june_20031.pdf

Batunanggar, S., (2002), "Indonesia's Banking Crisis Resolution: Lessons and the Way Forward," Research Paper on Banking Crisis Resolution, The Centre for Central Banking Studies, Bank of England, CCBS seminar, 1 – 9 December, London. http://www.bi.go.id/NR/rdonlyres/81804644-50F8-411E-847A-AEE92502FAAA/13371/ibcr0212.pdf

Batunanggar, S., (2002), "Indonesia's Banking Crisis Resolution: Lessons and the Way Forward," CCBS, Bank of England Conference, 9 December. http://www.bi.go.id/NR/rdonlyres/81804644-50F8-411E-847A-AEE92502FAAA/13371/ibcr0212.pdf

Hendarsah, Nanang, (2010), "Challenges and Policy Options in Managing Portfolio Investment Flows: Bank Indonesia's Recent Experiences," *Working Paper*, Bank Indonesia, November. http://www.bi.go.id/NR/rdonlyres/42E4813F-4BF7-47B7-BAC8-581B20D936C0/21486/Challenges_and_Policy_Options.pdf

Satria, Doni and Solikin M. Juhro, (2011), "Risk Behaviour and Monetary Policy Transmission Mechanism in Indonesia," *Bulletin of Monetary Economics and Banking*, January.

CAN SEACEN ECONOMIES HANDLE BASEL III REFORMS?

BY J P R KARUNARATNE[1]

Global Financial Crisis and Evolution of Basel III Framework

One of the main reasons the economic and financial crisis, which began in 2007, became so severe was that the banking sectors of many countries had built up excessive on- and off-balance sheet leverage. This was accompanied by a gradual erosion of the level and quality of the capital base. At the same time, many banks were holding insufficient liquidity buffers. The banking system, therefore, was not able to absorb the resulting systemic trading and credit losses nor could it cope with the re intermediation of large off-balance sheet exposures that had built up in the shadow banking system. The crisis was further amplified by a procyclical deleveraging process and by the interconnectedness of systemic institutions through an array of complex transactions. During the most severe episode of the crisis, the market lost confidence in the solvency and liquidity of many banking institutions. The weaknesses in the banking sector were rapidly transmitted to the rest of the financial system and the real economy, resulting in a massive contraction of liquidity and credit availability. Ultimately the public sector had to step in with unprecedented injections of liquidity, capital support and guarantees, exposing taxpayers to large losses.

The effect on banks, financial systems and economies at the epicenter of the crisis was immediate. However, the crisis also spread to a wider circle of countries around the globe. For these countries, the transmission channels were less direct, resulting from a severe contraction in global liquidity, cross-border credit availability and demand for exports. Given the scope and speed with which the recent and previous crises have been transmitted around the globe as well as the unpredictable nature of future crises, it is critical that all countries raise the resilience of their banking sectors to both internal and external shocks.

To address the market failures revealed by the crisis, the Basel Committee is introducing a number of fundamental reforms to the international regulatory framework. The reforms strengthen bank-level or micro prudential regulations which will help raise the resilience of individual banking institutions to periods of stress. The reforms also have a macroprudential focus, addressing system-wide risks that can build up across the banking sector as well as the procyclical amplification of these risks over time. Clearly these micro and macroprudential approaches to supervision are interrelated, as greater resilience at the individual bank level reduces the risk of system-wide shocks.

In the light of above, this article intends to examine issues, challenges and implications of implementation in Basel III in ten SEACEN member economies namely, Brunei Darussalam, Cambodia, Indonesia, Korea, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka and Thailand based on research analyses for the SEACEN research project on “Basel III Implementation: Challenges and Implications” completed in 2013.

Impact of Global Financial Crisis

Recent global financial crisis did not have a significant impact on the financial sectors of these economies. The main reason for this in Brunei, Darussalam, Cambodia, Myanmar, Nepal and Sri Lanka was that most of them were not highly integrated with the global financial system. Measures taken by the authorities Indonesia, Korea, Malaysia,

1. The author is the Superintendent of Currency at the Central Bank of Sri Lanka and Visiting Research Economist of The SEACEN Centre (OP 2012).

Philippines and Thailand to strengthen the financial system consequent to the Asian financial crisis in late 1990s made them more resilient during recent crisis. These reforms focused on strengthening prudential regulatory standards and aligning them with international norms to enhance risk management, promote good corporate governance and greater transparency, and reduce moral hazard. These reforms enabled domestic financial institutions to manage the risks arising from the banking and debt crisis in Europe and weak economic growth in the US.

No major risks were observed in the two risk areas of credit and liquidity as reflected by the relevant risk indicators. Credit risk has been maintained at low and comfortable levels and adequately mitigated with high provision coverage.

Application of Basel Capital Adequacy Framework

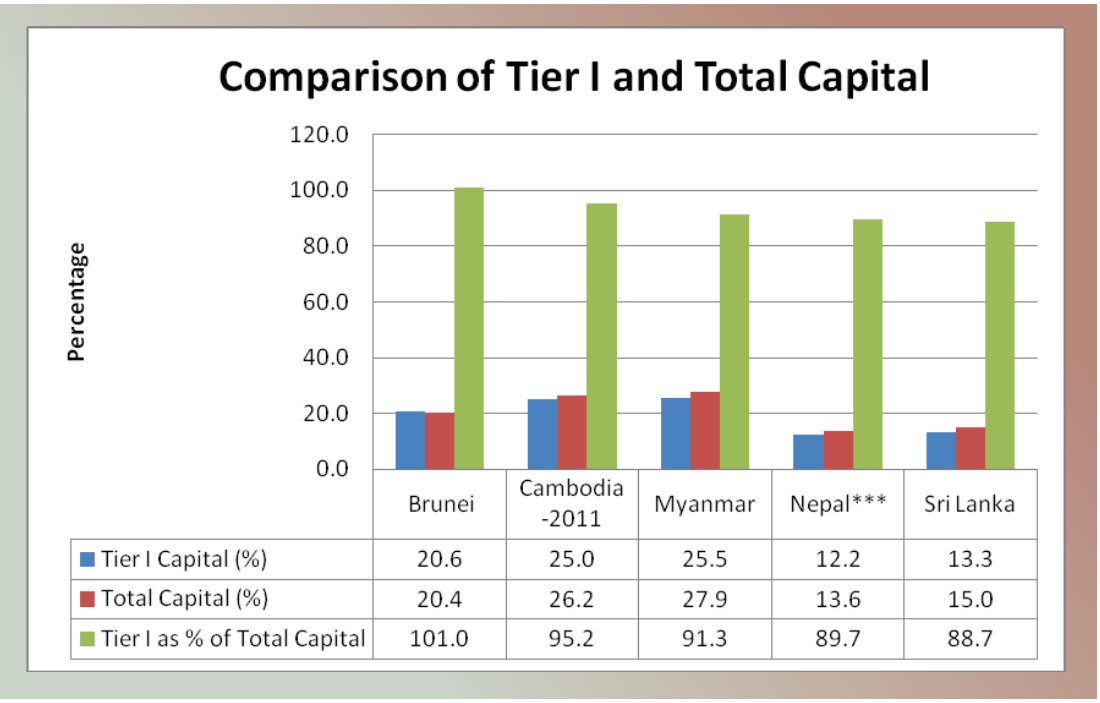
The current status of application of Basel capital adequacy framework differ among economies with Brunei Darussalam, Cambodia and Myanmar still at Basel I and others at either partial or full implementation of Basel II. In the case of Brunei Darussalam, Cambodia, Myanmar, Nepal and Sri Lanka, the main focus currently is either on full implementation of Basel I or moving from Basel I to II or implementation of Basel II in full rather than focusing on Basel III considering the present regulatory environment, infrastructure and other conditions specific to economies. Therefore, there are no specific plans for implementation of Basel III in these economies at this stage. Indonesia, Korea, Malaysia, Philippines and Thailand are in the process of implementing Basel III mostly in line with the BCBS timeline with higher capital requirements in some economies than BCBS standards. However, in the case of leverage and liquidity framework, specific plans are in place only in Indonesia.

The present Tier I and Total Capital Ratios in all economies are well above the minimum ratios set by their respective regulators. In all economies, Tier I Capital Ratios are more than 2 times the required minimum and even significantly higher than required minimum Total Capital Ratio. This reflects the strong capital position of banks which are much higher even in terms of currently applicable Basel II standards for international banks. One of the key observations is the significant improvement in capital levels of banks in all the economies compared to the levels prevailing at the time of global financial crisis. Based on 2012 data, banks in Myanmar reported the highest Tier 1 Ratio of 25.5% while banks in Korea reported the lowest at 11.1%. In terms of Total Capital, banks in Myanmar reported highest ratio of 27.9% while banks in Nepal reported lowest at 13.6% .One of the key observations is the significant improvement in capital levels of banks in all these economies compared to the levels prevailing at the time of global financial crisis. In terms of composition of capital, Tier I Capital accounts for 72% to 101% of Total Capital with a minimum of 72% in the case of Thailand and maximum of 101% in the case of Brunei Darussalam. Reliance on Tier II Capital by banking sector has, therefore, been minimal and limited to around 14% except in Korea and Thailand. Heavy reliance on Tier I capital is an indication of strong quality capital.

The present Tier I and Total Capital Ratios in all economies are well above the minimum ratios set by their respective regulators. In all economies, Tier I Capital Ratios are more than 2 times the required minimum and even significantly higher than required minimum Total Capital Ratio. This reflects the strong capital position of banks which are much higher even in terms of currently applicable Basel II standards for international banks.

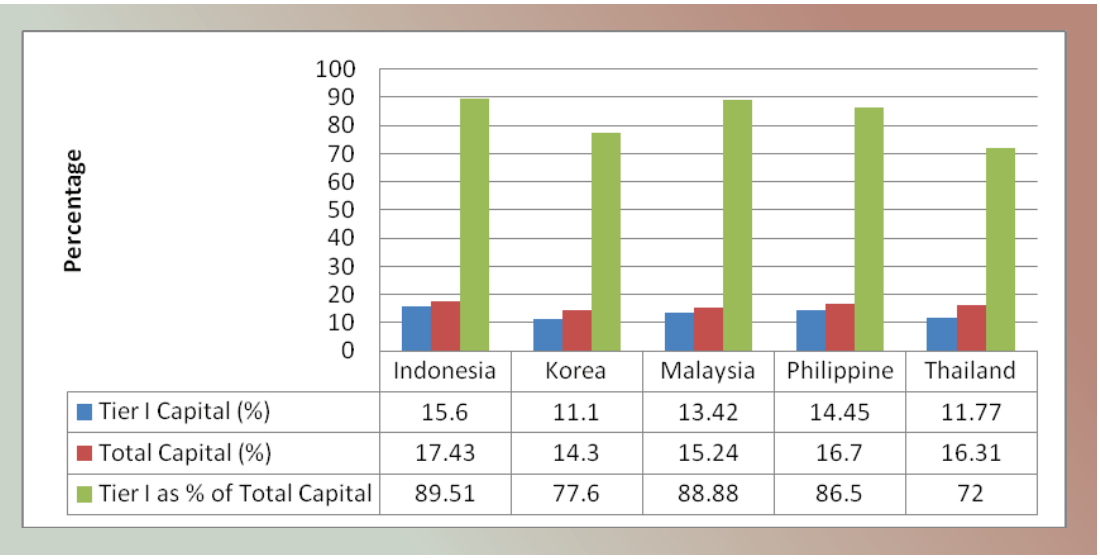
Figure 1

Comparison of Tier 1 and Total Capital



	Brunei	Cambodia -2011	Myanmar	Nepal***	Sri Lanka
Tier I Capital (%)	20.6	25.0	25.5	12.2	13.3
Total Capital (%)	20.4	26.2	27.9	13.6	15.0
Tier I as % of Total Capital	101.0	95.2	91.3	89.7	88.7

*** Private commercial banks only



	Indonesia	Korea	Malaysia	Philippine	Thailand
Tier I Capital (%)	15.6	11.1	13.42	14.45	11.77
Total Capital (%)	17.43	14.3	15.24	16.7	16.31
Tier I as % of Total Capital	89.51	77.6	88.88	86.5	72

Even though an impact assessment on capital has not been done in Brunei Darussalam, Cambodia, Myanmar, Nepal and Sri Lanka, it is observed that their banking systems[2] are capable of meeting CET I, Tier I and Total Capital Requirements in Basel III including capital buffers due to existing high level of core capital structure, quality of capital and regulatory requirements. In these economies, capital is generated mainly through retained earnings and transfers made to statutory reserve fund.

2. Refers to only private commercial banks in Nepal.

Figure 2

Comparison of Capital Levels in 2012 in Terms of Basel III

Capital Ratios	CET1(%)			Tier I Capital (%)			Total Capital (%)		
	Basel III	Actual	Excess	Basel III	Actual	Excess	Basel III	Actual	Excess
Brunei	4.5	19.77	15.27	6.0	20.60	14.60	8.0	20.40	12.40
Cambodia**	4.5	22.46	17.96	6.0	24.96	18.96	8.0	26.23	18.23
Myanmar	4.5	22.95	18.45	6.0	25.50	19.50	8.0	27.94	19.94
Nepal	4.5	10.90	6.40	6.0	12.22	6.22	8.0	13.63	5.63
Sri Lanka	4.5	13.30	8.80	6.0	13.30	7.30	8.0	15.00	7.00

**2011

The impact assessment of Basel III application on current capital levels has been done in Indonesia, Korea, Malaysia, Philippines and Thailand. As per the results of the impact studies done, there is a negative impact on the current capital levels in Korea, Malaysia, Philippines and Thailand. However, in Indonesia, Basel III capital reforms have a positive impact. Despite the negative effect in these four economies, the Common Equity Tier 1 (CET 1), Tier 1and Total Capital Ratios remain well above the stipulated ratio of Basel III.

The positive impact in Indonesia is due to more stringent application of certain elements in Bank Indonesia's regulations compared to the treatment specified in Basel III. As reported in the BCBS study, Indonesia is among 5 (five) countries[3] where Basel III implementation has a positive impact on banks' capital level and capital adequacy ratio. In light of existing high capital levels, raising additional capital to comply with Basel III is not an urgent necessity in Indonesia, Korea, Malaysia, Philippines and Thailand. However, in Korea, 34.3 trillion Won is required to maintain capital at the current level. Another prominent feature in banks of these five countries is that capital has been mainly generated internally through retained earnings. It is also observed that in case of capital required in the medium-term, this can be done through building up of internal reserves over a period of 3 to 5 years without issuing new equity or debt capital.

Banks in all economies have maintained liquidity at comfortable levels, above the stipulated liquidity indicators set by the regulators. In terms of trends in liquidity ratio and loans to deposit ratio, no major liquidity risk is observed. Impact studies on banks' ability to comply with LCR and NSFR has been done in Sri Lanka, Indonesia, Korea and Thailand. In the case of Indonesia, sample banks meet LCR and NSFR requirements while in other economies, non-compliance by certain banking groups were observed. In the case of liquidity standards, the main concern is on the defining assets which fulfill criteria under LCR requirements in the respective jurisdictions. In some economies, regulators are in the process of gathering information on liquid assets to assess the appropriateness of liquidity standards. Therefore, compliance with LCR and NSFR would be a major challenge for many economies.

Issues and Challenges in Implementation of Basel III

Banks in all economies may not be subject to many challenges in the implementation of Basel III in the short-term. However, these economies would be subject to medium-term challenges. Banks in Brunei Darussalam, Cambodia, Myanmar, Nepal and Sri Lanka may find it difficult to raise capital through capital markets as they are not active or developed. Also these markets are not liquid with low volumes of trading. Therefore, authorities in these economies need to focus on the development of

3. Five economies where Basel III implementation have positive impact are Hong Kong, Indonesia, Luxemburg, Mexico dan Russia.

domestic capital markets as a supplement to the banking sector which would also strengthen the financial system through the diversification of risk and funding sources.

Even though banks in Indonesia, Korea, Malaysia, Philippines and Thailand have adequate capital, having set aside some part of existing capital to meet requirements under new capital buffers, the excess capital banks currently maintain over minimum capital will decrease. This could restrict their future business expansion such as credit in line with strategic plans, ultimately affecting the economic growth. Hence, banks would need to increase its internal capital target level in order to maintain their previous level of excess capital. Additional capital required will further increase in economies where regulatory authorities decides to adopt more stringent capital rules as opposed to BCBS standards. Banks may also be under pressure for issuing capital in the form of instruments that qualify for additional Tier 1 capital and Tier 2 capital in the context of Point of Non-Viability (PONV) feature and their pricing in the absence of benchmark for such pricing.

Basel III can have several implications on financial markets and the economy as a result of reduction in credit and increasing interest spread. In studies done in Korea and the Philippines, it has been shown that a 1% increase in capital ratio results in a decline in GDP by 0.23% and 0.01 respectively. In case of the Philippines it has, however, been shown that the negative effect on GDP is offset by a positive effect of 0.02% derived from strengthened bank capital which allow banks to weather future financial crisis and prevent the output losses attendant to these crises ultimately resulting in a net positive impact of 0.01%.

The demand for government securities could increase resulting in the lowering of yields for government securities. However, banks in economies where even the government securities market is not well developed will find it difficult to meet Basel liquidity requirements due to non-availability of high quality liquid assets. Further implementation of liquidity standards could obstruct bond market development since the banks' buy-and-hold investments increases while free-float government bonds decreases leading to illiquidity in the market. Ironically, the liquidity requirement is then self-defeating in its purpose. The need for liquidity profile adjustments potentially intensifies competition in retail deposit-taking banks. As deposits from retail customers is currently considered as having relatively low run-off rate, the competition, however, may make this class of funding less stable.

Implementation of Basel III counter cyclical buffer has several implications. The calibration of booms and busts involves

pervasive parameters of complex and dynamic macro-financial relationships that are hard to predict for policy feedback. The sequencing of policy execution is crucial, which requires close collaboration and careful alignment with monetary policy and other macroeconomic policies. Yet, even with the best foundation, the execution might remain challenging in the politics of booms as well as of countries' comparative advantages. The challenge is also particular for bank-based economies with relatively less developed financial markets.

Much more resources and commitment are required not only to further refine the boom-bust prediction and the buffer calibration, but also to incorporate this novel measures to the institutional setting. Besides, the work entails skillful public communication in order to put the right messages across and not cause unnecessary noises in the financial system.

The robustness of the aggregate private sector credit-to-GDP growth, as an effective indicator triggering the buffer as recommended by BCBS is also a concern. There are several alternate strategies for implementing countercyclical capital buffers already implemented by some regulators and effective in times of high credit growth. These include increase of risk weights assets assigned on housing loans and other loans, increase in loan loss provisions, varied Statutory Reserve Ratio, maximum ceilings on credit to vulnerable sectors and overall credit ceilings.

In the case of mortgage loans, the Loan-to-Value (LTV) ratio has been used as a flexible preemptive tool to curtail credit growth. The use and adjustment of the LTV ratio has demonstrated its preventive quality and, more importantly, the flexibility to fine-tune policy in response to changing economic circumstances. No significant implications on cost and profitability are expected in the medium-term in the absence of major changes in assets and liability strategies of banks. In most economies, the current legal framework provided by the respective banking and other statutes provide adequate legal scope for implementation of the Basel capital adequacy framework.

While all generally agree with the importance of implementing Basel III, not all the economies are in a position to implement the framework as per the scheduled time table due to the diverse economic, political, market, infrastructure and regulatory conditions prevalent in respective economies.

In conclusion, Basel III implementation would not entail serious challenges on the 10 economies under study in the short-term. Issues of concern could be addressed over the medium-term in line the Basel time plan.

References

Annual Supervision Report 2011, Cambodia.

Annual Report 2011, Cambodia.

Bank of Thailand, Supervision Report, 2010 and 2011.

Bank Negara Malaysia, Financial Stability and Payment Systems Report, 2010, 2011, 2012.

Bank Negara Malaysia, Monthly Statistical Bulletin, April 2013, January 2013 and January 2012.

Bangko Sentral ng Pilipinas, Status Report on the Philippine Financial System 2012.

Bangko Sentral ng Pilipinas, Banking Statistics, 2008, 2009, 2010, 2011.

Bank for International Settlements (BIS), (2010), Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring, December,

www.bis.org.

Bank for International Settlements (BIS), (2011), Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems, December 2010 (Revised June 2011).

Project Team Papers, (2013), Research Project on “Basel III Implementation: Challenges and Opportunities,” The SEACEN Centre.

Published by
The South East Asian Central Banks
(SEACEN) Research and Training Centre
Kuala Lumpur, Malaysia.

Designed by
Communications
The SEACEN Centre

The **SEACEN** Centre

The South East Asian Central Banks (SEACEN)
Research and Training Centre

Level 5, Sasana Kijang
Bank Negara Malaysia
2 Jalan Dato' Onn
50480 Kuala Lumpur
Malaysia

Tel: (603) 9195 1888
Fax: (603) 9195 1801
(603) 9195 1802
(603) 9195 1803

E-mail: info@seacen.org

www.seacen.org