Park, Young-Joon

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Strengthening ASEAN+3 Regional Financial Arrangements: A New Framework Beyond CMIM*

Young-Joon Park
Department of Economics, Ajou University
yjpark@ajou.ac.kr

This paper examines the operational limitations of the Chiang Mai Initiative Multilateralization (CMIM) as a regional financial safety net in East Asia and presents a new regional financial arrangement. To overcome the drawbacks of the Chiang Mai Initiative Multilateralization which has never been activated so far, this study proposes that ASEAN+3 establish a new lending facility, so-called a Reserve Fund Facility, and create a regional common reserves asset. The proposed Reserve Fund Facility framework guarantees lending automaticity of the liquidity facility, based on upfront funding instead of pledge funding. Establishing the Reserve Fund Facility could find a way of making up for weakness of the Chiang Mai Initiative Multilateralization and responding to the regional needs for effective regional financial arrangement. The full-fledged Reserve Fund Facility will ultimately contribute to the future development of East Asia's monetary and financial cooperation beyond the Chiang Mai Initiative Multilateralization.

Keywords: ASEAN+3, CMIM, East Asia, Regional Financial Arrangements, Liquidity Lending Facility, Upfront Funding
JEL classification: F33, F44, F55

I. INTRODUCTION

ASEAN+3 monetary and financial cooperation emerged with the regional needs for the financial self-help measures after the Asian currency crisis in 1997-1998. Since then, regional financial cooperation in East Asia has been induced by gradual financial liberalization with increasing cross-border capital flows, establishing regional financial arrangements, and developing local currency bond markets. However, East Asian economies had been lagging behind in the development of their financial systems relative to that of real sectors. Underdevelopment of financial

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sectors was due to several reasons: for instance, heavy dependence on bank-intermediated financing and insufficient long-term credits, high degree of risk vulnerability to external shocks, thin regional bond markets, and premature capital markets. Successful regional financial cooperation facilitates effective risk sharing through better allocation of financial resources and ultimately promotes regional economic growth.

An increasing number of studies have examined the important role of regional monetary and financial cooperations. Rey (2013) explores that the center economies' monetary policy influences other peripheral countries' economic conditions, which implies that non-center countries are sensitive to international financial fluctuations. Recent studies have documented its importance that the movements of the advanced economies affect the economic conditions of developing and emerging economies (Ahmed and Zlate, 2013; Aizenman et al., 2015; Forbes and Warnock, 2012; Fratzscher, 2011). In terms of feasible conditions for regional economic cooperation, there is a growing consensus that the East Asian economy requires gradual step-by-step progress to build the regional emergency liquidity facility of coordinated crisis-resolution mechanism (Hill and Menon, 2010; Kawai, 2009, 2014; Ogawa and Shimizu, 2011, Oh et al., 2009 among others). Eichengreen (2010) examines several challenges for regional financial arrangements and proposes that countries ante up real funds and create stand-alone institution equipped with economic surveillance capacity. In particluar, Lamberte and Morgan (2012) suggest to promote the regional financial arrangement cooperating with the global financial safety nets and to build a regional bank to improve regional financial institution.

Rhee et al. (2013) propose changes to the IMF articles of agreement to allow for lending or guarantees to regional arrangements directly and desirable features of regional mechanism. Siregar and Chabchitrchaidol (2013) raise a series of fundamental questions about the CMIM facility, including the limited CMIM's role and AMRO's surveillance activities. They emphasize (i) the need to integrate the CMIM, as a multilateral swap facility, with bilateral swap facilities to backup the limited amount of CMIM fund, and (ii) the need to deliberate ex ante and ex post conditionalities as the safeguard measures against moral hazard problem of the potential recipients. Krishna et al. (2014) propose two ways to strengthen a regional financial arrangement in East Asia: (i) establishing a currency arrangement

under the CMIM to increase the usage of local currencies, and (ii) creating a cooperative framework between the AMRO and the IMF in the area of surveillance.

This paper contributes to the literature in the following point. The regional financial arrangement has been at the forefront of the ASEAN+3 monetary and financial cooperation. Despite the significant progress of regional financial safety nets in East Asia, some fundamental issues about the CMIM operation and the role of AMRO have been raised to enhance their effectiveness. This paper reviews the operational limitations of the CMIM and make a design of a new regional financial arrangement, tentatively named a 'Reserve Fund Facility' (hereafter RFF) which operates under a centralized paid-in capital mechanism in the region.

The remainder of the paper is organized as follows. Section 2 reviews the development of the CMIM by highlighting the status quo and its limitations in actual operation. Section 3 proposes a new regional financial arrangement and its operational mechanism. Section 4 examines the major stakeholders' incentives to respond to the proposed liquidity facility and prospect of financial regionalism in East Asia. Section 5 concludes.

II. ASEAN+3 REGIONAL FINANCIAL ARRANGEMENTS

1. CMIM: Development and Status Quo

During the Asian currency crisis, a number of East Asian countries were dissatisfied with the IMF-driven economic structural reform. The conventional IMF bailout programs were used to be tight with the conditionalities and subject to a stigma effect, which made the East Asian countries reluctant to involve the IMF lending facilities during the global financial crisis. Chwieroth (2013), for instance, points out that informal staff judgments are essential in designing any IMF program. It resulted in initiating ASEAN+3 collective actions toward establishing regional financial safety nets. Their efforts led to the establishment of the Chiang Mai Initiative (CMI) in May 2000 under the objective to address short-term liquidity difficulties of ASEAN+3 members by supplementing existing international financial arrangements. Its mechanism was a network of bilateral currency swap arrangements between the central banks of ASEAN+3 member states.

The ASEAN+3 Finance Ministers Meeting (AFMM+3) in 2009 agreed to multilateralize the CMI in such a way of supporting emergency liquidity from the

total fund of USD 120 billion under a single agreement. Since the CMIM fund is financed in the form of pledge funding, there is no direct and immediate reduction in the member state's foreign reserves. The CMIM agreement finally came into effect on March 24, 2010, which is in nature a multilateral currency swap arrangement of the ASEAN+3 countries. As for the borrowing multiples, 0.5 applies to China and Japan for each, 2.5 to the bigger ASEAN economies, and 5.0 to other ASEAN economies, as summarized in Table 1. It shows that the ASEAN countries can draw larger amounts than their contributions. That is, allowing the economies of higher vulnerability to economic crisis for larger borrowing multiples enhances the effectiveness of the CMIM as a regional lending facility. Despite its loose structure with relatively small size of the fund, the CMIM is evaluated as a significant move towards promoting East Asia's financial arrangement.

Table 1. CMIM Contributions and Swap Amounts

	Contributions		Purchasing Multiple	Max. Swap Amount (USD billion)
	Amount (USD billion)	Share (%)		
China (excl. HK)	76.80 (68.40)	32.00 (28.50)	0.5	34.20
(Hong Kong)	(8.40)	(3.50)	2.5	6.30
Japan	76.80	32.00	0.5	38.40
Korea	38.40	16.00	1.0	38.40
Plus Three	192.00	80.00	-	117.30
Indonesia	9.104	3.793	2.5	22.76
Thailand	9.104	3.793	2.5	22.76
Malaysia	9.104	3.793	2.5	22.76
Singapore	9.104	3.793	2.5	22.76
Philippines	9.104	3.793	2.5	22.76
Viet Nam	2.00	0.833	5.0	10.00
Cambodia	0.24	0.100	5.0	1.20
Myanmar	0.12	0.050	5.0	0.60
Brunei Dar.	0.06	0.025	5.0	0.30
Lao PDR	0.06	0.025	5.0	0.30
ASEAN	48.00	20.00	-	126.20
Total	240.0	100.0	-	243.50

Note: Hong Kong uses only the IMF de-linked portion of the fund.
Source: CMIM Fact Sheet (2012).

The 15th ASEAN+3 Finance Ministers and Central Bank Governors' Meeting (AFMGM+3) in 2012 has made the latest progress of the CMIM. First, the

Executive Level Decision Making Body (ELDMB) pledged to double the total size of the CMIM from USD 120 billion to USD 240 billion. As a result, each of ASEAN big five countries - Indonesia, Malaysia, the Philippines, Singapore, and Thailand - can access up to the maximum amount of USD 22.76 billion, compared to USD 11.38 billion previously. However, the CMIM fund is basically not paid-in funding but pledge funding, being managed by the member's central bank. Second, the IMF-delinked portion of the CMIM fund increased to 30%. Third, they agreed to prolong the maturity and supporting period for the IMF-linked portion from 90 days to 1 year and from 2 years to 3 years, respectively. Also the maturities for the IMF-delinked portion are extended from 90 days to 6 months and from 1 year to 2 years, respectively. Fourth, the annual AFMGM+3 announced to introduce a crisis-prevention mechanism, called the CMIM Precautionary Line. The role of the existing CMIM is converted to the crisis-resolution mechanism, named the CMIM Stability Facility.[1] Fifth, the ASEAN+3 Finance Ministers' and Central Bank Deputies' Meeting (AFDM+3) was improved to the status of the ASEAN+3 Finance Ministers' and Central Bank Governors' Meeting (AFGM+3). The involvement of the central bank governors in the decision making process on the CMIM fundamental issues enables more comprehensive and in-depth discussions on reviewing economic issues at both national and regional level.

The CMIM framework has also made an innovative effort to build up the regional surveillance unit of AMRO, headquartered in Singapore. It was initially established as a corporate body under the corporate law in Singapore, but formally accorded the legal status of an international organization on February 9, 2016. It is the first international organization established by the ASEAN+3 process, which aims to monitor regional economy and contribute to early detection of potential risks as well as help efficient decision making of the CMIM.

AMRO's surveillance activity implements its mission by distinguishing peace time from crisis time. In peace time, AMRO prepares quarterly consolidated reports assessing the overall macroeconomic condition of both the region and individual ASEAN+3 countries. However, in times of crisis, AMRO provides an analysis

[1] The crisis prevention function applies five ex-ante qualification criteria: (i) external positions and market access, (ii) fiscal policy, (iii) monetary policy, (iv) financial sector soundness and supervision, and (v) data adequacy. At the same time, the crisis prevention function can impose ex-post conditionality after reviewing the economic reports by the requesting country and the relevant surveillance reports by AMRO/ADB/IMF.

report on macroeconomic and financial situation of the CMIM swap requesting country, and monitors the use of the disbursed funds from the CMIM, as well as keeps a close watch on the swap requesting country's compliance with the CMIM Covenants.

2. CMIM: Operational Limitations

1) Adequacy of CMIM Fund Size

Although the regional financial arrangement has been at the forefront of ASEAN+3 monetary and financial cooperation, its effective operation has been in doubt. One of the important elements of the regional financial arrangements is the available funding amount that should be sufficient for crisis prevention and crisis resolution. The size of swap facilities available under the CMIM is currently insufficient to support preemptive and short-term liquidity, especially to cope with multiple simultaneous crises in the region. Adequate amount of funding will reduce uncertainty of liquidity provision, and CMIM activations are likely to occur in times of crisis.

Even though the CMIM fund was doubled to USD 240 billion in 2012, the swap amount is effectively insufficient in times of crisis. Considering 70% of the CMIM's IMF-linked portion, for instance, only about USD 11.52 billion is available for Korea. We remind that the size of the bilateral currency swap arrangement between the U.S. Fed. and the Bank of Korea in 2008 was USD 30 billion. From a different point of view, the size of the CMI, as a network of bilateral swap agreements, amounted to USD 78 billion in 2004 which was approximately 5% of ASEAN+3 international reserves at that time. However, the current CMIM fund of USD 240 billion does not even reach 5% of ASEAN+3 international reserves.

2) Regional Surveillance Activities

The existence of a surveillance unit for regional macro-prudential oversight is crucial for early detection of crisis symptom and proper assessment of the member's economic situation in accordance with regional economic conditions. The ASEAN+3 Economic Review and Policy Dialogue (ERPD) has performed low-level regional economic surveillance, and thus its effectiveness has been suspected. Indeed there existed a strong demand for an independent and effective

surveillance unit in the region. The phased surveillance activities are comprised of three stages: (i) information sharing through discussions about regional economic trends, (ii) peer review and peer pressure among the member countries, and (iii) due diligence as the highest-level surveillance. However, the ASEAN+3 ERPD conducts low-level peer review and peer pressure in comparison to the IMF's due diligence.

Due to the limited surveillance capacity of the ERPD, the CMIM maintains the IMF-linked portion of the fund to mitigate a moral hazard problem. Recently, keeping up with the existence of AMRO, the CMIM reduced the IMF-linked portion from 80% to 70%. Its subsequent reduction is expected in the future along with AMRO's improved surveillance capacity.

3) Escape Clause

In principle, each of the CMIM members can escape from contributing to swap requests by obtaining an approval of the Executive Level Decision Making Body. That is, even though the member countries committed to provide their contributions to a swap drawing, they could opt out in case of force majeure. In exceptional cases such as an extraordinary event and domestic legal limitations, this escape option can be exercised without obtaining the ELDMB's approval. In case that financial crisis hits many East Asian economies simultaneously, this escape clause restricts the effectiveness of the CMIM activations.

4) IMF-Linked Portion of CMIM Fund

Although the CMIM facility is purely financed by the ASEAN+3 countries, 70% of the CMIM fund is linked to the IMF conditionality which enforces substantial structural reforms on the recipient economy, including considerable fiscal cuts and monetary policy changes. The use of IMF-linked portion was introduced to prevent potential moral hazard problem. However, large IMF-linked portion causes another side effect of thin demand for tapping the CMIM. For instance, setting up 70% of IMF-linked portion curtails the available size of liquidity support without the IMF conditionality, and the swap requesting party can use only 30% of the fund. Accordingly, the IMF-linked portion, 70% of the fund, is still regarded as being large enough to restrict the member's access to the CMIM, and the portion should be reduced to enhance the CMIM effectiveness.

5) Decision-Making Speed of Lending Approval

Reconsideration for speedy decision making is required based on the operational procedure. In practice, the swap-requesting country makes contacts with the two co-chairs of the AFGM+3, one from the ASEAN members and another from the Plus Three countries, then their activation process informs other members within two days of the request and calls for the ELDMB meeting to make a decision within one to two weeks.

The speed of decision making depends crucially on whether the IMF-linked portion is required or not for emergency liquidity support. If the lending requires only the IMF-delinked portion, the activation process is completed once the borrowing country reaches an agreement with the CMIM. If the lending is granted, currency swaps should take place within two weeks after the ELDMB's approval. However, if the IMF-linked portion is included, the decision making is prolonged until the member country reaches an agreement with the IMF. Thus, having the regional financial arrangements be rapidly and automatically disbursed will enhance the approval speed and its effectiveness.

6) Stigma Effect

Last but not least, it is important to mitigate stigma for requesting short-term emergency liquidity. The emergency liquidity support programs commonly entail stigma, even in case of the IMF precautionary lending facilities. Similarly, minimizing the aftermath of a stigma effect is important for the regional financial arrangements. Otherwise, countries in crisis would prefer alternative crisis-resolution instruments, such as bilateral swap lines whenever they are able to do so. In fact, no East Asian country activated the CMIM during the global financial crisis. Korea and Singapore, for example, experienced a liquidity difficulty in financial markets in late 2008, but they made currency swap arrangements of USD 30 billion with the U.S. Fed., instead of tapping into the regional lending facility of the CMIM. Korea chose this channel because, among other reasons, the government might worry about stigma from borrowing emergency liquidity from the CMIM, which could aggravate the market participants' confidence and perception on economic conditions. Thus, the future phase of the regional financial arrangement must be designed in such a way to minimize a stigma effect, even though it seems quite impossible to eliminate it completely.

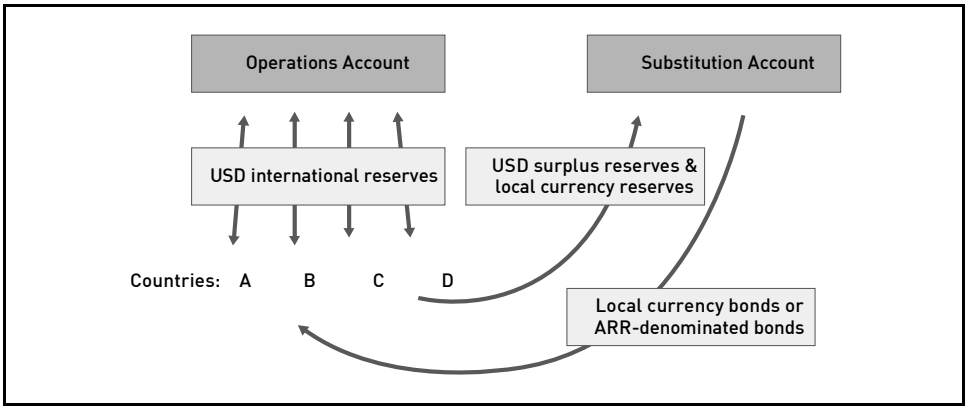
III. A NEW ASEAN+3 FINANCIAL ARRANGEMENT OF RESERVE FUND FACILITY

1. Institution Building of RFF Secretariat

The proposed 'Reserve Fund Facility' (RFF) is basically a mechanism of automatic lending the chipped paid-in fund to supplement the existing CMIM process. The RFF provides a claim on the unconstrainedly usable regional reserve fund of ASEAN+3. A basic difference from the CMIM is the nature of paid-in funding, instead of pledge funding. This feature of the RFF would enhance the effectiveness of the crisis-resolution and crisis-prevention functions of the regional financial safety nets. This is because the use of the upfront fund can improve predictability of liquidity provision in crisis based on lending with mitigated policy conditionality.

The RFF is a regional reserve pooling arrangement such that member countries contribute part of their official reserves to the RFF's Operations Account. The member states then use emergency liquidity in times of crisis as front-line reserves as illustrated in Figure 1.

Figure 1. Operational Mechanism of Reserve Fund Facility



To operate a centralized reserve pooling mechanism, it is imperative that a proper institutional organization be in place to manage the capital effectively and to monitor compliance with policy conditionality to minimize a moral hazard problem. The ASEAN+3 process will need stronger regional surveillance mechanism equipped with the function of due diligence in all likelihood, since an arrangement with low-

degree conditionality and weak enforcement loses market confidence and is therefore unsustainable. Responding to the regional needs, the RFF Secretariat has to fall in place to operate the RFF effectively.

We consider two types of institution building; one is to establish a brand-new institution to operate the RFF and the other is to extend the CMIM mandate and re-organize AMRO. The former is expected to take much cost and time, while the latter is advantageous in that it inherits the accomplishments of the existing ASEAN+3 financial cooperation. The latter also maintains the continuity of ASEAN+3 cooperation, taking less cost and time, and could be properly equipped by regional surveillance capacity. It seems reasonable that AMRO evolves into an RFF Secretariat as an independent headquarter. Once the RFF Secretariat is institutionalized, it manages a kind of regional common reserves asset, tentatively named 'ASEAN+3 Regional Reserves' (hereafter ARR), which is a composite reserves asset of the member's paid-in international reserves. Moreover, for smooth functioning of the regional composite reserves asset, a coordinated exchange rate is required for appropriate valuation of the ARR.

2. Operational Mechanism of Reserve Fund Facility

1) Operations Account

The RFF is in nature a claim to the paid-in capital that the members already deposited their own committed contributions of international reserves. That is, as shown in Figure 1, the member countries deposit committed amount of their USD international reserves to the RFF's Operations Account, and they can withdraw the USD liquidity in times of crisis as front-line reserves.

The RFF is different from the CMIM in that it is operated based on the paid-in capital, rather than the CMIM's pledge funding. This feature does not require promissory-note financing and even the escape clause of breaking away from the multilateralized swap agreement. In this case, the member countries can unconstrainedly withdraw the paid-in international reserves from the Operations Account whenever they need, which does not result in a reduction of a country's international reserves de facto. Moreover, the withdrawal from the Operations Account does not entail the conditionality, and thus the use of the RFF's emergency liquidity lessens the concern about the imposition of harsh policy conditionality and about corresponding stigma, backed by both guaranteed anonymity and lending automaticity. Stigma

associated with the RFF lending could be mitigated if the RFF Secretariat guarantees anonymity for withdrawing emergency liquidity from the Operations Account, provided the RFF's lending automaticity is warranted.

The important economic aspect of the Reserve Fund Facility is the function of insurance against economic crisis. The RFF is similar to a typical insurance mechanism in that it plays a role of a prevention capacity against a possible economic crisis in the future. In addition, the RFF mechanism is geared to providing assurance to recipient countries with lending automaticity. Greater automaticity can give potential users higher degree of assurance that the liquidity support will be available when needed. Main merit of automaticity is the reduction of the discretionary feature of the lending decision process.

However, the RFF differs from an insurance program in the following sense. The first difference between them is that the RFF does not define a triggering event, e.g. sovereign default, for liquidity lending process. In general, an insurance program carries out an ex-post resolution function after a triggering event or crisis happens. However, the RFF conducts an ex-ante precautionary function as the first line of defense to mitigate stress caused by sudden stop or sudden reversal of international capital flows beforehand. Second, the RFF is different from an insurance in terms of payment of insurance premiums. The RFF members do not pay explicit insurance premium, rather they contribute the pre-committed amount of their own reserves as a self-insurance. Then the RFF simply pools the member's reserves and then provides a multilateralized backstop service (i.e., backed by a pool of the member's paid-in contribution) for lending as a sort of liquidity insurance just like banking operation.

2) Substitution Account

Even though the Operations Account functions as a main building block of the RFF, there exists a possibility that the committed contribution of reserves in the account may not be sufficient to provide emergency liquidity during times of distress. In this case, the Substitution Account can be utilized to supplement the Operations Account by providing additional liquidity when the demand for lending exceeds the Operations Account's capacity.

The Substitution Account offers the member countries an opportunity to invest their spare international reserves, being non-committed for the Operations Account. In other words, central banks are allowed to deposit surplus U.S. dollar reserves

and local currency reserves in excess of the committed amount as working balances of the Operations Account. Then, the Substitution Account replaces them with the same value of an ASEAN+3 supranational reserves asset, named ASEAN+3 Regional Reserves (ARR). In operating the paid-in capital, the Secretariat could offer minimal required return for the reserves contributions to compensate the central bank's opportunity cost of profitability, but it could be waived if the member countries regard it as the insurance premium for the use of a regional financial safety nets. However, the return from the Substitution Account should be offered in the sense of the member's incentive to deposit spare foreign reserves.

Member countries then convert their holdings of international reserves denominated in local currencies into the claims denominated in the ARR unit as the numeraire. The account is to enable countries to alter the composition of their reserves by allowing the RFF to issue the local currency bonds backed by the RFF's common reserves asset, and/or the ARR-denominated bonds in exchange for reserves in local currencies. In fact, most of regional financial arrangements maintain an option to issue bonds, such as Arab Monetary Fund in Middle East and Latin American Reserve Fund as well as European Stability Mechanism in euro area, except the CMIM in East Asia and the Eurasian Economic Community Anti-Crisis Fund in Central Asia. That is, member's additional provision of their reserves takes a way of a note purchase agreement, rather than a credit arrangement. The Substitution Account also facilitates the central bank's diversification of the reserves composition and provide an investment vehicle for its local currency holdings.[2]

Another advantage of the Substitute Account enables us to cope with the situation that most member countries face liquidity difficulties. Even though it is unlikely to happen, if that is the case the RFF should provide against emergencies. The RFF can prepare for emergencies by making agreements with the IMF and/or other regional financial safety nets such as Arab Monetary Fund (AMF) in Middle East and Latin American Reserve Fund (FLAR) as well as European Stability Mechanism (ESM) in euro area. This viable proposition can be achieved under the

[2] The RFF mechanism suggests creating a regional common reserve asset, so-called ARR, which is similar to the IMF's SDRs. As the SRDs are claims based on international reserves, an ARR could be conceptually analogous to a contingent reserve pool involving the member countries and it plays a role as special disbursement resources of the RFF.

G20 process, which mutually improves both the global and regional financial safety nets. For example, in addition to the RFF loans, the credit lines with the IMF and/or other regional financial safety nets could be made available. If this is the case, the RFF could issue a collateral-backed repurchase agreement or provide a guarantee scheme on behalf of the individual countries.

3. Feasible Conditions for Operating RFF

1) U.S. Dollar Convertibility

As with the Substitution Account, it is necessary to provide U.S. dollar convertibility for the local currency reserves deposit. Once economic crisis hits a member country, she needs U.S. dollar liquidity, rather than local currencies. We remind the currency swap arrangements of the Bank of Korea and the Monetary Authority of Singapore with the U.S. Fed. In 2008, for instance, instead of tapping the CMI. To guarantee U.S. dollar convertibility, the RFF could seek to find out the direction of progressing in vertical cooperation with the IMF and at the same time horizontal cooperation with other regional financial arrangements. Even though they are reluctant to make swap agreements with individual countries in East Asia, the swap lines between the RFF and other regional financial arrangements could be possible, provided that the RFF concludes repurchase agreements or possibly provides the corresponding warranted collateral.

Most of individual countries in East Asia will have difficulties in making bilateral swap agreements with other regional financial arrangements, while the RFF-backed swap lines with other regional financial arrangements or the Fed. might be viable. Although Korea and Singapore have made bilateral currency swaps with the Fed. in 2008, these will not be guaranteed in next time of crisis. Reminding the case of Eurozone during the European debt crisis, credit ratings of some Eurozone countries were overrated comparing their economic fundamentals because in part they are backed by Eurozone itself and its strong economies such as Germany and France. For a similar reason, many ASEAN+3 members will be expected to benefit from this opportunity.

2) Amount of Paid-In Contribution to Operations Account

As pointed out earlier, the current size of the CMIM might be insufficient in times of crisis. In this subsection I calculate the hypothetical amount of the RFF paid-in contributions. One of the lessons from the Asian currency crisis is that countries' vulnerability to the risk of sudden stops could have been reduced by managing international reserves. It is increasingly recognized that we should take into account the importance of capital flows especially for emerging market economies, and thus the adequate size of international reserves should cover a country's external debt. The Guidotti-Greenspan rule specifies that international reserves should reflect short-term external debt, because their reserves should prepare the ground against a massive withdrawal of short term foreign capital.[3]

Given this context, the reserve adequacy measures should include both measures of liquidity-at-risk and trade-related measures. The minimally required size of international reserves is calculated as the sum of these measures: a country's international reserves add up (1) three-month imports to consider abrupt trade imbalances, (2) short-term external debt with the maturity of 1 year or less, and (3) foreign portfolio investment outflows in times of crisis. For calculation, three-month imports data are taken from International Financial Statistics, short-term external debt is from World Development Indicators, portfolio investment of equity securities (excluding exceptional financing) is from Balance of Payments Statistics, and international reserves data are from World Development Indicators. In addition, during the recent global financial crisis, portfolio investment of equity securities has decreased by 29.5% on average in the ASEAN big five economies and the Plus Three countries. Based on this fact, 30% of portfolio investment outflows in equity securities is assumed to calculate the hypothetical size of international reserves.

The hypothetical amount of the reserves is defined by the amount of reserves that a country would have to hold to maintain the coverage of aforementioned items of (1), (2), and (3). To determine the adequate balance of the Operations Account, 5% of hypothetical ASEAN+3 reserves is used as a reference level. The calculation presents that the size of ASEAN+3 international reserves

[3] de Beaufort Wijnholds and Kapteyn (2001) point out that the Guidotti-Greenspan rule deals with an external drain on a country's reserves, disregarding the possibility of an internal drain such as capital flight by residents.

amounts to USD 6,345.46 billion in 2007. Taking 5% of the hypothetical ASEAN+3 international reserves during the global financial crisis as an amount of the regional fund, at least USD 320 billion is required to meet the adequate level of a regional reserve pooling mechanism.[4] Table 2 presents member country's committed paid-in capital contribution to the Operations Account, provided that their contribution shares and drawing multiples are the same as the CMIM.

Table 2. Proposed Paid-In Capital Contribution into Operations Account

	Paid-in Reserves Contribution		Drawing Multiple
	(USD billion)	Share (%)	
China(excl. HK)	102.4 (91.2)	32.0 (28.5)	0.5
(Hong Kong)	(11.2)	(3.5)	2.5
Japan	102.4	32.0	0.5
Korea	51.2	16.0	1
Plus Three	256.0	80.0	-
Indonesia	12.1376	3.793	2.5
Thailand	12.1376	3.793	2.5
Malaysia	12.1376	3.793	2.5
Singapore	12.1376	3.793	2.5
Philippines	12.1376	3.793	2.5
Viet Nam	2.6656	0.833	5.0
Cambodia	0.3200	0.100	5.0
Myanmar	0.1600	0.050	5.0
Brunei	0.0800	0.025	5.0
Lao PDR	0.0800	0.025	5.0
ASEAN	64.0	20.0	-
Total	320.0	100.0	-

Source: Author's calculation.

3) Arrangement Period of RFF Lending

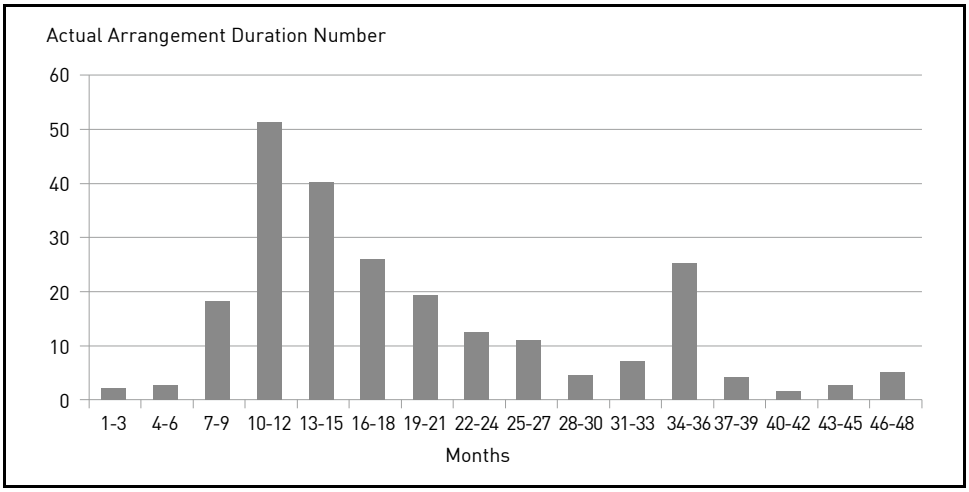
Figure 2 shows the arrangement period of IMF lending between 1990 and 2006. The demand for IMF lending with the actual duration of six months or less was

[4] Since this calculation includes solely short-term external debt following the Guidotti-Greenspan rule, this amount might stand a chance of being underestimated.

merely three cases out of 290 programs in the period. In this regard, the six to nine months arrangement period of the RFF seems to be reasonable because the RFF is able to meet the potential demand for short-term emergency lending. If the crisis-hit country's economic situation did not get better after utilizing the RFF liquidity support, the country should tap the IMF lending facilities as the international lender of last resort. This would be rationalized in terms of division of labor between the global and regional financial safety nets.

In fact, this short arrangement period of the RFF corresponds to the European counterparts: loans of 45-90 days by the European 'Very Short-Term Financing Facility' (VSTF) against speculative attacks, and loans of three to nine months by the 'Short-Term Monetary Support' (STMS) against temporary balance-of-payment difficulties.

Figure 2. Arrangement Period of IMF Lending



Source: de las Casas and Serra (2008).

IV. PROSPECT OF FINANCIAL REGIONALISM IN EAST ASIA

In the past two decades, financial regionalism in East Asia has been manifested by the initiatives of regional financial safety nets and local currency bond markets. ASEAN+3 financial cooperation has brought to substantive fruition, but some critiques still exist that the ASEAN+3 process has been tied-up in the form of a

discussion forum. In spite of the choppy political ambience, especially among the Plus Three countries, to improve regional economic cooperation, it is time for the ASEAN+3 process to readdress the issues about the regional reserves arrangements. In order for ASEAN+3 to move toward the proposed regional financial arrangement, we consider political decision and incentives of the major interested parties such as the IMF, the U.S., China, and Japan.

We experienced an episode of open opposition to regional arrangements, particularly to the Japanese proposal to create an Asian Monetary Fund (AMF) in 1997. The proposal was shelved implicitly because of the anxiety about insufficient Asia's capacity to provide resources and surveillance activities. In those days the proposal to create an AMF was confronted by China's vigilance and both the IMF and the U.S. made an objection against the proposal. Instead, the U.S. counter-proposed to establish the Manila Framework as a regional surveillance mechanism. Azis (2012) argues that the real reason for rejection was a fear of duplication and competition that could undermine the IMF's role and credibility.

Since then, the stance of the IMF and the U.S. administration has swung to be favorable for establishing the CMI. At a press conference by Horst Kohler in Prague on September 20, 2000, the IMF Managing Director expressed support for the AMF and other regional initiatives as long as they are complementary and not competitive with the IMF approach. China also has expressed open support for and an intention to actively participate in the CMI (Goad, 2000; Rowley, 2000). Timothy Adams, the U.S. Treasury Undersecretary for International Affairs, also mentioned in 2006 that the U.S. would support Asian financial cooperation if it is paired with the multilateral framework (Kim, 2011).

Ocampo (2006) pointed out that while the IMF should play a central role in macroeconomic policy coordination at the global level, there is plenty of room for regional and sub-regional processes of a similar nature. This kind of division of labor in the provision of financial arrangements between world and regions play a greater role in the support of smaller economies in the region. Therefore, co-existence and joint surveillance activity of both global and regional financial safety nets can provide geared efficiency and effectiveness of ex-ante crisis prevention and ex-post crisis resolution, like the relation between the World Bank and the ADB.

The East Asian countries recently have sought to lessen reliance on the U.S. dollar as the numeraire in trade settlement and international reserve currency, which implies that recent market conditions are different from those of two decades

ago. Recent market volatility over U.S. monetary tightening has made Asia keenly aware of its reliance on U.S. dollar, boosting efforts to use local currencies for trade and other transactions. For instance, China and Japan recently decided to bypass U.S. dollar altogether and exchange their currencies directly, and China and Singapore also announced to introduce direct trading between their currencies in 2013.

China has carried forward the renminbi internationalization. It is used in the settlement of border trade in Asia and renminbi banknotes are accepted in many tourist places in the region. If renminbi is increasingly used in regional trade and financial transactions and its exchange rate flexibility rises over time, variations in the exchange rate of Chinese yuan against other major currencies such as the U.S. dollar will have an increasing impact on the region. In this regard, the proposed scheme in this paper could promote the wide use of renminbi and thus it could be further incentive for China to accept this proposal of the RFF, especially by the function of the Substitution Account.

The RFF-based ARR exchange rate system could provide a good incentive for Japan because she has made efforts to formalize a soft peg exchange rate system since 1997 and long continued to adopt a common currency basket arrangeent, e.g. the Asian Monetary Unit (AMU) composed of 13 currencies or the AMU-Wide composed of 16 currencies, in the ASEAN+3 region. The valuation of the ARR should be based on a regional basket currency and the value of the ARR should be regularly released under the RFF scheme.

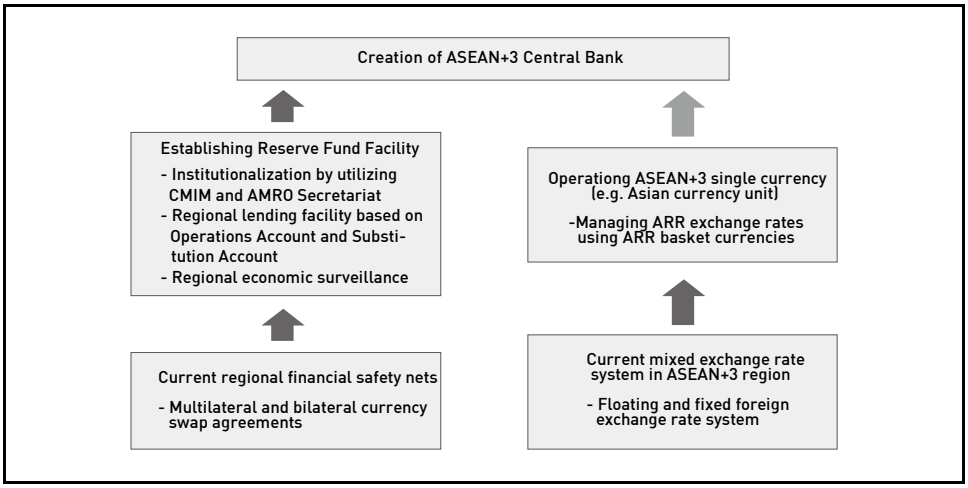
In East Asia, regional security tensions and the lack of sufficient political will to overcome historical obstacles have made ASEAN+3 efforts toward financial cooperation largely superficial. However, these aforementioned changed conditions and incentives call for a fundamental shift in regional politics and reinforced financial regionalism toward financial integration by increasing our collective capacity based on cumulative accomplishments to deal with external shocks and regional risk sharing.

These incentives enable the ASEAN+3 countries to pursue a long-term roadmap toward ASEAN+3 monetary and financial cooperation. Viewing it from a long-term perspective, the establishment of the RFF will lay groundwork for the East Asian financial and monetary cooperation. East Asia's financial cooperation is expected to develop into a regional financial institution, such as an ASEAN+3 Central Bank, by utilizing both the RFF and ARR exchange rate coordination, like bicycle wheels. In Figure 3, the solid-line arrows indicate the expected direction

of its development in all likelihood and the dotted-line arrows represent the probable direction of the flow.

To this end, the committed reserves contribution to the Operations Account could be turned over to General Resources Account of a regional financial institution in the future. Furthermore, regional exchange rate cooperation via coordinating ARR exchange rate is imperative for the well-functioning RFF operation. In order for the proposed RFF to function well, an appropriate regional exchange rate arrangement is necessary to manage the regional common reserve asset. The valuation of the ARR should be based on a basket of key regional currencies that are relatively important in the regional trading and financial system. If this effort carries over to the regional common currency, then we would ultimately expect the establishment of an ASEAN+3 Central Bank.

Figure 3. Roadmap for ASEAN+3 Financial Cooperation



V. CONCLUDING REMARKS

In this paper we examined the operational limitations of the Chiang Mai Initiative Multilateralization and then presented a new framework of the regional financial arrangement. As envisaged earlier, it is desirable to have a concentric paid-in liquidity support system as a front-line facility in East Asia. I propose that ASEAN+3 should establish a regional reserves system by the use of a supranational

regional reserve asset. The new regional financial arrangement, so-called a Reserve Fund Facility, guarantees a degree of lending automaticity in liquidity facility, based on upfront funding instead of pledge funding. The proposed operational mechanism of the RFF comprises (i) institution building of the RFF secretariat to manage the regional common reserves asset of ARR, (ii) an Operations Account and a Substitution Account, and (iii) exchange rate coordination for ARR valuation.

The expected benefits of the RFF are enumerated as follows. First, the RFF equipped with lending automaticity can enhance the speed of approval decision making compared to the CMIM lending with IMF-linked portion. Second, since the RFF is a claim on the freely usable paid-in reserves asset of ASEAN+3, the liquidity-requesting country is not constrained by the IMF conditionality and benefits from mitigated stigma. Third, in case that a country demands additional drawing from the Substitution Account, moral hazard can be reduced by applying appropriate interest rate fee for the RFF lending. Fourth, the operation of the RFF is necessarily based on institutionalization, and AMRO could be re-organized as the RFF secretariat with its surveillance activities. Fifth, the existing bilateral currency swap arrangements under the ASEAN+3 process, providing local currencies instead of U.S. dollars, can be effectively utilized by the RFF's Substitution Account. In case of won-yuan swap, Korea as a requesting country, for example, swaps Korean won for Chinese yuan, and then extra deposit of yuan to the Substitution Account converts yuan to U.S. dollars that Korea requires in crisis. This structure gets the bilateral and multilateral swap arrangements be complement each other. Lastly, the ASEAN+3 countries can reduce substantial cost of stockpiling international reserves by pooling their international reserves and benefit from economies of scale through a concentric reserve pooling system.[5] Accordingly, the establishment of the RFF should contribute to the development of ASEAN+3 financial cooperation in the long run. Regional collective efforts and the member's political will are also required to create favorable circumstances to ensure such an effective facility.

[5] Stockpiling excessive international reserves necessarily accompanies sizeable fiscal costs, including its opportunity costs, in the following respects: (i) assets held by international reserves tend to yield low returns; (ii) countries holding a large amount of international reserves are exposed to risk of making accounting losses arising from appreciation of domestic currencies against reserve currencies; and (iii) international reserve accumulation through running current account surpluses may cause global imbalances.

The feasible conditions are necessary for the full-fledged Reserve Fund Facility. This implies that ASEAN+3 members should make efforts to consolidate the foundation for moving forward in the future. In this sense, the prerequisites imply a roadmap toward future development of ASEAN+3 financial cooperation as described in Section 4. Since more in-depth study to evaluate each prerequisite condition one by one is beyond the scope of this paper, these points will be remained as future research agenda.

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