Enhancing Financial Risk Management in Asia
: Macroprudential Aspects

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Chang-Hyun Yun

KOREA INSTITUTE OF FINANCE

Contents

☞ Ⅰ. Early Warning System

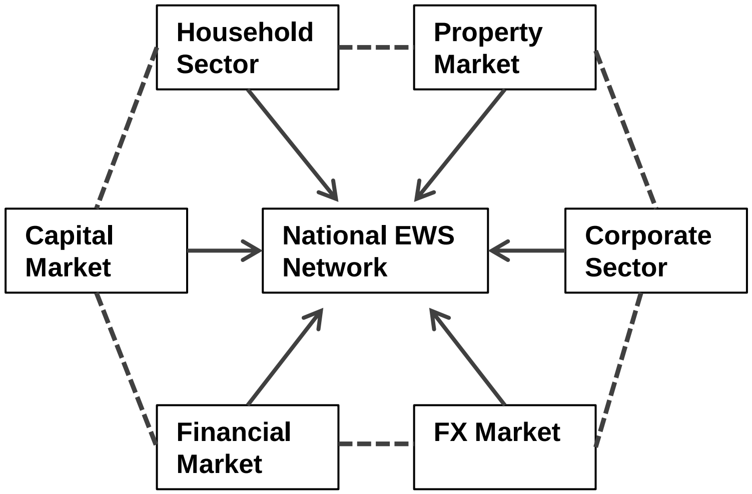
I. Early Warning System (1)

◆ What is the Early Warning System?

- An early warning system (EWS) is a monitoring system to detect the possibility of economic and financial crisis in advance by measuring the level of instability.

- Since the global financial crisis in 2008, the European Systemic Risk Board (ESRB) and the US Financial Stability Oversight Council (FSOC) were established to strengthen early warning activities.

- The focus is on preventing contagion of crisis through a linkage of network across different sectors.



◆ The EWS in Korea

- In Korea, the national risk monitoring system began to operate in 2005.
  - The system has three elements: (1) EWS (2) Economic Review Meeting and (3) Manual on Crisis Management

- The EWS calculates warning indicator for ten sectors including external, financial, real estate, commodities, crops and labor sectors in five stages: ‘Normal→Caution→Warning→Quasi-emergency→Emergency’

Warning Levels

- The Economic Review Meeting scrutinizes conditions of the financial market, financial industry and external sector.

- The manual maps out systematic responses to warning signs of crisis and work flows among ministries and related institutions.

◆ The EWS of Financial Markets in Korea

- In Korea, the EWS of financial markets has been operating since 2004, which measures financial stress index and early warning index each month.

- FSI (Financial Stress Index) is a type of current composite index that measures the stress state of the financial markets.
  - It divides a financial markets into four sectors (stock, FX, bond and banking), calculates each index and compiles them in the weighted average index.

- EWI (Early Warning Index) is a kind of leading index that measures economic indicators that have strong prediction power for the possibility of financial crisis

☞ Ⅱ. Capital Flow Management

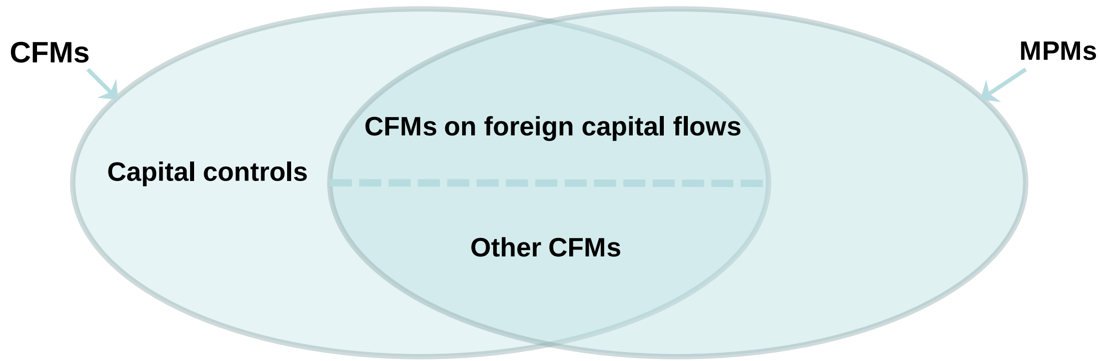
◆ Understanding CFMs

- Capital flow management measures (CFMs) indicate a set of policies, including some of the macroprudential measures (MPM) that affect capital flows.

- In comparison, capital controls means some of the residency-based CFMs which discriminate non-residence.

- In Korea, macroprudential stability levy can be seen as CFM, not capital control measure, as it is non-discriminatory while affecting capital flows.

CFMs, MPMs and Capital controls



II. Capital Flow Management (2)

◆ G20 discussions over CFMs

- At the 2011 G20 Summit in France, heads of state reached **'G20 Coherent Conclusions on Capital Flow Management Measures'**

- They agreed that CFMs can be used in a complementary manner with other various policy options (monetary, exchange rates, foreign reserves, micro-prudential regulations) in case of excessive capital inflows and high capital volatility.

- Capital controls should be used temporarily and lifted when pressures on financial stability abate.

- Member countries or regions are given discretion in evaluating feasibility of CFMs.

◆ Stance of IMF over CFMs

- The Fund released the view on capital liberalization and CFMs in December 2012 and confirmed legitimacy of using CFMs

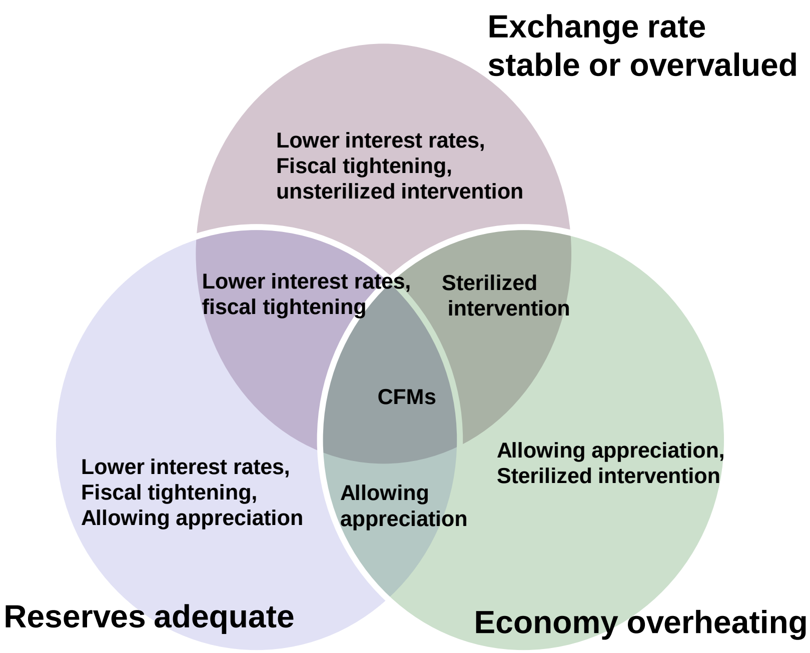
  "There is no presumption that full liberalization is an appropriate goal for all countries at all times"

- Principles of CFMs

  - **Inflow management** : An optimal mix of macroeconomic policies should be primarily used, and residency-based discrimination should be minimized.

  - **Outflow management** : Macroeconomic policies, restructuring, and financial policies should be primarily used, and CFMs should be temporarily used in case of crisis or imminent-crisis conditions.

Responses to Capital Inflows



Source: IMF(2012)

* CFMs may be used when macroeconomic policies do not suffice to manage excessive capital inflows under stable or overvalued exchange rate, adequate amount of foreign reserves and overheating economy.

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II. Capital Flow Management (4)

◆ CFMs in Korea (A package of triple measures to manage capital flows)

	Ceiling on banks' FX derivatives position	Macro-prudential stability levy	Withholding tax on foreign bond holding
Description	Leverage caps relative to banks' equity capital (30% for domestic banks; 150% for branches of foreign banks)	Levy on banks' non-deposit foreign currency liabilities (20bp for maturity of less than 1 year; 10bp for 1 to 3 years; 2bp for over 5 years)	Revival of withholding tax on non-residents' interest income (tax rate 14%) and transfer income (20%) from bond investment
Effect	Deters banks' heavy selling of FX forwards and surge in short-term external debts	Restricts increase in short-term external debts; extends maturity of debts	Absorbs shocks in bond and FX markets in case foreign investment soars
Effective Date	October 2010 (Subsequently the caps were lowered twice in July 2011 and December 2012)	August 2011	January 2011
Limitations	Risk of market rigidity in case of surge in actual demands for FX forward transactions	Limited effect in case the benefits of capital inflows outweigh the burden of levy	Loopholes such as an exemption to avoid double taxation; strengthening performance of Korean bonds

☞ Ⅲ. Regional Safety Net

III. Regional Safety Net (1)

◆ Why is the Regional Safety Net necessary in the emerging Asia?

- Vulnerable to external shocks

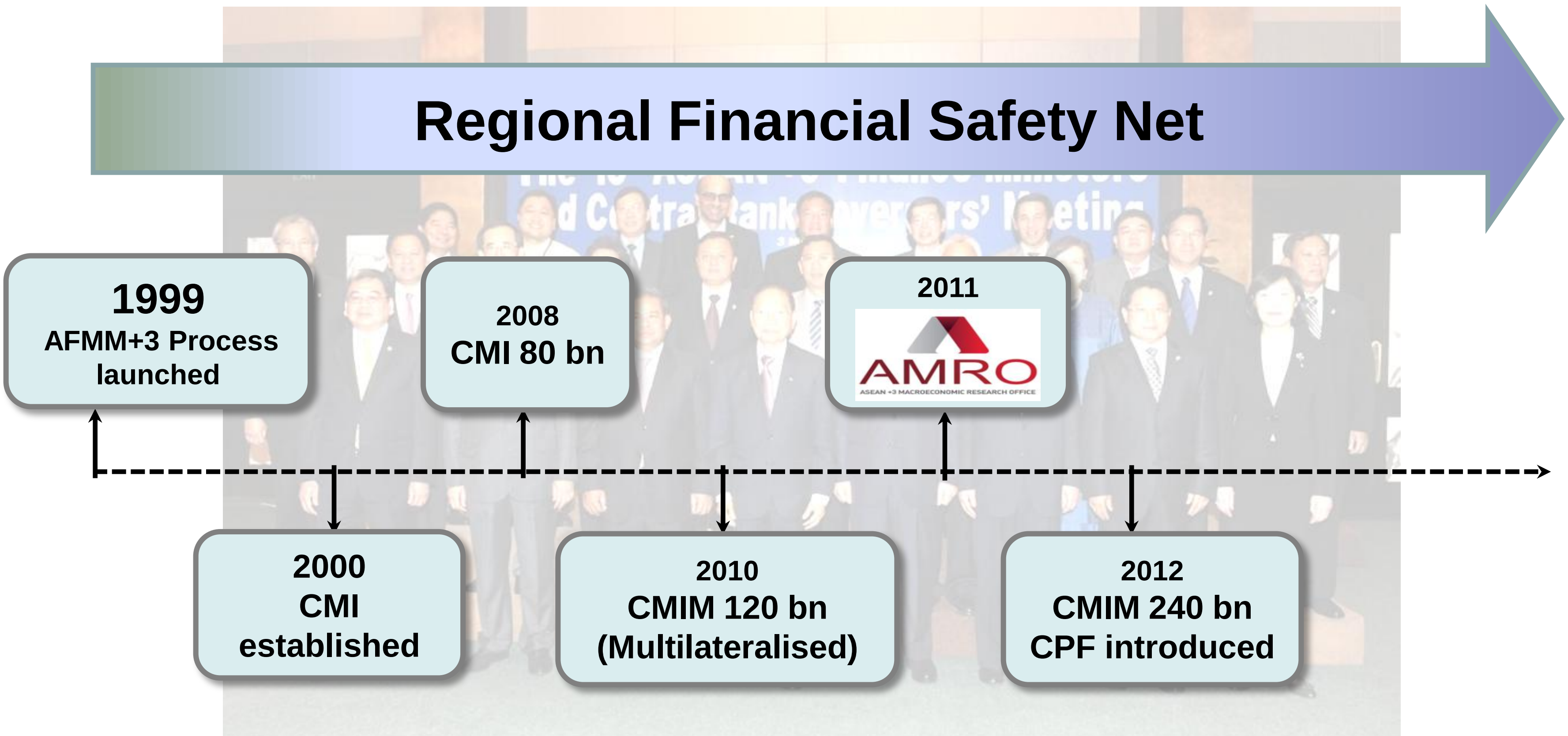
Dependency on Export

The Original Sin

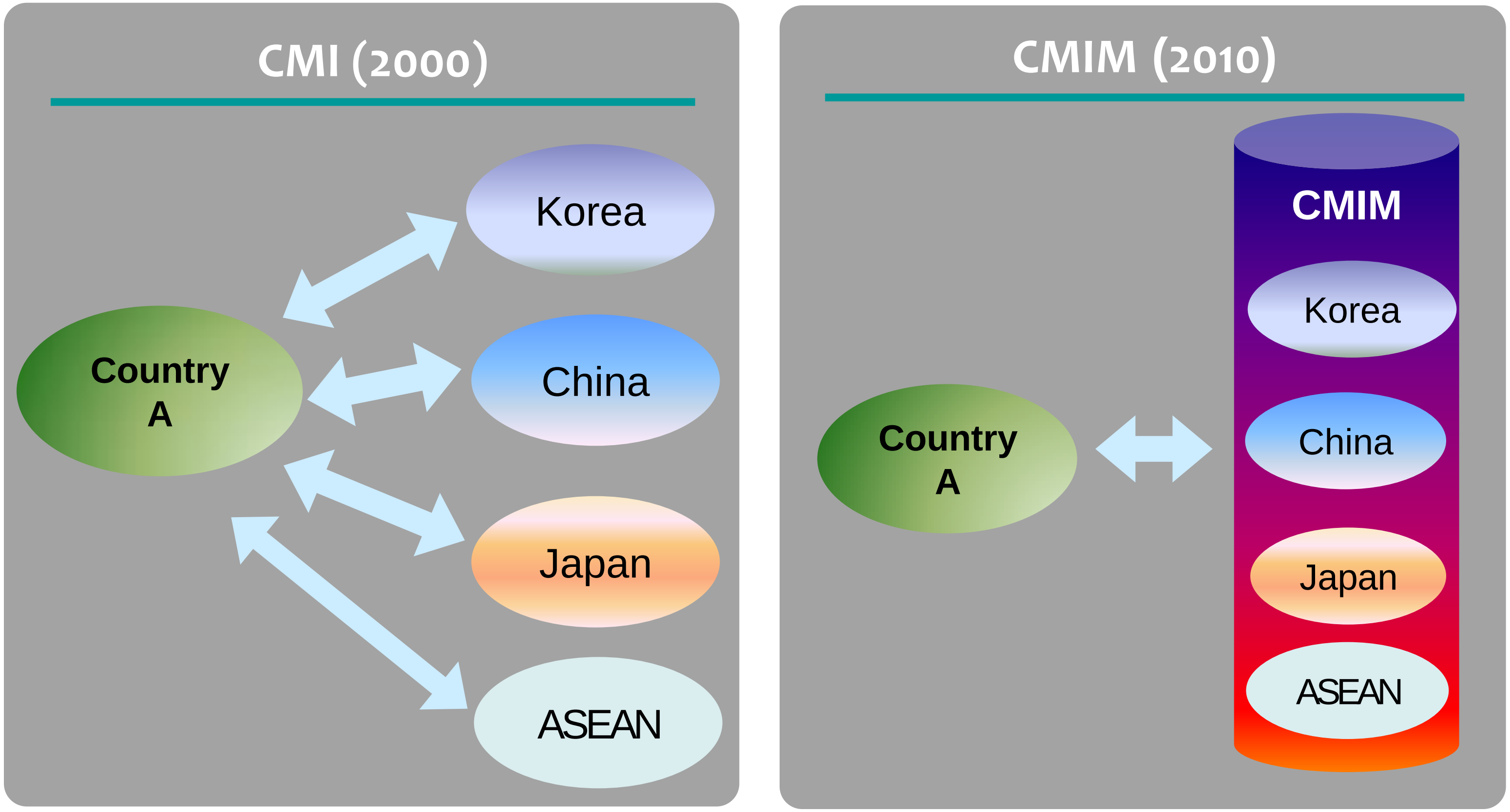
No key currency in the region

Capital flow volatility

◆ Development of the CMIM as the Regional Financial Safety Net



Multilateral Swap Arrangement Process



◆ Financial Contribution and Maximum Arrangement Amount

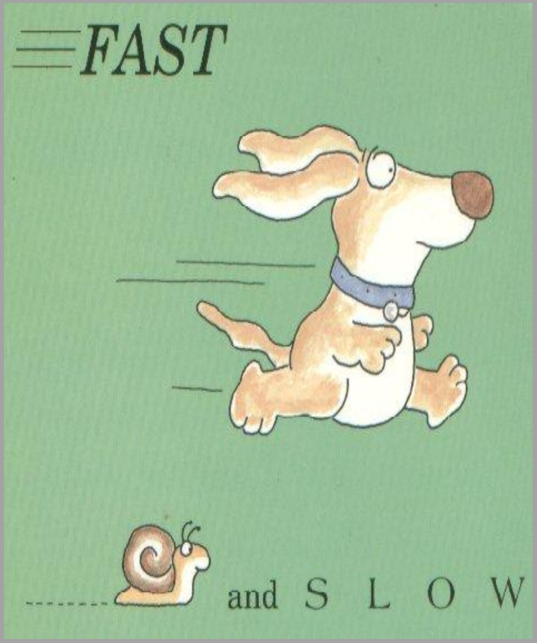
	Financial contribution				Maximum Arrangement Amount	Total voting power	
	USD (billion)		(%)		USD (billion)	(no. of vote)	(%)
China*	76.80	China 68.40	32.0	28.50	34.20	71.60	25.43
		H.K. 8.40		3.50	6.30	8.40	2.98
Japan	76.80		32.00		38.40	80.00	28.41
Korea	38.40		16.00		38.40	41.60	14.77
Plus 3	192.00		80.00		117.30	201.60	71.59
Indonesia	9.104		3.793		22.76	12.304	4.369
Thailand	9.104		3.793		22.76	12.304	4.369
Malaysia	9.104		3.793		22.76	12.304	4.369
Singapore	9.104		3.793		22.76	12.304	4.369
Philippines	9.104		3.793		22.76	12.304	4.369
Vietnam	2.00		0.833		10.00	5.20	1.847
Cambodia	0.24		0.100		1.20	3.44	1.222
Myanmar	0.12		0.050		0.60	3.32	1.179
Brunei	0.06		0.025		0.30	3.26	1.158
Lao PDR	0.06		0.025		0.30	3.26	1.158
ASEAN	48.00		20.00		126.20	80.00	28.41
Total	240.00		100.00		243.50	281.60	100.00

III. Regional Safety Net (5)

◆ But there are inherent limitations

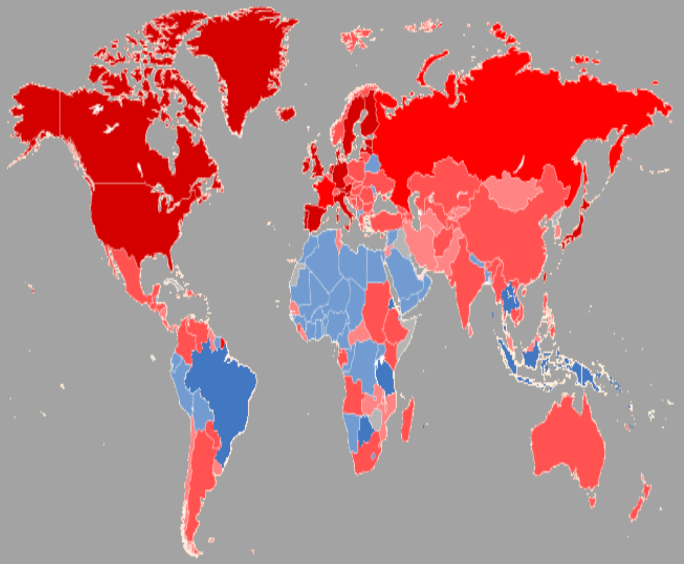
Never sufficient

Economy keeps growing



Weak in Systemic Crisis

Hard to respond



◆ **Need to refine the CMIM, which developed substantially in a short period of time**

Refining the CMIM

- ✓ **Revise the CMIM Agreement**
- ✓ **Accumulate experiences**
- ✓ **Refine the mechanism**
- ✓ **Further increase the size**
- ✓ **Increase the IMF-delinked portion**

III. Regional Safety Net (7)

◆ Further collaborative framework with the IMF

- Mutual trust built through enhanced cooperation

Cooperation with the IMF

- ✓ **Develop a cooperative framework**
- ✓ **Implement cooperation programs**
- ✓ **Utilize comparative advantages**