

**CONCEPTUAL PROPOSAL  
FOR FUTURE MACROPRUDENTIAL FRAMEWORK  
UNDER DUAL FINANCIAL SYSTEM IN INDONESIA<sup>1</sup>**

**By**

**Ascarya<sup>2</sup>, Adiwarman A. Karim<sup>3</sup>, Siti Rahmawati<sup>4</sup>, Masyhudi Muqorrobin<sup>5</sup>, and Dimas Bagus Wiranatakusuma<sup>6</sup>**

**Abstract**

**BACKGROUND** – The repeated financial crises and some instability in money markets have transmitted some shocks to some financial institutions including Islamic financial system due to an increased interconnectedness. The call for macroprudential policy is highly needed to restore and preserve financial system stability.

**RESEARCH PROBLEM** - The paper is focused on several questions, including (1) what are the risks exposed in Islamic banks in Indonesia? (2) how to develop some criteria to design macroprudential policy under financial system in Indonesia? (3) how would macroprudential policy be implemented in countries adopting dual financial system.

**METHODOLOGY** – The paper elaborates the issues by intensifying and exploring the study of literature related to macroprudential. The Gap analysis is used to further propose the future macroprudential design under dual financial system in Indonesia.

**DISCUSSION** – Macroprudential framework in Indonesia had released since 2011 which consists of macroprudential surveillance process and planning process&implementation of macroprudential policy. Under financial system, Islamic bank's risks are among the primary concern due to the common and unique risks exposed. Therefore, some designs are needed towards future macroprudential policy under dual financial system, including redefining on several aspects: (a) objective and role of central bank, and (b) objective, scope, instrument, and authority of macroprudential policy.

**CONCLUSION AND RECOMMENDATION** – Indonesia designs macroprudential policy which can accommodate dual financial systems. Some preconditions should be taken in place towards effective macroprudential framework under dual systems and some aspects should be arranged, such as institutional, instruments, and related arrangements in order to preserve financial system stability.

**JEL Classifications:** E59, E69, G29

**Keywords:** *Macroprudential Policy, Dual Financial Systems, Financial System Stability, and Indonesia.*

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<sup>2</sup> Senior Researcher at Center for Central Banking Research and Education, Bank Indonesia.

<sup>3</sup> Founding Partner 'KARIM Consulting Indonesia', Jakarta, Indonesia

<sup>4</sup> Researcher at Center for Central Banking Research and Education, Bank Indonesia.

<sup>5</sup> Director, International Program for Islamic Economics and Finance (IPIEF), Department of Economics, Universitas Muhammadiyah Yogyakarta and PhD holder in Economics from International Islamic University Malaysia (IIUM)

<sup>6</sup> Lecturer at Department of Economics, Universitas Muhammadiyah Yogyakarta, and PhD Candidate in Economics, International Islamic University Malaysia (IIUM).

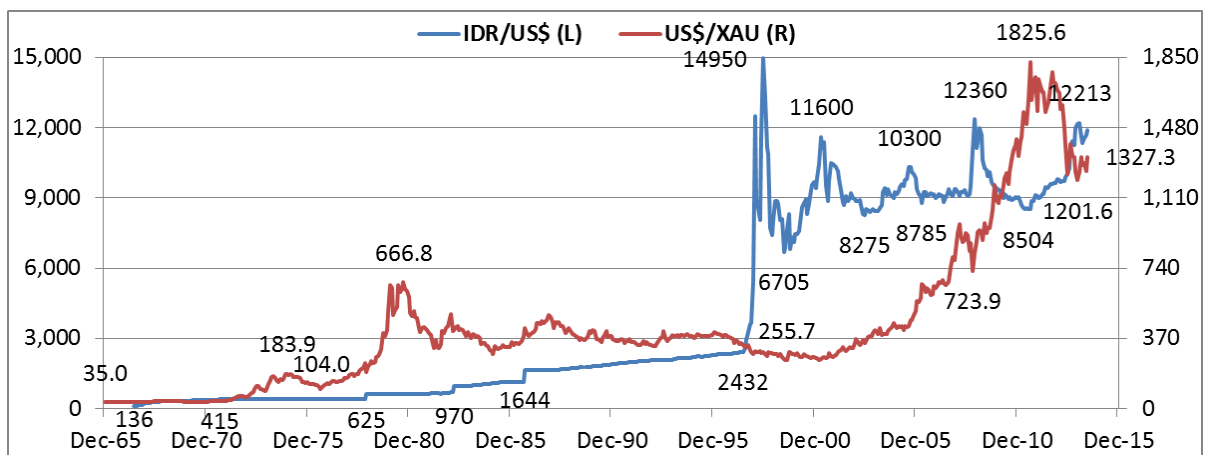
## 1 Introduction

Severe repeated financial crises and the presence of instability in money markets emerge over centuries. Its instability can trigger some shocks in the financial system and transmit them to the Islamic financial institutions. Moreover, under dual financial systems where Islamic financial system is side by side with conventional counterpart, the probability of instability occurred is relatively high due to an increased interconnectedness. The macroprudential policy is one out of six main pillars of preserving financial system stability. However, fundamental different features between Islamic and conventional financial systems challenge the set up of the current macroprudential framework enabling to preserve dual system, particularly in Indonesia.

Since the collapse of the Bretton Woods Agreement (BWA) in August 1971, the gold standard system collapsed and a modern financial system started to form, which is characterized by volatility, exchange rate fluctuations and decline, excessive credit expansion, asset price bubbles, financial fragility, imbalances, and ultimately repeated financial crisis, such as the banking crisis in the UK (1973-1974), a deep recession in the industrial countries (1978-1980), the debt crisis in developing countries (1980-1982), the savings and loan crisis in Latin America (1980), the collapse of the capital market in the USA and the UK (1987), the collapse of a low-quality debt securities (1989), the financial crisis in Mexico (1994), the financial crises in Asian countries, Russia, Brazil and Argentina (1997-1999), as well as the global financial crisis (2007-2008) which has not been recovered until today and has spread over European countries such as Greece, Ireland, Portugal, Italy, Spain, Cyprus, Slovenia, Slovakia, Finland and Belgium.

Since August 1971 the price of gold had risen and continued to rise until reaching US\$183.9 per troy ounce in December 1974. The price of gold has multiplied 5.25 times, in less than three and half years. In September 1980 the price of gold reached US\$666.8 per troy ounce, an increase of 6.4 times in five years from US\$104 on August 1976. Thereafter, the price of gold experienced a downward trend for two decades until it reached US\$255.7 per troy ounce in August 1999. After the gold price again increased rapidly up to a record of \$ 1825.6 per troy ounce in August 2011, and then it decreased again to US\$ 1201.6 per troy ounce in December 2013. In June 2014 the price of gold rose to US\$1327.3 per troy ounce (see Figure 1). The increase in the price of gold actually showed a decrease in the value of the US dollar, which is losing its purchasing power against the real assets, so that the US\$ fiat currency has not been able to function well as a store of value.

**Fig. 1.1** Instability and Decline in Value of US\$ and Rupiah Post Bretton Woods System



Fluctuation and decline in value have also been happened to Rupiah, at even a higher rate. After seven years of fixed pegged at Rp415/US\$, on 15<sup>th</sup> November 1978 the government devalued the Rupiah to Rp625/US\$, and replaced the fixed exchange rate regime to a managed floating regime. Nevertheless, four years and four months later the government devalued the rupiah on 30<sup>th</sup> March 1983 from Rp702/US\$ to Rp970/US\$, due to the global recession and falling oil prices. Due to the continues global economic downturn, as well as structural weaknesses and pressure on the balance of payments, the Government, again, in September 1986 devalued the Rupiah from Rp1134/US\$ to Rp1644/US\$. After ten years of economic and financial liberalization in June 1986, the Government could no longer hold the exchange rate so that when the Asian financial crisis hit Indonesia, in August 1997 the Government decided to replace its exchange rate regime to a floating exchange rate. Rupiah exchange rate, which in June 1997 before the crisis was Rp2432/US\$, jumped up to Rp14950/US\$ in June 1998. After the 1997-1998 financial crisis, Rupiah fluctuated between Rp9000/US\$ and Rp12000/US\$. When the global financial crisis erupted, the rupiah fell to Rp12360/US\$ in November 2008, and then rose again to reach Rp8504/US\$ in July 2011. Rupiah came under pressure due to continued balance of payments deficits, so that in January 2014 Rupiah weakened to Rp12213/US\$.

Unfortunately, subprime mortgage crisis erupted in the US and triggered global financial crisis. This has demonstrated the need for fundamental reform of the financial system, where prudential regulatory framework will need to be re-oriented to have a system-wide focus (Goodhart, 2010), which becomes the sixth pillar of financial stability and is known as macroprudential regulation. In the Future financial system with increased risks potential in the economy, as well as failures in macro policy, market and regulation, macroprudential responsibility to maintain financial system stability from systemic instability will become other important role of any future central bank under conventional financial system as well as under dual financial system.

The updated framework of financial system stability, which includes macroprudential policy, does not provide a guarantee that the financial instability and financial crisis will not happen again in the future. In addition, there has been a general agreement that the central bank should play a leading role in maintaining financial system stability by assuming macroprudential responsibility.

Meanwhile, Islamic financial system (IFS) is a different kind of financial system compared to that of 'conventional' which has been previously discussed. IFS comprises of various Islamic financial institutions (IFIs) doing finance and providing financial services in accordance with the Islamic teachings. IFIs should be free from ribā (usury or interest), free from maysir (game of chance or speculation) and free from gharar (excessive uncertainty).

In summary, Islamic financial system is conceptually and empirically proven to be more resilience to financial crisis. Yet, it is still not immune to financial crisis due to several deficiencies from the ideal, potential deviations from Islamic finance norms, as well as due to natural causes. Therefore, policies to enhance the resilience and stability of Islamic financial system are urgently required, as it has been stated by Aziz (2010).

In the financial system with increased systemic risks (due to larger size, more complicated business and increased interdependent among institutions and/or financial markets), increased imbalances and lower quality of intermediation, while the financial system is also becoming increasingly globalized, uncertain, competitive and innovative, the future role of the central bank under dual financial system would focus on two main objectives, namely: 1) to maintain the purchasing power of currencies or maintain price stability; and 2) to maintain financial stability by contributing to the preservation of and the enhanced resilience of systemic financial stability, in an environment which is independent and free from the intervention of other parties.

Thus macroprudential policy under dual financial system conducted by the central bank in the future should include both conventional finance and Islamic finance in a comprehensive and integrated form, in order to eliminate and prevent systemic risk and the financial crisis. Moreover, In the midst of increasing financial system volatility, the enhanced resilience in Islamic financial system is a must. In Indonesia, the economy is characterized as bank based economy. It implies the risks are highly stemmed from banking exposures towards risks. Therefore, the paper is focused to answer several questions, including (1) what are the risks exposed in Islamic banks in Indonesia? (2) how to develop some criteria to design macroprudential policy under financial system in Indonesia? (3) how would macroprudential policy be implemented in countries adopting dual financial system.

The rest of the paper is as follows. Chapter two elaborates the literature review. Chapter three discusses the discussion, and conclusion and recommendation in the chapter fourth.

## **2 Literature Review**

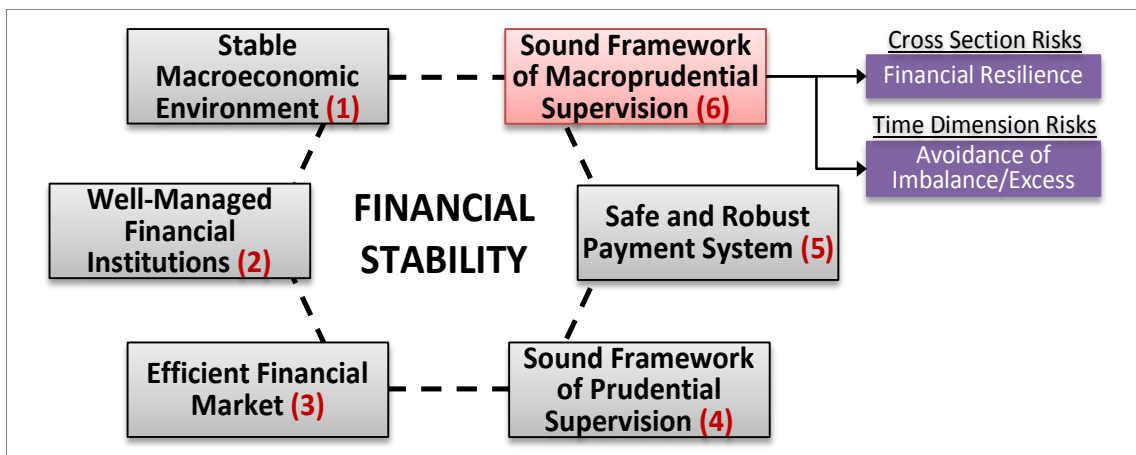
### **2.1 Overview of Macprudential Policy**

The G30 Working Group (2010) defines macroprudential policy comprehensively with four components, namely: 1) Macroprudential policy seeks to develop, oversee, and deliver appropriate policy response to the financial system as a whole rather than focusing on individual institutions or certain economic measures in isolation; 2) Macroprudential policy aims to enhance the resilience of the financial system and to dampen systemic risks that spread through the financial system via the interconnectedness of institutions, their common exposure to shocks, and the tendency of financial institutions to act in procyclical ways that magnify the volatility of the financial cycle; 3) Macroprudential policy should use variable and fixed tools and apply them with the goal of reducing systemic risk and increasing the resilience of the financial system to absorb such risk; and 4) The institutions charged with

implementing macroprudential policy must inform and be informed by monetary, fiscal, and other government policies, and give due regard to the primary responsibilities of other agencies.

Global financial crisis has proven that previous framework of stable financial system has structural flaws. Global financial crisis has demonstrated that regulation focused on individual institutions alone does not adequately deal with systemic risks to the financial markets as a whole. Moreover, global financial crisis has also demonstrated the need for fundamental reform of the financial system, where prudential regulatory framework will need to be re-oriented to have a system-wide focus. Based on lessons learned from the global financial crisis, some economists look back to macroprudential policies that have emerged and evolved since the 1970s, which is believed to be a forgotten element in the framework of the existing financial system stability. Finally, the additional new sixth element/pillar of financial system stability (FSS) was introduced, named "Sound Framework of Macroprudential Supervision", by implementing a macroprudential approach to financial regulation and supervision, focused on the systemic risk of the financial system, which includes the cross-section risks arise from the existence of common (correlated) exposures and the time dimension risks or system-wide risk which can be amplified by interactions within financial system as well as between the financial system and the real economy (Borio, 2009). Davis and Karim (2009) considered macroprudential regulation as a missing policy pillar.

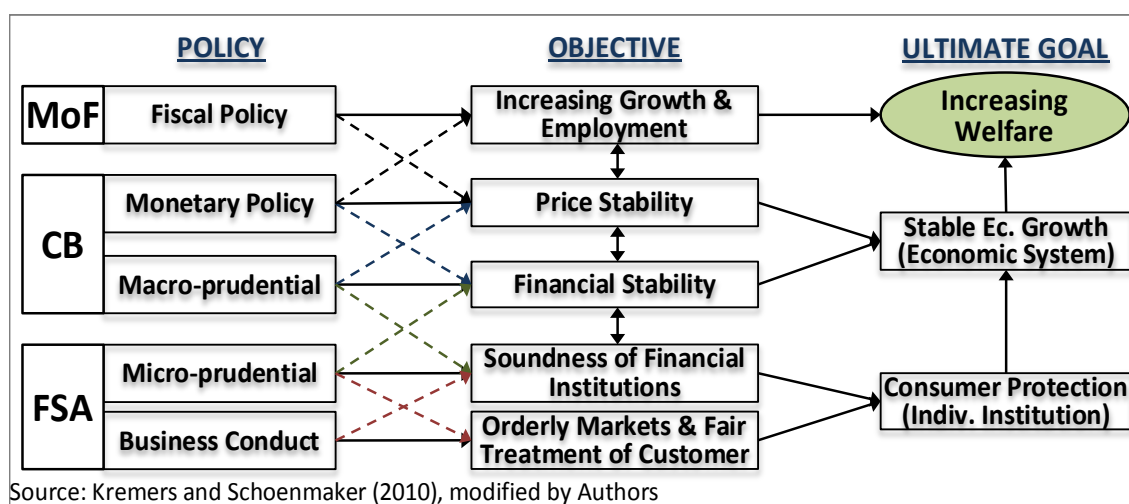
**Fig. 2.1** Main Pillars/Elements of Financial System Stability



Source: Bank Indonesia

Within macro-micro economic policy framework, macroprudential policy is intended to achieve financial stability by preventing its systemic risks, microprudential policy is intended to achieve financial stability by maintaining financial soundness of individual financial institution, where financial stability is a pre-condition for effective monetary policy. The interconnections of macro policy framework to achieve macroeconomic objectives is illustrated by Kremers and Schoenmaker (2010) as exhibited in Figure 2.2.

**Fig. 2.2** Macro-Micro Economic Policy Framework



## 2.2 Sources and Consequences of Systemic Risk

The causes of systemic risks are rooted from fundamental deficiencies or flaws of conventional financial system (CFS) in the structure of banks, interconnectivity of financial institutions as well as information and control intensity of financial contracts, which makes it inherently unstable, and it has not been touched by regulators, yet. Other causes of systemic risks come from specific deficiencies, including financial frictions and systemic risk buildup, which lead to systemic fragility. Financial frictions could be due to incentive problems, information frictions and coordination problems, which are exacerbated by regulatory deficiencies. Subsequently, CFS flaws and financial frictions lead to the buildup of systemic risks of cross-section dimension and time dimension. Specific deficiencies of CFS have usually been addressed by macroprudential policy and tools during normal condition, while systemic crisis has usually been addressed by crisis management protocol. However, fundamental deficiencies as the real root causes of systemic crisis have never been addressed by regulators, yet.

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## 3 Conceptual Proposal and Discussion

### 3.1 Macroprudential Framework in Indonesia

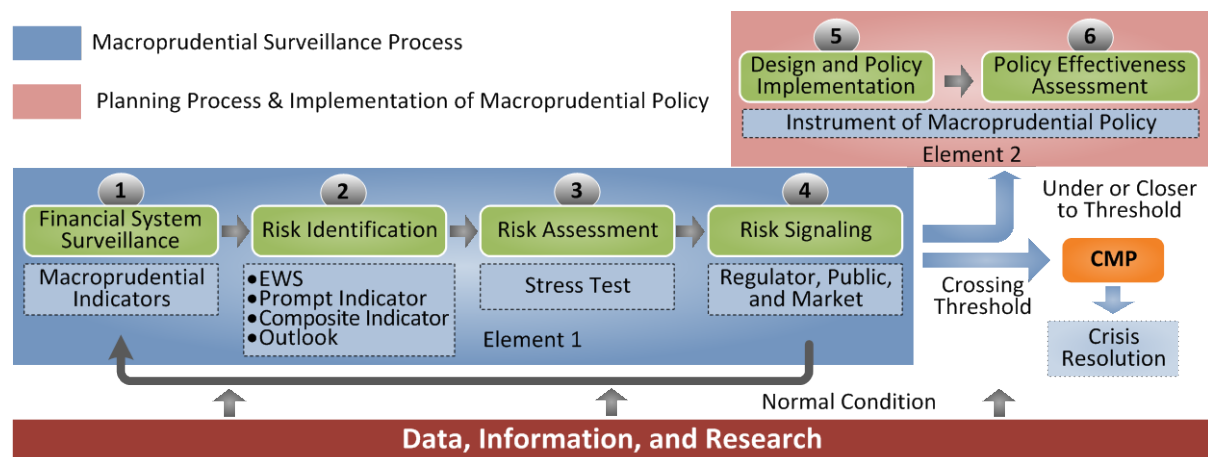
The emergence of macroprudential policy in Indonesia cannot be separated from changes in the institutional framework in Indonesia. Regulation of the Financial Services Authority (FSA) in 2011, had pushed the prudential regulatory authority into macro-prudential oversight and microprudential supervision to achieve ultimate objective of financial system stability. Bank Indonesia is clearly mandated to regulate macroprudential aspect. In other words, since the FSA act, supervisory structure for financial system stability follows the Separate Regulator (SR) models. Referring to this model, the achievement of stability of the

financial system relies on inter-agency coordination mechanisms (eg. In Indonesia is called Financial System Stability Coordination Forum / FKSSK), and Bank Indonesia is part of the maintenance of financial stability, especially in the aspects of macroprudential policy. Macroprudential policy in Indonesia can be explained through macroprudential policy framework (Figure 3.1).

Figure 3.1 shows the flows of macroprudential framework in Indonesia. Generally, the framework aims at identifying risk embodied in the financial system which potentially leads to create systemic system, realizing how to deal with risks spread, through which channels the risks are spread out, and the precise momentum to release the particular instrument of macroprudential so that the potential risks can be prevented and spread across financial system, macroeconomic, and real sector. Monitoring the Financial system until risk signaling is the first four steps in conducting macroprudential surveillance process. The planning process is to implement macroprudential policy which takes place when risk signaling appears in the critical points, for example crossing below or above the tolerated thresholds. In other words, the process of macroprudential process is extended to release instruments of macroprudential policy so that the crisis management protocols (CMP) can be activated.

The step of macroprudential surveillance process (step 1 to 4) is not necessarily implemented in order and could be executed simultaneously. The steps of macroprudential policy in figure 3.1 are set up in order to ease the thinking framework and macroprudential concept implementation. Obviously, the effectiveness and reliability of macroprudential policy implementation is determined by adequate data, rigorous information, and extensive research.

**Fig. 3.1** Conventional Macroprudential Framework in Bank Indonesia



Source: Bank Indonesia

Regarding macroprudential instruments, until end of 2013, Bank Indonesia had released 4 (four) macroprudential policy instruments, including: loan-to-value (LTV) for home loan ownership and down payment for vehicles loan ownership; loan to deposits ratio (GWM-LDR) for strengthening banking intermediation; Net Open Position (NOP) for dampening systemic risk related to currency mismatch in bank due to the rising volatility of exchange rates and foreign capital inflows-outflows in Indonesia; Credit Base Rate Transparency (CBRT) aims to mitigate credit risk exposed in banking by promoting sound

and competitive environment in the midst of high credit growth and increase good governance in banking industry. In near future, Bank Indonesia is studying to release other 2 (two) macroprudential instruments, countercyclical capital buffer (CCB), and capital surcharges (CS).

**Table 3.1** Macroprudential Policy Instruments

INSTRUMENT		LTV	GWM LDR	CBRT Transp'cy	NOP	CCB	Capital Surchg.
OBJECTIVE		Credit-related	Credit, Liq.- related	Credit, Gov.- related	Liquidity- related	Capital- related	Capital- related
RULES	Single/Multiple	Single	Multiple	Single	Single	Single	Single
	Broad-based/ Targeted	Targeted	Targeted	Broad-based	Targeted	Broad-based	Targeted
	Fixed/ Time- varying	Fixed	Time-varying	Fixed	Fixed	Time-varying	Fixed
	Rule/ Discretion	Rule	Rule	Rule	Rule	Rule/ Discretion	Rule
Category of instrument		Need repeated calibration	Developed to mitigate systemic risk	Developed to mitigate systemic risk	Need repeated calibration	Developed to mitigate systemic risk	Developed to mitigate systemic risk
Source: Bank Indonesia							

### 3.2. Analyzing the Risk Exposed by Contemporary Islamic Banking

Islamic Financial Services Boards (IFSB) recognizes six risk categories of Islamic bank, namely: credit risk, equity investment risk, market risk, liquidity risk, rate of return risk, and operational risk.



**Table 3.2** The Risk Profile of Islamic Financial Institutions

<b>Risks</b>	<b>Definition</b>
Credit Risk	Credit risk is defined as the exposure to the likelihood that a counterparty will fail to meet its obligations in accordance with agreed terms.
Equity Investment Risk	Equity investment risk broadly defined as the risk arising from entering into a partnership for the purpose of undertaking or participating in a particular financing or general business activity, and in which the provider of finance shares in the business risk.
Market Risk	Market risk normally refer to the potential impact of adverse price movements such as benchmark rates, foreign exchange (FX) rates, equity prices and commodity prices, on the economic value of an asset.
Liquidity Risk	Liquidity risk is the potential loss to IIFS arising from their inability either to meet their obligations or to fund increases in assets as they fall due without incurring unacceptable costs or losses.
Rate of Return Risk (including displaced commercial risk)	Rate of return risk is the possible impact on the net income of the IIFS due to change in market and benchmark rates. Displaced Commercial Risk refers to the magnitude of risks that are transferred to shareholders in order to cushion the IAH from bearing some or all of the risks to which they are contractually exposed in Muḍārabah funding contracts.
Operational Risk (including Shari'ah non-compliance risk and fiduciary risk)	Operational Risk is risk of loss resulting from inadequate or failed internal process, people and systems or from external events. Shari'ah non-compliance risk is the risk that arises from IIFSs' failure to comply with the Shari'ah rules and principles; Fiduciary risk: Fiduciary risk is the risk that arises from IIFSs' failure to perform in accordance with explicit and implicit standards applicable to their fiduciary responsibilities.
Source: <i>IIFSB-1</i> , Dec 2005; <i>IIFSB-13</i> , March 2012; <i>IIFSB-15</i> , Dec 2013; <i>IIFSB-16</i> , March 2014; <i>ED-IIFSB-17</i> , Oct 2014.	

Taman (2014) categorized Islamic banking risks profile into two, generic risks and specific (unique) risks profiles. Generic risks – generally, the risk exposures of Islamic Banking activities which are similar to credit risk, market risk, liquidity, and operational risks exposures in conventional banking. However, the generic risks are not straight forward in Islamic banking from the perspectives of risk management process and practices, specifically for financing which involves financing assets. The risks of financing may transform from credit to market risk at different stages of contract, for example in murabahah contract, market risk is exposed when asset available for sale, but the risk is then transformed into credit risk when asset is sold to and payment is due from customer.

**Table 3.3** Generic Risks Profile

<b>Generic Risks</b>	<b>Definition</b>	<b>Contemporary Islamic Bank</b>	<b>Conventional Bank</b>
Credit Risk	The potential that a counter party fails to meet its obligation in accordance with agreed terms and conditions of a credit related contract.	V	V
Market Risk	The potential impact of adverse price movements such as benchmark rates, foreign exchange rates, equity prices on the economic value of an asset.	V	V
Liquidity Risk	The potential loss arising from the Bank's inability either to meet its obligations or to fund increases in assets as they fall due without incurring unacceptable costs or losses.	V	V
Operational Risk	The potential loss resulting from inadequate or failed internal processes, people and system, or external event.	V	V
Source: Taman (2014)			

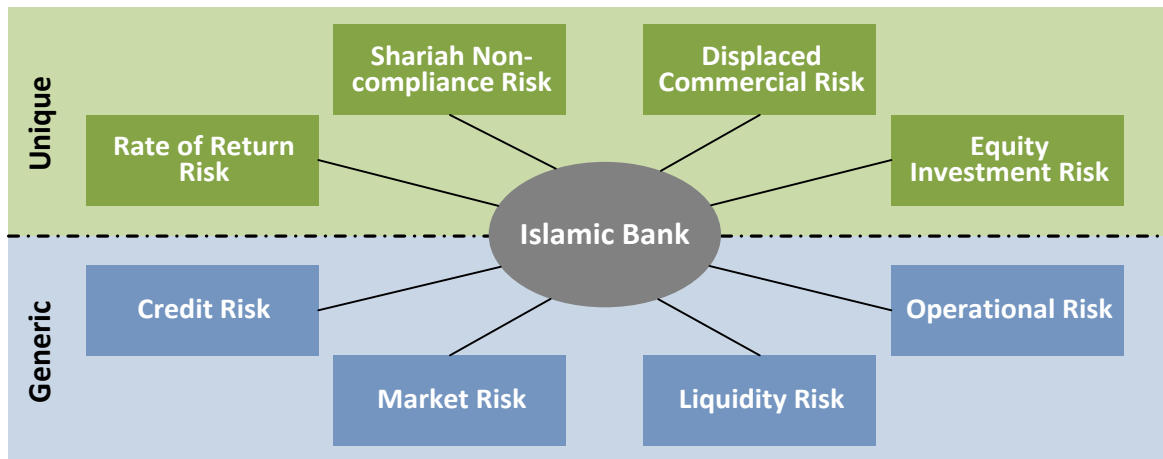
Meanwhile, the specific (unique) risk is defined as the unique risk exposures of Islamic banking activities which include Shariah non-compliance risk, rate of return risk, displaced commercial risk, equity investment and inventory risk.

**Table 3.4** Specific Risk Profile in Islamic Bank

<b>Unique Risks</b>	<b>Definition</b>
Shariah Non-compliance Risk	Risk arises from the failure to comply with the Shariah rules and principles.
Rate of Return Risk	The potential impact on the returns caused by unexpected change in the rate of returns.
Displaced Commercial Risk	The risk that the bank may confront commercial pressure to pay returns that exceed the rate that has been earned on its assets financed by investment account holders. The bank foregoes part of its entire share of profit in order to retain its funds providers and dissuade them withdrawing their funds.
Equity Investment Risk	The risk arising from entering into a partnership for the purpose of undertaking or participating in a particular financing or general business activities as described in the contract, and in which the provider of finance shares in the business risk. The risk is relevant under mudharabah and musharakah contracts.
Inventory Risk	The risk arising from holding items in inventory either for resale under a murabahah contract, or with a view to leasing under the Ijarah contract.
Source: Taman (2014)	

The summary of risks exposed to Islamic bank according to Taman can be illustrated in figure 3.2.

**Fig. 3.2** Contemporary Islamic Banking Risks Profile



Based on several studies of risks on contemporary conventional bank, contemporary Islamic bank, and ideal Islamic bank, as well as other related studies on bank’s operations and risks, summary of risks exposed to Islamic and conventional banks can be seen in table 3.5.

**Table 3.5** Some Risks Exposed In Islamic and Conventional Banks

RISK	IDEAL ISLAMIC BANK	CONTEMPORARY ISLAMIC BANK	CONVENTIONAL BANK
• Solvency Risk	-	IB	CB
• Credit Risk	IB, DEP	IB, DEP	CB
• Liquidity Risk	-	IB, DEP	CB
• Market Risk	IB, DEP	IB, DEP	CB
➤ Markup Risk	-	V	V
➤ Price Risk	-	V	V
➤ Leased Asset Value Risk	-	V	V
➤ Currency Risk	-	V	V
➤ Security Price Risk	-	V	V
➤ Rate-of-Return Risk	V	V	-
➤ Equity Investment Risk	V	V	V
➤ Hedging Risk	-	V	V
➤ Interest Rate Risk	-	-	V
➤ Benchmark Risk	-	V	V
➤ Business Risk	V	V	V
• Operational Risk	IB, DEP	IB, DEP	CB
➤ Displaced Commercial Risk	-	V	V
➤ Withdrawal Risk	-	V	V
➤ Governance Risk	V	V	V
➤ Fiduciary Risk	-	V	V
➤ Transparency Risk	V	V	V
➤ Shariah Risk	V	V	-
• Reputational Risk	IB, DEP	IB, DEP	CB

Source: Various Sources

Table 3.5 shows the risks profile exposed by Islamic Bank and Conventional Bank. Moreover, naturally, the Islamic Banks is basically divided into two types of banking activities, namely a 100 percent reserve system for safekeeping, and an investment banking system. Based on two above banking activities, Islamic bank naturally can be grouped into ideal and contemporary form which has several distinctive risk exposures. In practice, there are several risks profile exposed in Islamic bank, namely solvency risk, credit risk, liquidity risk, market risk, operational risk, and reputational risk. Moreover, Greuning and Iqbal (2008) states that the Islamic banking system is exposed to risks that it is not supposed to be due to the present of deviations between the theory and practice. These deviations emerge due to three factors, (a) trend toward less risky short-term assets, (b) low participation in profit-and loss-sharing arrangements, and (c) lack of clarity between shareholders and investors-depositors. These deviations have created heightened risk either at the institutional and depositor level as explained below.

In terms of solvency risk, contemporary Islamic bank is perceived to expose to this risk. The bank which faces solvency risk, it cannot meet the financial obligation due to its debt or liability exceeds its equity and its expense coverage is larger than its cash flow. However, in case of solvency risk, its depositors may approach the depositor insurance company to get claim of their deposited funds. Therefore, the solvency risk can lead to Islamic bank failure but the depositors' fund remains insured.

In terms of credit risk, either ideal or contemporary Islamic Bank is exposed to credit risk due since payments may be delayed or not made at all by counterparty, which can cause cash flow problems and affect a bank's liquidity. Especially in the case of default by the counterparty, Islamic banks are prohibited from charging any accrued interest or imposing any penalty, except in the case of deliberate procrastination. Clients or borrowers take advantage by delaying payment, knowing that the bank will not charge a penalty or require extra payments. During the delay, the bank's capital is stuck in a non-productive activity and the bank's investors-depositors are not earning any income. Therefore, once credit risk happens, it would deteriorate balance sheet of an Islamic bank and get impacted to depositors.

In terms of liquidity risk, only contemporary Islamic bank is exposed to this kind of risk. Liquidity risk which applies to Islamic banks is due to lack of liquidity in the market and lack of access to funding. In the case of the institution is unable to borrow or raise at a reasonable cost, the risk associated with a future of profit shared with the depositor also get impacted. The impact of liquidity risk towards depositors is based on the contractual agreement between the bank and the investors-depositors. A "pass through" mechanism technically leads to influence all profits and losses to the depositors-investors due to liquidity risk exposure. However, Islamic bank practices a mechanism where actual risk borne by depositors in their investment account can be dampened by holding a profit equalization reserve (PER). A certain amount of PER is maintained to reduce or eliminate the variability of return on investment deposits and offer returns that are aligned to market rates of return on conventional deposits or other benchmark. Therefore, the liquidity risk exposed by Islamic bank is shared to depositors as well.

Meanwhile, in terms of market and operational risks, either ideal or contemporary Islamic banks are exposed to these risks. Islamic banks operate within a regulatory framework that is likely to impose on them capital requirements with a view to promoting stability and limiting contagion risk due to the existence of risk stemming from market and its operational factors. Surely, these risks exposure would raise the uncertainty risks on risk sharing deposits. Unlike depositors of conventional banks, the contractual agreement between Islamic banks and investment account holders is based on the concept of sharing profit and

loss. This makes investment account holders a unique class of quasi-liability holders which they are neither depositors nor equity holders. Although they are not part of the bank's capital, they are expected to absorb all losses on the investments made through their funds either stemming from market or operational bank (unless the market and operational risks are emerged due to negligence or misconduct on the part of the bank). Therefore, depositors remain exposed to these risks.

Finally, in terms of reputational risk, either ideal or contemporary Islamic bank are exposed to these risks. Practically, the reputational risk emerges due to Islamic bank is unable to act in the best interest of investors-depositors and shareholders. If and when the goals of investors and shareholders diverge from the action of the bank, the reputational risk emerges by previously Islamic bank exposing fiduciary risk. A dire fiduciary risk, for example, inadequate screening and monitoring of projects in the case of partnership-based investment, mismanagement of the funds of current account holders, and mismanagement in governing the business, can cause reputational risk in the form of creating panic among depositors, who may rush to withdraw their funds. Therefore, reputational risk is channel to depositors through damaging the trust of the bank's activities.

### **3.3 Towards Future Macprudential Policy under Dual Financial System**

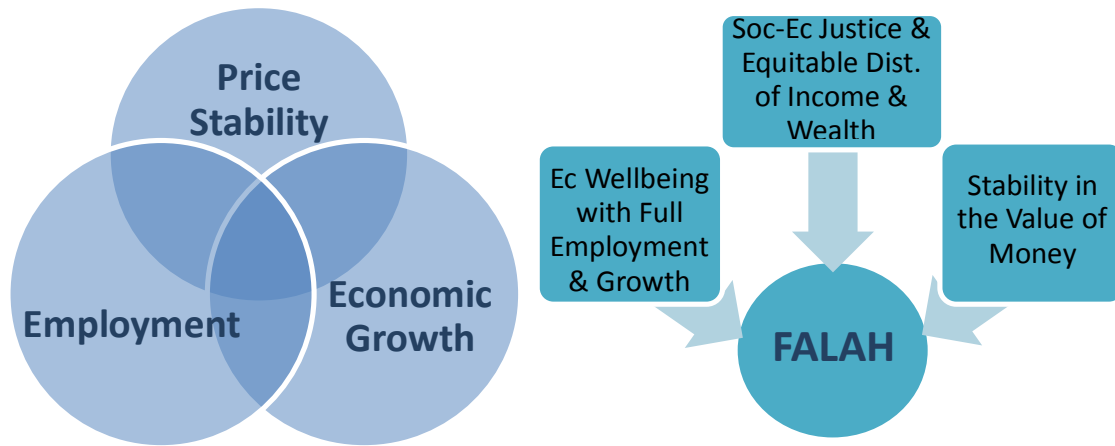
The design of Islamic macroprudential policy undertaken by the central bank would certainly be different from the design of conventional macroprudential policy, especially in a country adopting dual financial system, like Pakistan, Malaysia and Indonesia. The differences not only related to macroprudential policy itself, but also related to objectives and the role of the central bank.

#### **3.3.1 Objective of Central Bank**

Contemporary central bank generally has single objective, which is to maintain the purchasing power of the currency or to maintain price stability. The purchasing power of the currency or domestic price stability is reflected by inflation, while the purchasing power of the currency or the foreign price stability is reflected by the exchange rate. In addition to the primary objective, the central bank sometimes also burdened with the responsibility to encourage economic growth and expanding employment opportunities, so that the objective of the central bank is also the objective of the macro economy of a country.

In countries adopting dual financial system, where Islamic financial institutions coexist with conventional financial institutions, the objectives of the central bank should be a merge between conventional and Islamic macroeconomic objectives. Chapra (1985) suggested several intermediate objectives of Islamic economic, among others: 1) Economic wellbeing with full employment and optimum rate of economic growth; 2) Socio-economic justice and equitable distribution of income and wealth; and 3) Stability in the value of money to enable the medium of exchange to be a reliable unit of account, a just standard of deferred payments, and a stable store of value. In the end, the ultimate goal of Islamic economic is aimed to achieve happiness in the world and the Hereafter (*falah*).

**Fig. 3.3** Objectives of Conventional and Islamic Macroeconomic Policy



Alexandre Lamfalussy, former general manager of BIS (Monetary and Economic Department - BIS, 2011; p.8) stated that the central bank has, or should have, a more or less well defined macroprudential mandate both in preventing the emergence of a systemic crisis and in participating in the management of such a crisis in case its preventive endeavors fail. Therefore, in the future, single objective of the central bank in the conventional financial system, namely a) to maintain price stability, is no longer sufficient and must be combined with the macroprudential objective, namely b) to maintain financial stability by contributing to the preservation of and the enhanced resilience of systemic financial stability. Meanwhile, the central bank under dual financial system in the future should also add other Islamic macroeconomic objectives, namely c) promoting economic wellbeing with full employment and optimum rate of economic growth; and d) promoting socio-economic justice and equitable distribution of income and wealth.

**Table 3.6** Central Bank’s Objective: Current, Future and Gap

<b>CURRENT</b>	1. Maintaining the purchasing power of money or price stability.
<b>FUTURE</b>	1. Maintaining the purchasing power of money or price stability; 2. Maintaining financial stability (by contributing to the preservation of and the enhanced resilience of systemic financial stability); 3. Promoting economic wellbeing with full employment & optimum rate of economic growth; 4. Promoting socio-economic justice and equitable distribution of income & wealth.
<b>GAP</b>	a. CB has not been able to reach its ideal in maintaining purchasing power of money. b. CB has a new role in preserving and enhancing the resilience of systemic financial stability. c. CB has a new role in encouraging the real sector to achieve wellbeing, socio-economic justice and equity.

Obviously, there are gaps between current and Future objectives of central bank in terms of quantity and quality. Current central bank has single objective, while Future central bank has multiple objectives. In maintaining price stability, central bank has not been able to reach its ideal in maintaining purchasing power of money. For example, gold price per troy ounce was US\$35 in 1971 and it was US\$1327.3 in June 2014, while, Rupiah was Rp378/US\$ in 1971 and it was Rp12213/US\$ in January 2014. Moreover, central bank has a new role in preserving and enhancing the resilience of systemic financial stability, as well as in encouraging the real sector to achieve wellbeing, socio-economic justice and equity.

### 3.3.2 Role of Central Bank

The role of contemporary central bank is primarily as monetary authority with the primary objective of maintaining price stability. Central bank also plays an increasing role in maintaining systemic financial stability by assuming macroprudential responsibility. Moreover, some central banks are also given the mandate as payment system authority to maintain efficient, safe, swift, and reliable payment system. These roles are also applied for central bank under dual financial system.

In the future model, the above roles of central bank should be strengthened. The most crucial challenge is whether central bank should also be in charge of microprudential policy. Alexandre Lamfalussy, former general manager of BIS (Monetary and Economic Department - BIS, 2011; p.8) gave two powerful arguments which reinforce each other. Firstly, the central bank is always in the front line whenever there are signs of an emerging crisis. Secondly, central bank, as an oversight responsibility for clearing, settlement and payment systems, has access to direct market information. Therefore, central bank should also be given stronger role in macroprudential policy as the highest authority, so that integrated model, where macroprudential and microprudential authorities vested in one institution is preferable. Moreover, under dual financial system, central bank should be given a role as real sector enabler to encourage and stimulate real sector productive activities.

**Table 3.7** Central Bank’s Role: Current, Future and Gap

<b>CURRENT</b>	1) Monetary authority; 2) Macroprudential responsibility; and 3) Payment system authority.
<b>FUTURE</b>	1) Monetary authority; 2) Macroprudential authority; 3) Microprudential authority; 4) Payment system authority; and 5) Real sector enabler.
<b>GAP</b>	<ul style="list-style-type: none"> <li>a. CB should have comprehensive framework of monetary policy under dual financial system.</li> <li>b. CB should be given a clear mandate to assume a well defined responsibility in the preservation of systemic financial stability.</li> <li>c. CB should re-assume its microprudential authority.</li> <li>d. CB should meet the challenge of efficient, safe, swift, and reliable future payment system.</li> <li>e. CB should have access to the real sector.</li> </ul>

Therefore, as a monetary authority under dual financial system, Future central bank should have comprehensive framework of monetary policy under dual financial system, so that it can benefit from both worlds. Future central bank should be given a clear mandate to assume a well-defined responsibility in the preservation of systemic financial stability, as well as re-assume microprudential authority. Future central bank should also meet the challenge of efficient, safe, swift, and reliable future payment system. Moreover, Future central bank under dual financial system should have access to the real sector, since Islamic finance cannot be detached from the activity in the real sector.

### 3.3.3 Macroprudential Policy

All aspects of macroprudential policy will be affected and should be altered to meet the future challenges. Some important aspects of macroprudential policy will be discussed, including objective, scope, instrument and authority.

### 3.3.3.1 Objective of Macroprudential Policy

The term macroprudential is part of financial stability assessment process, particularly dealing with systemic risks. Systemic risks are cumulated risks across institutions, markets, and even countries to levels that could disturb the real economy. Global interconnectedness and procyclical behavior are two primary sources of triggering systemic risks within financial system. Broadly then, systemic risks can be distinguished into two types, namely (1) “resiliency risk” denotes for a concentration of risk that can arise at a point in time due to the interconnectedness and similar exposure among financial institutions and markets; (2) “procyclical risks” reflects the tendency of the financial system to procyclical behavior that might exacerbate economic booms and bursts. Therefore, macroprudential policies are designed to strengthen the ability of the financial system to withstand stresses and strains and continue to provide financial services.

Alexandre Lamfalussy, former general manager of BIS (Monetary and Economic Department - BIS, 2011; p.21) had clearly stated that a central bank have been strikingly successful if it can be able to either maintain the purchasing power of money and contribute to the preservation of systemic stability. In respect on financial stability preservation, Bank Indonesia has stated its self as a frontier institution which greatly encourage the preservation of financial system stability through macroprudential surveillance.

Obviously, looking at the current macroprudential policy objective, it cannot put away towards contributing to the overall stability of the system. Hence, macroprudential policy should be able to eliminate all fluctuations in the financial system by (1) preventing and reducing systemic risk; (2) encouraging balanced and sustainable intermediation; and (3) improving the efficiency of the financial system and financial access. Meanwhile, in the future, macroprudential policy objectives should comprise of several objectives, namely (1) eliminating and preventing both systemic risks and financial crises; (2) encouraging balanced and sustainable intermediation; and (3) improving the efficiency of the financial system and financial access.

**Table 3.8** Macroprudential Objective: Current, Future and Gap

<b>CURRENT</b>	1) Prevent and reduce systemic risks; 2) Encourage balanced and sustainable intermediation; and 3) Improve the efficiency of the financial system and financial access.
<b>FUTURE</b>	1) Eliminate and prevent both systemic risks and financial crises; 2) Encourage balanced and sustainable intermediation; and 3) Improve the efficiency of the financial system and financial access.
<b>GAP</b>	<ul style="list-style-type: none"> <li>a. There exists structural gap which need to be reformed, while CB should be more aggressive in using current MaP instruments.</li> <li>b. There exist imbalances in terms of sectoral and spatial as well as in terms of asset-liability. In Islamic finance, there exists imbalance due to the domination of debt-based financing.</li> <li>c. The absence of inter-related channels among financial sectors (particularly to microfinance sector) and the existance of interest rate anomaly.</li> </ul>

However, by comparing Future and current objectives, there remain some outstanding gaps, namely (1) there exists structural gaps which need to be reformed, while central bank should be more aggressive in utilizing current Macroprudential (MaP) instruments; (2) there exist imbalances in terms of sectoral and spatial as well as in terms of asset liability. In Islamic finance, there exists imbalance due to the domination of debt-based financing; (3) the



absence of inter-related channels among financial sectors (particularly to micro finance sector) and the presence of interest rate anomaly.

### **3.3.3.2 Scope of Macroprudential Policy**

According to IMF (2011), BIS (2011), Bank of England (2009), and Working Group G-30 (2010), macroprudential policy is basically a policy which aims at maintaining financial stability as a whole by limiting systemic risks and cost of systemic risks in the financial system because of interconnectedness and procyclical behavior among financial institutions. Hence, the primary scope of macroprudential policy should address risks arising in the financial system and risks amplified by the financial system, leaving other identified sources of systemic risks to be dealt with by other public policies. In addition, since macroprudential policy is a part element to preserve financial stability, recently Bank Indonesia released central banking regulation No. 16 2014 which officially states a commitment to encourage a balanced and sustainable intermediation function, and enhance the efficiency of financial system and expose to financial access. In other words, macroprudential policy deals with not only creating sound financial system, but also providing conducive environment for real sector development.

Given limiting systemic risks build-up is the main concern, macroprudential policy should draw on all useful sources of information and apply a range of approaches, namely incorporating quantitative indicators and models, supervisory data and assessments, and other qualitative information, including market intelligence (IMF, 2011 pg.4). In addition, macroprudential policy should be able to encompass all important providers of credit, liquidity, and maturity transformation regardless of their legal form, as well as individual systematically important institutions and financial market infrastructures.

Based on above description, the scope of macroprudential policy in Bank Indonesia is being focused on (1) promoting effective and solid financial system surveillance; and (2) conducting precise examination of bank and relevant institutions as needed. In practice, Bank Indonesia has set up MaP policy framework and develop systemic risks index consisting of size factor, interconnectedness among financial sector, and complexity (represented by net performing loan, domestic government bond price, and capital adequacy ratio). Moreover, Financial System Stability Index also is developed by incorporating exchange rate volatility, IHSG, and yield of obligation) in order to conduct surveillance mechanism in the financial system.

Meanwhile, in the Future model, the scope of macroprudential policy must be also concern with (1) financial system surveillance and (2) promoting examination of bank and relevant institution as needed. However, in the future, the scope of macroprudential policy is not merely concern with the financial system and the institution per se, but also should be extended to the source of financial distress in the financial system, such as excessive credit growth, price bubble in property sector, and increasing foreign debt.

**Table 3.9** Macroprudential Scope: Current, Future and Gap

<b>CURRENT</b>	1) Financial system surveillance; and 2) Examination of bank and relevant institutions as needed.
<b>FUTURE</b>	1) Financial system surveillance; and 2) Examination of bank and relevant institutions as needed.
<b>GAP</b>	a. Credible leading indicators and Financial Stability Index (FSI) are needed, including better predictor. The predictor can be divided into internal sources (stress indicators), and external sources of risks (imbalances indicators). b. Strong and comprehensive legal foundation are needed, so that macroprudential authority could perform its examination tasks effectively.

Obviously, there are gaps between current and Future objectives of central bank in terms of macroprudential scope. Bank Indonesia needs to develop credible leading indicators and The Financial stability Index (FSI) as better predictor for detecting financial turmoil. In addition, The need to have strong and comprehensive legal foundation for macroprudential policy implementation so that macroprudential authority could conduct its examination tasks effectively.

### 3.3.3.3 Instrument of Macroprudential Policy

Instrument of macroprudential is sequential steps of surveillance process in macroprudential policy framework. Instruments of macroprudential have several unique characteristics, namely (1) the primary purpose is to mitigate systemic risks; (2) its scope covers the financial system as a whole; (3) macroprudential policy is implemented through prudential or monetary tools; (4) it has connection with other policies; (5) it encompasses cross section and time series dimensions. In addition, Lim, C., *et al.* (2011) classifies instruments of macroprudential into credit, liquidity, and capital-related. Recently, Bank Indonesia adds up the instrument with governance-related. Therefore, in short, instruments of macroprudential policy can be used to specifically and effectively target systemic risks.

Given the instrument of macroprudential policy is very importance to achieve ultimate target, the instruments must ensure that they can affect not only monetary side, but also real side. Recall on Irving Fisher equation which tries to balance between left hand side, comprising of money and velocity, and right hand side, comprising of price and output. According to this theory, it comes up with 5 hypotheses, namely (1) the money growth is source of inflation; (2) money supply is exogenous in nature; (3) the money demand is a stable function of nominal income and interest rate; (4) Injecting money into economy is not able to affect the output in the long run; and (5) the real of interest rate is merely influenced by non-monetary factor, such as productivity of capital and time preference. Therefore, according to above hypothesis, the left-hand side is dominantly affecting the process towards equilibrium state. in other words, relating to macroprudential policy, it should be able to generate such mechanism for activating either left or right-hand side altogether.

The current instruments of macroprudential policy tries to focus on several goals, namely : 1) Strengthening the resilience of capital and preventing excessive leverage; 2) Managing intermediation and controlling credit risk, liquidity risk, foreign exchange risk and interest rate risk, as well as other risks which could potentially become systemic; 3) Limiting exposure concentration; 4) Strengthening the resilience of the financial infrastructure; and 5) Improving the efficiency of the financial system and financial access. Meanwhile, in the future, instruments of macroprudential policy should be directed towards: 1) Instruments which affecting MV (instruments on the financial sector, like current instruments); 2)

Instruments which affecting PT (instruments on the real sector); and 3) Instruments which include conventional and Islamic macroprudentials

**Table 3.10** Macroprudential Instrument: Current, Future and Gap

<b>CURRENT</b>	1) Strengthening the resilience of capital and preventing excessive leverage; 2) Managing intermediation and controlling credit risk, liquidity risk, foreign exchange risk and interest rate risk, as well as other risks which could potentially become systemic; 3) Limiting exposure concentration; 4) Strengthening the resilience of the financial infrastructure; and 5) Improving the efficiency of the financial system and financial access.
<b>FUTURE</b>	1) Instruments which affecting MV (instruments on the financial sector, like current instruments); 2) Instruments which affecting PT (instruments on the real sector); and 3) Instruments which include conventional and Islamic macroprudentials.
<b>GAP</b>	a. The central bank currently have conventional and Islamic macroprudential instruments affecting the financial sector, which still need to be improved. b. The central bank should have conventional and Islamic macroprudential instruments affecting the real sector.

In conclusion, the gaps which should be taken care off are the central bank should develop both conventional and Islamic macroprudential instruments which could affect either the financial or real sector.

### 3.3.3.4 Authority of Macroprudential Policy

The agency responsible for macroprudential policy should be given the authority to implement it. The authority given the mandate of macroprudential policy should be highly credible. This seems very important due to the nature of macroprudential policy implementation. It has the long-term nature of macroprudential risks and goals and the short term effect of some of the tools available to respond to macroprudential policy's goals. Therefore, only a credible authority is likely to be able to persuade the public that the long-term advantages justify the short-term costs. In addition, an effective macroprudential policy tool needs communication and moral suasion and they will be effectively implemented only in the hand of an agency that is credible.

Looking back to macroprudential policy, Canada states herself as one of the best countries which has coped in response to financial distress so that has been held up as a model of good performance. However, in the case of Canada is still lacking in terms of which agencies will carry out that responsibility in order to preserve financial system stability. In the case of Indonesia, the current financial system stability preservation includes a committee, called Financial System Stability Forum, made up of the Bank Indonesia, Financial Service Authority, Indonesia Deposit Insurance Corporation, and Ministry of Finance. This established forum is set up to ensure that all the expert information and advice is brought to bear on macro-prudential issues (Jenkins and Thiessen, 2012). This forum is chaired by minister of finance, similar with what United States does. This means that the minister of finance is given responsibility. According to Jenkins and Thiessen (2012), this model gives an advantage, particularly in the normal political process would provide for full accountability for macroprudential policy to parliament and the public. These political processess, however, provide shortcomings namely disincentives to act promptly when systemic risks may be building up. Meanwhile, for macroprudential responsibility, currently Bank Indonesia, on its own, is given responsibility for macro-prudential policy.

In the future, like in the United Kingdom and European Central Bank (ECB), the governor of the bank of England and the president of the ECB chairs the Financial Policy Committee. Thus, in case of Indonesia, governor of Bank Indonesia would be the most appropriate chair for Financial System Stability Coordination Forum. According to Jenkins and Thiessen (2012), that is primarily because of the broad perspective provided by the governor's existing responsibilities for dealing with system wide issues of monetary policy and the monitoring of financial stability. Meanwhile, in terms of macroprudential responsibility, Bank Indonesia is given responsibility, but with joint responsibility along with other related agencies. This joint responsibility led by Central Bank would be the most suitable mechanism since this alternative would provide the strongest incentive to make full use of all the knowledge and expertise of committee members, given their direct involvement in all decisions and their collective responsibility for them.

**Table 3.11** Macroprudential Authority: Current, Future and Gap

<b>CURRENT</b>	1. Financial System Stability Coordination Forum (FKSSK) chaired by the Minister of Finance; 2. Central Bank as macroprudential authority.
<b>FUTURE</b>	1. Financial System Stability Coordination Forum (FKSSK) chaired by Governor of Central Bank; 2. Central Bank as macroprudential authority, as well as microprudential authority.
<b>GAP</b>	a. Regulation on the establishment of FKSSK should be amended. b. Regulations related to the separation of macroprudential authority and microprudential authority should be amended..

Therefore, the gaps remain in respect to macroprudential authority, namely (1) regulation related to the establishment of Financial System Stability Forum (FKSSK) should be amended; (2) regulation related to the separation of macroprudential and microprudential authority should be amended.

## **4 CONCLUSION AND RECOMMENDATION**

### **4.1 Conclusion**

The repeated crises and financial instability has forced some authorities to activate the macroprudential policy. The presence of systemic risk and highly interconnectedness among financial institutions creates common understanding on the crux of prudent and solid financial ecosystems. Moreover, the presence of dual financial systems, conventional and islamic, which principally has its own characteristics, become outstanding challenge under macroprudential framework. Indonesia is running her economy under dual systems and a challenge remains on how it would be designed without practically disturb one to another.

The contemporary Islamic banks which record the dominant share in the financial system, in fact, expose some common risks (credit, market, liquidity, and operational risks) and unique risks (rate of return and shariah non-compliance risks).

Therefore, the current practice of macroprudential need to adopt such challenges which accomodates the dual systems. The paper finally proposes the framework towards future macroprudential policy under dual financial system, including (1) objective of central bank, (2) the role of central bank, (3) objective of macroprudential policy, (4) scope of macroprudential policy, (5) instrument of macroprudential policy, and (6) authority of macroprudential policy.

## 4.2.1 Recommendation

4.2.1 The fulfillment of precondition towards effective macroprudential framework under dual financial system, namely:

4.2.1.1 Anomalies should be addressed gradually and systematically, including: low economic liquidity M2/GDP, imbalance in sectoral liquidity, and interest rate structure

4.2.1.2 Understanding on the root causes of financial crises should be enhanced from conventional and Islamic perspectives, as well as from various alternative schools of thoughts

4.2.2 In terms of institutional arrangement, the suggested recommendations as follows:

4.2.2.1 The need of clear and unambiguous roles as well as responsibilities of each related authorities within Financial System Stability Coordination Forum (FKSSK).

4.2.2.2 The need for external coordination among related authorities, either in normal or crisis condition.

4.2.2.3 The potential micro-macro prudential conflict of interests should be removed by prioritizing national and public interest over institutional interests.

4.2.2.4 The internal coordination among related departments should be strengthened and formalized.

4.2.2.5 Under dual financial system, there should have a division dealing with islamic macroprudential within macroprudential authorities.

4.2.3 In terms of instruments arrangement, the recommendations as follows:

4.2.3.1 Under dual financial system, both conventional and Islamic macroprudential instruments should be distinctly studied and developed.

4.2.3.2 Instruments influencing real sector should be studied and developed to complement existing instruments influencing financial sector.

4.2.3.3 Accurate financial stability indicators, leading indicators to financial crisis and other related indicators should be studied and developed.

4.2.4 The other recommendations related to macroprudential aspects under dual system, including:

4.2.4.1 Under dual financial system, the share of Islamic finance should be increased to a significant level to benefit the inherent stability of Islamic finance.

4.2.4.2 The holding of gold reserves by central bank should be increased to a significant ratio in order to improve the fairness and soundness (*scarcity integrity*) of financial system

4.2.4.3 Credit/financing incentive system should be studied and developed to address sectoral and spatial imbalances, as well as MSME and productive-consumptive imbalances.

4.2.4.4 Access to necessary data from financial system, financial institutions and other sources should be made readily available.

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