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Institutional Arrangements for Macroprudential Policy In Asia

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Institutional Arrangements for Macroprudential Policy in Asia

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Abstract

This paper surveys institutional arrangements for macroprudential policy in Asia. Central banks in Asia typically have a financial stability mandate, and play a key role in the macroprudential framework. Smaller and more open economies with prudential regulation inside the central bank tend to have institutional arrangements that give the central bank a leading role. In larger and more complex economies where prudential regulation is outside the central bank, the financial stability mandate is usually shared with other agencies and the government tends to play a leading role. Domestic policy coordination is typically performed by a financial stability committee/other coordination body while cross-border cooperation is largely governed by Memoranda of Understanding.

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I. INTRODUCTION

The macroprudential approach to financial regulation is not entirely new to Asia. Since the Asian financial crisis in the late 1990s, many Asian countries have devoted greater attention to risks that threaten the stability of the entire financial system in an effort to strengthen financial regulation and supervision. Policymakers in Asia have also proactively used what are now considered macroprudential instruments to address emerging vulnerabilities in the financial sector. Asia's bank-dominated financial systems came out of the global financial crisis (GFC) generally unscathed in part because of this approach.

Asian countries' approach to financial stability is underpinned by their institutional arrangements for macroprudential policy. These arrangements have evolved over the years reflecting the evolution of central banking and financial regulation as well as changes made following tumultuous events. The GFC has provided yet another impetus to examine the effectiveness of existing institutional arrangements, and efforts are now underway in Asia as in other parts of the world to further improve the macroprudential policy framework. This paper attempts to document current institutional arrangements for financial stability in Asia and reviews the macroprudential frameworks in light of their key aspects as proposed in Nier and others (2011).

II. THE MANDATE FOR FINANCIAL STABILITY

Most Asian countries have financial stability enshrined in legislation. In some countries, a formal mandate is established explicitly in the law with "financial stability" stated as an objective, and the powers of responsible agencies clearly defined. In China and Malaysia, for instance, the mandate is specified in the Central Bank Law, and in Hong Kong SAR, it is contained in the Banking Ordinance. In other countries, the law does not refer to "financial stability" explicitly, but the assignment of responsibility is clear and authorities interpret the legislation as providing a financial stability mandate. A number of countries (Korea, Malaysia, and Thailand) have amended legislation since the GFC to make the mandate more explicit in an effort to strengthen the financial stability framework. Malaysia's Central Bank Act, amended in 2009, for instance, states that its principal objectives "shall be to promote monetary stability and financial stability conducive to the sustainable growth of the Malaysian economy."

The central bank in Asia typically has a financial stability mandate. In China, Malaysia and Singapore, the central bank is the responsible agency for financial stability. In a number of other countries, including Australia, Hong Kong SAR, Japan, and Korea, the mandate is shared by the central bank with other regulatory agencies and/or the ministry of finance (Table 1). In Indonesia, the central bank participates in a committee that has a financial stability mandate (Box 1). If the mandate is shared, the sharing arrangement is either through legislation, an exchange of letters or memoranda of understanding. In Australia, the 1998 reform of the regulatory structure created a separate prudential regulator with a financial stability mandate, and the central bank's long-standing responsibility for financial stability was also reaffirmed.[1] In Hong Kong SAR, the mandates are specified in the respective laws for the Monetary Authority, the insurance regulator and the securities regulator, and reaffirmed by an exchange of letters between the Financial Secretary and the Monetary Authority (Box 2).

Table 1. Financial Stability Mandate (Selected Asian Countries)

	Mandate established in	Responsible Agency
Australia [1]	Executive decision	CB, IR
China	Legislation	CB
Hong Kong, SAR	Legislation, Executive Decision	CB, I, S, MOF
India	Executive Decision	CB, FSC
Indonesia	Legislation	IR, FSC
Japan	Legislation	CB, DI, IR, MOF
Korea	Legislation	CB, IR, MOF
Malaysia	Legislation	CB
Philippines	Legislation	CB, FSC
Singapore	Legislation	CB
Thailand	Legislation	CB, FSC
Vietnam	Legislation	CB

Source: IMF staff compilation.
Notes: CB—Central Bank; B—Banking Regulator; DI—Deposit Insurance Agency; FSC—Financial Stability Committee or other policy coordination bodies; I—Insurance Regulator; MOF—Ministry of Finance; S—Securities Regulator; IR—Integrated Financial Regulator.
[1]Australia has two regulators—APRA, the prudential regulator, and ASIC, the business conduct regulator.

Depending on the supervisory structure, financial stability frameworks in Asia may be described by two distinctive models, the Central Bank (CB) model and the Separate Regulator (SR) model. The CB model is characterized by banking supervision being performed inside the central bank, while for the SR model, banking supervision is performed outside the central bank (Table 2).

- In the CB model (Hong Kong, India, Malaysia, Philippines, Singapore, Thailand and Vietnam) where bank supervision is inside the central bank, some of the central banks also supervise other financial industries. In Singapore, banking, insurance, and securities are all supervised by the central bank. In Malaysia, the central bank supervises insurance companies in addition to banks (Box 3). In other countries, the regulation and supervision of insurance and securities are performed by separate regulatory agencies.

[1]See http://www.rba.gov.au/fin-stability/about.html.

- In the SR model (Australia, China, Indonesia,[2] Japan,[3] and Korea) where bank supervision is outside the central bank, the degree of financial supervisory functions being consolidated in one agency varies. In China, a different agency is responsible for supervising each of the three financial industries of banking, insurance, and securities, while in Indonesia,[4] Japan, and Korea, one integrated agency supervises all three financial industries. In Australia, there are two integrated regulatory agencies: a prudential regulator, APRA, and a business conduct regulator, ASIC, both responsible for supervising entities in all the financial industries (Box 4).

Table 2. Authority for Financial Supervision (Selected Asian Countries)

	Bank	Insurance	Securities
The Separate Regulator Model			
Australia[1]	IR	IR	IR
China	B	I	S
Indonesia	IR	IR	IR
Japan	IR	IR	IR
Korea	IR	IR	IR
The Central Bank Model			
Hong Kong, SAR	CB	I	S
India	CB	I	S
Malaysia	CB	CB	S
Philippines	CB	I	S
Singapore	CB	CB	CB
Thailand	CB	I	S
Vietnam	CB	I	S

Source: How Countries Supervise Their Banks, Insurers And Securities Markets, Central Banking Publications, 2011.

Notes: CB—Central Bank; B—Banking Regulator; DI—Deposit Insurance Agency; FSC—Financial Stability Committee or other policy coordination bodies; I—Insurance Regulator; MOF—Ministry of Finance; S—Securities Regulator; IR—Integrated Financial Regulator.

The size of the economy appears to have some bearing on whether banking supervision resides inside or outside the central bank. Economies in the CB model are generally small (with the notable exception of India) and more open to trade, while economies in the SR model are much larger (Figure 1). This seems consistent with the findings of Melecky and

[2] In Indonesia, a law passed in 2011 created an integrated supervisory agency outside the central bank, although transition to the new regulatory structure will not be completed until 2014.

[3] While the BOJ is not a regulatory authority per se as defined under the Banking Act, it conducts on-site examinations and off-site monitoring of banks with the objectives stipulated in the Bank of Japan Act.

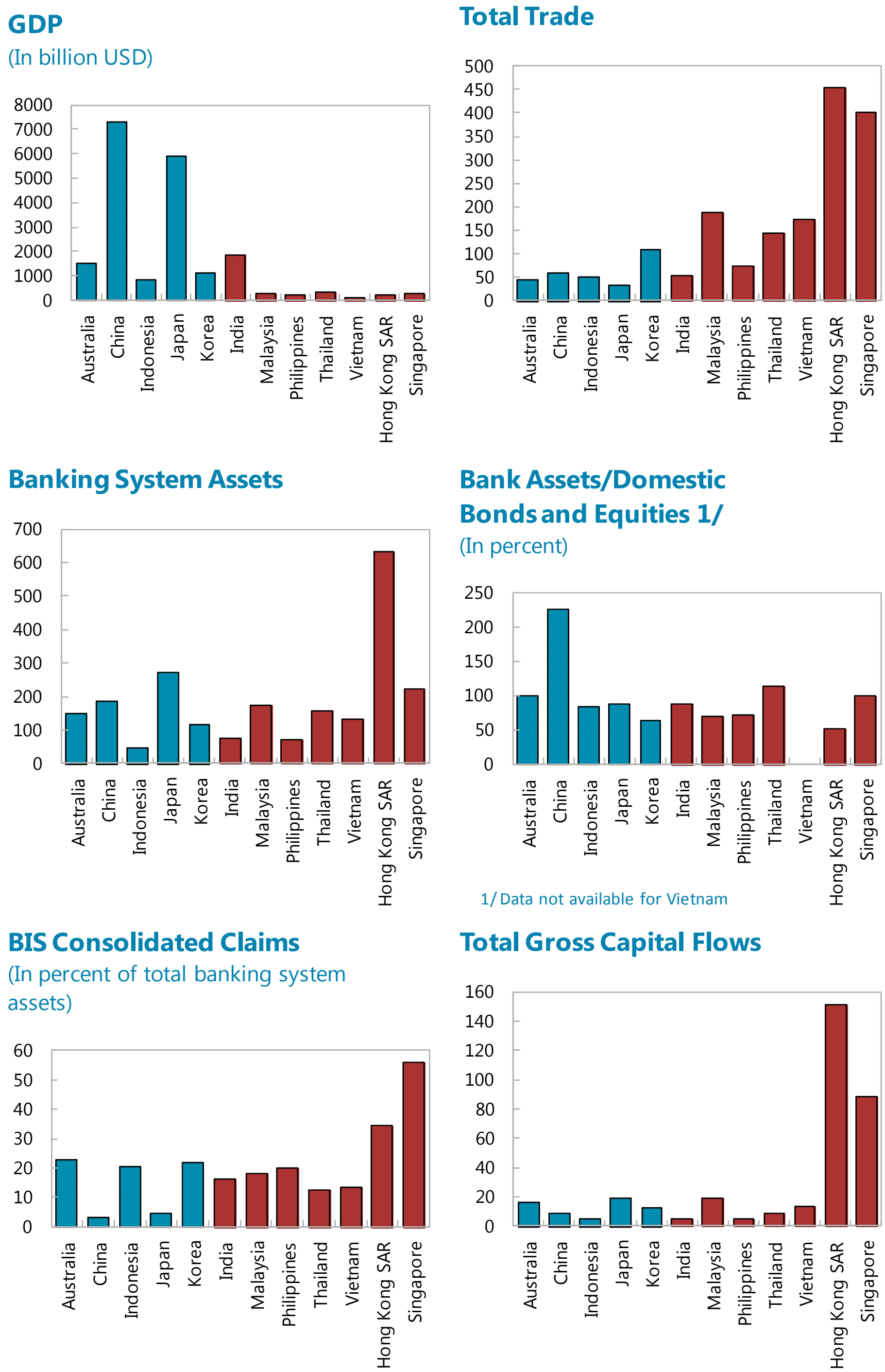
[4] See footnote 2.

Podpiera, who identified "a higher probability of integrating prudential supervision in small economies" and attributed it to cost considerations.[5] On the other hand, the size of the financial sector doesn't seem to be a distinguishing factor except for Hong Kong and Singapore, whose large financial sectors dwarfing their economies are reflective of their role as regional financial centers. Similarly, the magnitude of capital flows differs little between the two models when Hong Kong SAR and Singapore are excluded. Countries in the two models also have similar sizes of banking relative to capital markets with the only exception of China, whose capital markets are relatively underdeveloped.

Apart from economic and financial factors, Asia's institutional arrangements have also been shaped by individual countries' political and legal environment as well as historical events (see Appendix). Asia's central banks and supervisory agencies tend to have been formed after critical junctures in their countries' histories, and the regulatory structure tends to evolve after banking crises. For instance, Australia's current twin-peaks regulatory structure was established in response to the 'Wallis Inquiry', which considered the effects of financial deregulation on the Australian financial system since the early 1980s. Likewise, the Asian financial crisis in the late 1990s spurred changes in the financial stability frameworks in Indonesia.

[5] See Melecky and Podpiera (2012).

Figure 1. Comparison of the Two Models
(in percent of GDP unless otherwise stated)



Sources: IMF, BIS, Staff calculations.

Box 1. The Changing Institutional Framework in Indonesia

The legal and institutional frameworks for financial stability in Indonesia are undergoing transition. As part of the change, the Law on the Financial Services Authority of 2011 created an independent financial regulatory agency, Otoritas Jasa Keuangan (OJK), to regulate and supervise the activities of banking, capital markets, insurance, pension funds, and other financial institutions. The OJK assumed the functions of the Capital Market and Financial Institution Supervisory Body (Bapepam-LK), an agency of the Ministry of Finance (MoF), at the end of 2012, and will take over banking regulation and supervision from the Bank of Indonesia (BI) by the end of 2013 to become fully functional at the beginning of 2014.

The OJK law also introduces a macroprudential policy framework, which has the Forum of Financial System Stability Coordination as a key component. The Forum has an explicit mandate to monitor, evaluate, and maintain the stability of the financial system, and is led by the Minister of Finance. Members of the Forum include the Governor of the BI, the Chairman of OJK and the Chairman of the Deposit Insurance Corporation (LPS).

When the transition is complete, the BI's financial stability mandate will be made formal and more explicit. Currently the mandate was set out in a 2003 Memorandum of Understanding (MoU) between the BI and MoF, which stipulates the roles, responsibilities, and cooperation arrangements between the two authorities in maintaining national financial system stability. The respective roles and responsibilities of the BI and OJK in the financial stability framework will also be more clearly defined.

The successful completion of the transition requires a revamp of relevant laws, which is currently underway.

- **The BI Act.** With the transfer of prudential regulation powers to the OJK, the BI Act needs to be amended to eliminate overlapping responsibilities. The financial stability mandate for the BI will also need to be made explicit, with its responsibilities for macroprudential surveillance clearly stated. The draft amendment to the BI Act is at an early stage of preparation.

- **The Financial System Safety Net (FSSN) Law.** The FSSN Law, which focuses on crisis prevention and crisis management, is being amended to be consistent with the OJK Law and an amended BI Act, and to facilitate effective coordination among the key authorities (MoF, BI, OJK and LPS) in the prevention and management of systemic risks and crises.

Box 2. Financial Stability Arrangements in Hong Kong

In Hong Kong, the responsibility for supervising the financial services industry is shared among multiple agencies, including the Hong Kong Monetary Authority (HKMA), the Securities and Futures Commission (SFC), the Office of the Commissioner of Insurance (OCI), and the Mandatory Provident Fund Schemes Authority (MPFA). Each agency has its own formal mandate.

The mandate for the HKMA to promote the general stability and effective working of the banking system is set out in the Banking Ordinance, which stipulates the principal functions of the HKMA and provides it with the legal basis for regulating and supervising banks and other deposit-taking businesses. The HKMA determines prudential policies, standards, and guidelines relating to the regulation of banks and other deposit-taking institutions, and is empowered to independently set out and implement macroprudential policy instruments to address systemic risks in support of the Financial Secretary's policies.

The Financial Secretary (Ministry of Finance equivalent) shares the financial stability responsibility with the HKMA and plays an important role in maintaining the stability and integrity of the monetary and financial system. The Financial Secretary is also responsible for determining the monetary policy objective and the structure of the monetary system. The division of functions and responsibilities between the agencies was set out in an Exchange of Letters dated June 25, 2003.

Coordination among the various agencies responsible for financial stability is under the auspices of the Financial Stability Committee and the Council of Financial Regulators, which is chaired by the Financial Secretary and comprises the HKMA, the SFC, the OCI, the MPFA, and the Financial Services and the Treasury Bureau of the government.

The HKMA has used macroprudential tools extensively in recent years to limit systemic risks, particularly risks in the property sector. Caps on the LTV ratios have been adjusted several times since 2009 to control the property market boom. The LTV cap is also differentiated, with a lower limit imposed on higher-valued properties and on investment properties. Such differentiation makes full use of the ability of macroprudential instruments to target specific types of activities, a key advantage of macroprudential policy. In addition, banks are required to hold a "regulatory reserve" above and beyond individual and collective impairment allowances based on HKMA guidance, which reflects their risk profile.

Box 3. Financial Stability Arrangement in Malaysia

Oversight of the Malaysian financial system is primarily the responsibility of the Bank Negara Malaysia (BNM) and the Securities Commission (SC). The BNM supervises the banking sector (conventional, Islamic, and development banks), the insurance sector, money and foreign exchange markets, and payment systems. It also performs surveillance of non-bank entities by collecting information from institutions it does not regulate. The SC regulates capital market intermediaries, including fund management companies, broker-dealers, and securities and derivatives markets. It shares the oversight responsibility for investment banks with the BNM.

The SC also regulates the nascent private pension fund industry, but the two major state-owned pension funds are overseen by the Ministry of Finance. The offshore financial center in Labuan is supervised by the Labuan Financial Services Authority (LFSA), which is chaired by the BNM Governor and covers offshore banking, insurance, and trust and fund management.

The Central Bank of Malaysia Act 2009 (the CBA) provides the BNM with a formal financial stability mandate and overarching powers to achieve the mandate. A Financial Stability Committee (FSC) within the BNM is the decision-making body on financial stability issues. A Financial Stability Executive Committee (FSEC) extends BNM's oversight powers to institutions that are outside its direct regulatory perimeter. The FSEC consists of the BNM Governor, one Deputy Governor, the CEO of Perbadanan Insurans Deposit Malaysia (PIDM), an auditor, and a legal expert as regular members, and meets at least twice a year. The SC and the Treasury are not regular members but may participate in FSEC meetings by invitation.

The collaboration of financial regulators, the BNM, SC, PIDM, and LFSA, is governed by Memoranda of Understanding (MoUs) between the BNM and the other regulators. These MoUs facilitate information sharing and policy consultation, but the scope of the collaboration is limited. For instance, the MoU between the BNM and the SC covers only their shared responsibilities for investment banks and consultation is limited to the senior staff level.

The BNM has broad powers under the CBA to conduct macroprudential policy. To date, the BNM has implemented macroprudential measures alone without the involvement of the other regulatory agencies. In recent years, the BNM has adopted a series of macroprudential measures to curb the rise in household debt and house prices. In March 2011, the BNM revised the eligibility requirements for credit cards, and in 2010 and 2011 tightened the lending conditions on mortgages three times, by adjusting the LTV ratios. So far, the measures on credit cards appear to have had the desired effect, though it is too early to fully assess the degree of effectiveness. The measures to control the volume of lending, however, seem to have had no obvious impact (except for altering the lending composition), with housing price growth remaining at a high level.

Box 4. Financial Stability Arrangement in Australia

Australia's financial stability framework involves four agencies, including:

- **The Reserve Bank of Australia (RBA)**. The RBA has had a longstanding responsibility for financial stability, which was reconfirmed in the context of the 1998 reforms to financial sector regulation in Australia (which, inter alia, created APRA), and more recently was outlined in the September 2010 Statement on the Conduct of Monetary Policy.
- **Australian Prudential Regulation Authority (APRA)**. APRA is required to promote financial system stability in Australia while balancing its objectives of financial safety and efficiency, competition, contestability and competitive neutrality.
- **Australian Securities and Investments Commission (ASIC)**. ASIC regulates the conduct of business and promotes orderly financial markets, and is responsible for taking certain regulatory actions to minimize systemic risk in clearing and settlement systems, working with the RBA.
- **The Treasury**. The Australian Treasury has responsibility for advising the Government on financial stability issues and on the legislative and regulatory framework underpinning financial system infrastructure.

The Council of Financial Regulators (CFR), comprising senior representatives of the four agencies, provides a mechanism to ensure effective cooperation and coordination among the agencies. The CFR is an advisory body with no powers separate from its member agencies, and cooperation is governed by a series of bilateral MOUs between the agencies. There is regular formal and informal information sharing among the agencies, including the exchange of confidential prudential information. The CFR meets regularly and has working groups with staff from the various agencies working on specific financial stability issues. The arrangement is built on a "culture of cooperation, dialogue and mutual respect," and has served Australia well.

The Australian approach has been to avoid using simple regulatory ratios such as caps on loan-to-value or debt-to-income as macroprudential policy tools. Instead, they prefer to focus on judgments about the ability of borrowers to repay and the quality of bank lending standards, and adjusting risk weights or pillar II capital as necessary to respond to rising systemic risk. While there are no hard prudential limits, there is a well-established mechanism for systemic risk identification and monitoring. The RBA has a central role in monitoring financial system soundness and warning of potential risks, which are carried out through the publication of its half-yearly Financial Stability Review.

III. Key Aspects of Institutional Arrangements

In addition to the degree of central bank involvement in financial supervision discussed above, the criteria laid out in Nier and others (2011) can be used to further characterize the models of institutional arrangements in Asia. Characterizing the models with these criteria can shed more light on the decision-making process in the macroprudential policy framework. These criteria include:

- *Principal agency in charge of macroprudential policy*. This indicates which institution(s) is (are) held accountable for limiting systemic risk.

- *Role of the government*. The formal role of the government (treasury or other executive branch) can be active, passive or nonexistent.

- *Decision-making and control of policy instruments*. This arises when policy decisions and their implementation rest with different institutions.

- *Existence of a separate body coordinating across policies to address systemic risk*. This is a feature where the policy mandate is shared by multiple agencies.

The principal agency in charge of macroprudential policy is typically the central bank in the CB model. This is the case for Malaysia, Philippines, Singapore, and Thailand. This arrangement has the advantage of facilitating information flows and making use of the central bank's existing analytical and communications expertise, although it could also create potential conflicts between the central bank's monetary and prudential functions and increase its reputational risk.[6] Hong Kong and India are an exception, where a policy coordination committee is the primary decision-making body for macroprudential policy, but the central bank plays a key role. In the SR model, the executive branch is usually the principal agency making macroprudential policy decisions, either with a policy coordinating committee (Japan, Korea) or without (China). An exception is Australia, where the policy coordinating body, the Council of Financial Regulators, is chaired by the central bank and includes the Treasury as one of the members. In all countries in the SR model, however, consensus-building is a common approach to macroprudential policy issues.

The role of the government in the macroprudential policy framework seems more prominent in the SR model than in the CB model. This may be in part necessitated by the need to coordinate actions in a policy framework involving multiple agencies, but is also consistent with the overall approach to economic management in countries in the SR model. While a strong role for the government poses the potential risk of undermining monetary and regulatory independence, the government seems in a better position than other agencies to

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[6]See Nier et al (2011).

coordinate policy in a multiple-agency framework. Even in the CB model, the government seems to play an important role. In Hong Kong and Singapore, for instance, the government is actively involved in adopting policy to address systemic risks by introducing property transaction taxes and boosting land supply.

Decision-making and control of policy instruments are usually integrated in the CB model but separated in the SR model. In the CB model, the central bank is typically the principal decision-maker and also has the prudential regulation tools at its disposal as the banking supervisor. In contrast, the policy decision-maker typically does not have control of the policy instruments in the multi-agency setup of the SR model. While the arrangement of the SR model has the advantage of keeping each agency focused on its main objective, communication problems can arise in risk identification, and accountability can be diluted by assigning collective responsibility to multiple agencies. Communication and incentive problems can also delay policy action in this model, which will need to be addressed by better policy coordination mechanisms.

A separate policy coordinating committee exists in most countries in the SR model but only in a few countries in the CB model. Such a committee, clearly necessitated by the multi-agency setup in the SR model, typically comprises all the regulatory agencies and representatives of the executive branch, which plays a key role in policy coordination. In Korea (Box 5), this committee is informal with the executive branch representative acting as mediator, while in Japan (Box 6), this committee is formal and is chaired by the Prime Minister. China has no such committee, but the central bank and the regulatory agencies are part of the cabinet, and policy coordination is carried out at the cabinet level. Among countries in the CB model, Hong Kong and India also have a policy coordination committee chaired by the executive branch, while a similar committee is chaired by the central bank in the Philippines and Thailand (Table 3).

The type of institutional arrangements seems to have some influence on a country's readiness to use macroprudential policy instruments. Countries in the CB model, for instance, have used more instruments, and on more occasions, to mitigate systemic risk than countries in the SR model (Table 4). The institutional arrangement in the CB model tends to facilitate policy action as decision-making and control of macroprudential policy instruments are integrated in the central bank. Nevertheless, the difference in the use of macroprudential instruments may also be a reflection of the overall approach to economic management, independent of the type of macroprudential policy framework.[7] For example, in Korea, despite the lack of a formal macroprudential mandate, the central bank, the integrated supervisor, and the Government coordinated well to introduce macroprudential measures to reduce the reliance of banks on short-term foreign funding.

[7]This outcome may also reflect differences in their economic and credit cycles and the type of risk they face.

Table 3. Policy Coordination Mechanism

	Existence of Committee	Chaired By
The Separate Regulator Model		
Australia	Yes	CB
China	State Council [1]	Prime Minister
Indonesia	Yes	MOF
Japan	Yes	Prime Minister
Korea	Yes	
The Central Bank Model		
Hong Kong, SAR	Yes	MOF
India	Yes	MOF
Malaysia	No	
Philippines	Yes	CB
Singapore	No	
Thailand	Yes	CB
Vietnam	No	

Source: IMF staff compilation.
Note: MOF generally refers to the executive branch.
[1]The State Council is the highest executive body of the government.

Asia has regional arrangements for financial cooperation, although these usually do not have a role in policy coordination. Unlike Europe, Asia does not have a highly integrated regional financial system or a single market, and a regional coordination mechanism like the European Systemic Risk Board (ESRB) has not been created. One of the mechanisms for regional financial cooperation in Asia is the Executive Meeting of East Asia-Pacific Central Banks (EMEAP), which has a Monetary and Financial Stability Committee (MFSC) set up in 2007 to enhance regional collaboration and cooperation in the areas of macroeconomic monitoring and crisis management. The MFSC, represented at the Deputies' level, currently focuses on information sharing and joint-monitoring of global and regional economic and financial developments. Other regional cooperation mechanisms include the APEC, the ASEAN and the ASEAN+3 Finance Ministers and Central Bank Governors Meeting.

Cross-border arrangements for financial stability in Asia mostly take the form of bilateral Memoranda of Understanding (MOU) at the microprudential regulation level. These are established to facilitate communication and cooperation between home and host country supervisory authorities. The Hong Kong Monetary Authority (HKMA), for instance, has signed MOUs with most overseas supervisors of financial institutions with significant deposit-taking activities in Hong Kong. The Australian Prudential Regulation Authority (APRA) has established formal cooperation arrangements, mostly in the form of MOUs, with 23 overseas financial regulators. These arrangements cover the confidential information sharing, on-going supervision, as well as policy development issues. Some countries (e.g., Indonesia and India) have signed relatively few MOUs and have more informal forms of communication with their counterparts in other countries.

Table 4. Use of Macroprudential Policy Tools[1]

	Caps on loan-to-value or debt-to-income ratios	Ceiling on credit or credit growth	Limits on net open positions, currency mismatches	Countercyclical capital or provisioning requirement
The Separate Regulator Model				
Australia				
China	X	X		
Indonesia	X		X	
Japan				
Korea	X		X[2]	
The Central Bank Model				
Hong Kong, SAR	X			
India	X			X
Malaysia	X	X	X	
Philippines			X[3]	
Singapore	X	X		
Thailand	X		X	
Vietnam		X		

Source: IMF staff compilation.
[1]This is not an exhaustive list.
[2]Macroprudential levy on banks' non-core foreign liabilities.
[3]Limits on banks' gross exposure to peso NDF transactions.

Box 5. Financial Stability Arrangement in Korea

The financial stability mandate is shared by multiple agencies in Korea, including the Bank of Korea (BOK), the Ministry of Strategy and Finance (MOSF), the Financial Services Commission (FSC), which designs financial regulation, the Financial Supervisory Service (FSS), which carries out the supervision, the Korea Deposit Insurance Corporation (KDIC), and the Korea Finance Corporation (KFC). Of these agencies, the BOK, FSC/FSS and MOSF play the most important role.

- The BOK is responsible for the stability of payment and settlement systems and acts as the lender-of-last-resort. It takes financial stability into consideration in making monetary and credit policies.

- The FSC and FSS promote the stability of financial markets as an integrated prudential regulator and supervisor of banks, securities, and insurance companies.

- The MOSF acts as a policy coordinator on financial stability issues among the various agencies involved.

Inter-agency cooperation between the BOK and the FSC/FSS is required by law. In addition, a memorandum of understanding (MOU) signed by the MOSF, BOK, FSC/FSS, and KDIC in September 2009 aims to strengthen information sharing among the agencies, including all types of information provided by financial companies unless prohibited by law or containing business secrets. The MOU is also intended to facilitate joint inspection of banks and other financial firms by the BOK and the FSS.

During the global financial crisis, the MOSF, BOK, and FSC/FSS collaborated in an informal coordination committee led by the MOSF. They introduced a “macroprudential levy” on banks’ non-core foreign currency liabilities and held a joint press conference to explain the objective and implementation procedures of the measure. This coordination mechanism proved effective during the crisis, although there are some concerns about political interference in the design of financial stability policies that could undermine the independence and effectiveness of the various agencies tasked with different aspects of financial stability.

Korea has used macroprudential tools extensively to mitigate system risks, especially risks arising in the housing sector and the foreign exchange market. These include the loan-to-value (LTV) and debt-to-income (DTI) ratio limits; stronger foreign currency liquidity standards; and limits on banks’ foreign currency forward positions (the forward position is limited to 50 percent and 250 percent of capital for domestic and foreign bank branches, respectively).

Box 6. Financial Stability Arrangement in Japan

The current financial stability framework was established in late 1990s after consecutive failures of large financial institutions. All agencies with a financial stability mandate can take measures to mitigate financial risks, although a dedicated financial stability committee/council is involved only in crisis management. The financial stability consists of the following agencies.

- ***Bank of Japan (BOJ)***. As a central bank, the BOJ carries out monetary policy and is responsible for financial stability through (1) analysis and assessment of financial system stability, (2) coordination with microprudential activity of on-site examinations and off-site monitoring, (3) implementation of measures to ensure the stability of the financial system (including the lender of last resort), and (4) operation and oversight of payment and settlement systems.
- ***Ministry of Finance (MOF)***. The MOF is responsible for managing the government's budget and maintaining the credibility of the Japanese currency and the stability of the foreign currency market. Although its role in preserving financial stability has been limited as a result of the establishment of the FSA, the MOF continues to play an important role in crisis management.
- ***Financial Services Agency (FSA)***. The FSA's predecessor was the Financial Supervisory Agency, which was created in 1998 out of a strong need for regulatory reform to strengthen traditional inspection and supervisory practices and took over from the MOF the supervisory authority and responsibility for banks, securities companies, and insurance companies. In 2000, the FSA assumed its current name after taking over from the MOF regulatory responsibilities for those institutions. The FSA plays a key role in preserving financial stability and crisis management in close cooperation with the MOF and the BOJ.
- ***Deposit Insurance Corporation of Japan (DICJ)***. The DICJ, which is a quasi-autonomous governmental organization established in 1971, provides for the payments of deposit insurance claims in case of a bank failure. Its wholly owned subsidiary, the Resolution and Collection Corporation, handles the management and disposal of assets purchased from failed financial institutions.

There is also a Financial Crisis Response Council that provides a coordination platform for crisis management. The Council consists of the Prime Minister (chair), the Chief Cabinet Secretary, the Minister for Financial Services, the Minister of Finance, the Commissioner of the FSA, and the Governor of the BOJ. The council is convened by the Prime Minister to take decisions when a financial institution or institutions face serious problems that could develop into systemic risk. Since its inception, the Council has met only twice, including once in 2003 when the Council decided to inject public funds into the troubled Resona Bank and Ashikaga Bank.

IV. CONCLUSION

Asia's macroprudential frameworks are not one size but reflect country-specific conditions. Smaller and more open economies tend to have institutional arrangements in which the central bank plays a leading role while larger and more complex economies tend to give a more prominent role to the government. Nevertheless, Asia's macroprudential frameworks also have some commonalities, such as formal mandates and a consensus-building approach to macroprudential policy. The institutional arrangements generally facilitate the use of macroprudential policy instruments to address systemic risks, although the use of instruments seems more frequent where decision-making and control of policy instruments are integrated. These institutional arrangements served Asia well during the GFC, which has provided an impetus for improving the existing arrangements. Some countries in the region have made the mandates more explicit and others have moved to strengthen interagency cooperation. Asia has regional financial cooperation mechanisms such as the EMEAP, but a regional policy coordination mechanism like the ESRB has not been created as Asia does not have a highly integrated regional financial system.

APPENDIX: THE EVOLUTION OF FINANCIAL REGULATION IN ASIA

Before independent supervisory agencies were formed, mandates for banking supervision often resided with central banks. Indeed, many central banks in Asia continue to supervise the banking sector, and a few also supervise the insurance and securities sectors.

Asia's central banks tend to have been formed after critical junctures in their countries' histories. In some cases, a central bank was formed after a country gained independence or transitioned to a different form of government. The Bank of Japan, for example, was formed in 1882, after the Meiji Restoration that led to the modernization of Japan. Bank Negara Malaysia, the central bank, was established in 1959, two years after the Federation of Malaya gained independence. The Vietnam National Bank, predecessor of the State Bank of Vietnam, was formed in 1951 following the uprising against French colonial rule that gave Vietnam independence in 1945. The People's Bank of China was established in 1948 but did not take its current form until 1983 when economic reforms prompted the separation of its commercial banking functions to four state-owned commercial banks. The Monetary Authority of Singapore, the youngest central bank among the 12 countries considered, was established in 1971 and from the outset was given the mandate to regulate and supervise the entire financial sector.

In other cases, central banks were formed in response to economic turmoil. The Reserve Bank of India, for instance, was set up in 1935 "*in the present disorganization of the monetary systems of the world*."[8]

Sometimes, it took a confluence of economic turmoil and political change. The Bank of Korea was formed after a period of economic disarray that gave rise to severe inflation in the years before and after liberation in 1945.[9] The Central Bank of the Philippines, the predecessor of Bangko Sentral ng Pilipinas, was set up to make operational a change in the exchange rate regime, which was itself a product of economic problems in the years following independence in 1946.

While Asia's central banks were formed over the course of nearly 100 years, independent supervisory agencies were established more recently. Many securities regulators were set up between 1989 and 1993 in response to the need to better regulate securities markets following the crash of global stock markets in October 1987, while most insurance supervisors came into existence within a 10 year period between 1988 and 1999, except in the Philippines and Thailand, where they have existed since 1915 and 1929, respectively, albeit as divisions under government ministries rather than as independent institutions. The

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[8]Reserve Bank of India Act (1934).

[9]According to Frank Jr. et al (1975), "the Seoul retail price index increased about 123 times from June 1945 to June 1949."

China Banking Regulatory Commission, which took over banking supervision from the People's Bank of China, was set up in 2003 as China entered its "transformative period of reform."[10]

Integrated supervisors in Asia are an even more recent phenomenon and most were set up within relatively narrow windows. Like central banks, periods of crisis have played a role in initiating their establishment. The Australian Prudential Regulation Authority was formed in 1998 on the recommendation of the "Wallis Inquiry," which considered the effects of financial deregulation of the Australian financial system somce the ear;y 1980s.[11] The Japan Financial Supervisory Agency, the predecessor of today's Financial Services Agency, was formed in 1998 and the Korean Financial Supervisory Commission was established in 1998 followed by its executive arm, the Financial Supervisory Service in 1999, following the Asian financial crisis.[12] The proposal for an integrated supervisor in Indonesia, Otoritas Jasa Keuangan, was adopted soon after the Asian financial crisis, but the agency itself was not established until 2011.

[10]*Learning from the Chinese Experience,* in Financial Sector Reform in Transition Economies (2009).

[11]See Gizycki and Lowe, 2000.

[12]The agency was renamed the Financial Services Commission in 2008.

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