

# AMRO Research Collaboration Program RCP/19-01

## Local Currency Contribution to the CMIM

### Chapter 1. Summary Paper

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The ASEAN+3 Macroeconomic Research Office (AMRO) Research Collaboration Program aims at i) enhancing AMRO's research capabilities through collaboration with external academicians and experts, ii) expanding AMRO's network of external academicians and experts, and iii) increasing the visibility of AMRO's research activities.

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## Contents

### Executive Summary

1.	Introduction .....	5
2.	<b>Regional Integration and the Use of Local Currencies</b> .....	7
2.1	Regional Economic and Financial Integration	
2.2.	Overall Trend in USD Versus Local Currency Usage in the Region	
2.3.	Promoting Local Currency Usage in the Region	
3.	<b>Plausibility of Local Currency Contribution to CMIM</b> .....	13
3.1	Benefits and Costs of Local Currency Contribution to CMIM	
3.2	Demand for Foreign Exchange Reserves (Reserve Adequacy)	
3.3	Demand for Local Currencies in Foreign Exchange Reserves	
3.4	Net Demand for Local Currencies in CMIM	
3.5	Stability of Local Currencies	
4.	<b>Modality of Local Currency Contribution to CMIM</b> .....	20
4.1	Possible Size of Local Currency Contribution to CMIM	
4.2	Eligibility of Currency	
4.3	Modes of Local Currency Contribution to CMIM	
5.	<b>Summary</b> .....	24

### Tables

Table 1.	Measures for FX Reserve Demand .....	14
Table 2.	Demand for Local Currencies in FX Reserves.....	16
Table 3.	Net Demand for Local Currencies in CMIM .....	17
Table 4.	Various Measures of Currency Internationalization.....	18
Table 5.	Regional Share of Selected Economic Indicators for CMIM Members .....	22

## Abbreviations

ABF	Asian Bond Fund
ABMI	Asian Bond Market Initiative
AFC	Asian Financial Crisis
AMRO	ASEAN+3 Macroeconomic Research Office
ASEAN	Association of South-East Asian Nations
ASEAN-5	Indonesia, Malaysia, Philippines, Singapore and Thailand
BCLMV	Brunei Darussalam, Cambodia, Lao PDR, Myanmar and Vietnam
BI	Bank Indonesia
BIS	Bank for International Settlements
BNM	Bank Negara Malaysia
BOJ	Bank of Japan
BOK	Bank of Korea
BOP	Balance of Payments
BOT	Bank of Thailand
BSP	Bangko Sentral ng Pilipinas
BSA	Bilateral Swap Arrangement
CDIS	Coordinated Direct Investment Survey
CGIF	Credit Guarantee and Investment Facility
CLMV	Cambodia, Lao PDR, Myanmar and Vietnam
CMI	Chiang Mai Initiative
CMIM	Chiang Mai Initiative Multilateralization
CPIS	Coordinated Portfolio Investment Survey
COFER	currency composition of official foreign exchange reserves
DoTS	Direction of Trade Statistics
EMEAP	Executives' Meeting of East Asia - Pacific Central Banks
EMP	Exchange Market Pressure
FDI	Foreign direct investment
FX	Foreign exchange
GFC	Global Financial Crisis
GFSN	Global Financial Safety Net
HKMA	Hong Kong Monetary Authority
IMF	International Monetary Fund
JMoF	Japan Ministry of Finance
LCSF	Local Currency Settlement Framework
LCY	Local currency
MAS	Monetary Authority of Singapore
ODI	Outward direct investment
OECD	The Organization for Economic Co-operation and Development
PBC	People's Bank of China
Plus-3	China, Japan and Korea
RIETI	the Research Institute of Economy Trade and Industry, Japan
SDR	Special Drawing Right

## Executive Summary

The Chiang Mai Initiative (CMI) was established in 2000 after the Asia Financial Crisis and upgraded into CMI multilateralization (CMIM) in 2010. The current mechanism is to provide USD liquidity support in response to urgent short-term liquidity difficulties and/ or balance of payments difficulties experienced by any ASEAN+3 member.

On the one hand, ASEAN+3 region remains fairly exposed to negative spill-over effects from the U.S. due to the dominance of the U.S. dollar in trade and finance – and it is considered that local currency contribution to the CMIM may help reduce the over-reliance on the USD. On the other hand, however, regional economic and financial integration has been deepening and local currency usage in the region has shown an upward trend in recent years. Coupled with the fact that local currency contribution will pose a smaller burden for the lending countries, all the developments laid the ground for exploring the possibility of providing members with the choice of local currency contribution in addition to the USD contribution, as one option to enhance the CMIM.

**The purpose of this paper is to explore the plausibility of local currency contribution to the CMIM and to examine the possible modality, based on regional integration and cross-border local currency usage in the region.** First, we take stock of regional developments around economic and financial integration, local currency usage in the region, and some policy support. This is followed by a cost-benefit analysis and an evaluation of whether there is demand for local currencies during crisis periods, such as to pay for imports, repay debt or provide liquidity. Finally, we examine the possible modality and identify some practical issues.

**Economic and financial integration in the region has been deepening and local currency usage has also shown an upward trend in recent years, although the USD remains dominant in cross-border transactions.** Despite a high degree of regional integration, the USD is still dominant in trade, investment, the foreign exchange market and foreign exchange reserves. This results in this region's continued exposure to U.S. monetary and financial policy and problems. Therefore, the greater use of local currency will better shield the region from outside shocks. Country studies show that some local currencies, such as the Chinese RMB and the Thai baht, have increasingly been used for trade settlement with regional countries in recent years. In terms of regional investment, the Japanese yen and the Chinese RMB will play an important role in the region. From a policy perspective, an effective exchange rate direct trading market is essential for local currency usage in order to reduce currency exchange transaction costs. Direct tradings between local currencies, mainly among the Plus 3 currencies, and between the Chinese RMB and several ASEAN currencies has started gaining ground as well. Some bilateral swap arrangements have also been facilitated by members and Local Currency Settlement Framework has been explored among some ASEAN countries as well. Additionally, the Asian Bond Market Initiative (ABMI) and Asian

Bond Funds (ABF) have supported the development of the regional local currency bond market.

**Tentative analysis shows there is substantial demand for local currency in foreign reserves and the net demand for local currency in the CMIM Arrangements tends to be positive.** If there is a need for local currency, local currency contribution will be more efficient and will reduce the burden on lending countries, as well as reduce the over-dependence on the USD and give the market a positive signal. However, if the need for local currency is not very strong, it may be costly and even put local currencies under pressure when they are exchanged into reserve currencies by borrowing countries. Through inferential analysis, it has been identified that there is substantial demand for local currency in foreign reserves. Even in the case of net demand, which excludes actual foreign reserves in local currency, it tends to be positive, indicating room for local currency contribution to CMIM. Regarding the stability of local currencies, analysis shows that some currencies of ASEAN+3 members (China, Japan, Korea and Vietnam) are as stable as popular non-US international currencies in various periods. From the perspective of internationalization and capital account liberalization, the Japanese yen is among the most popular international currencies with a liberalized capital account, followed by Chinese RMB, Singapore dollar, Hong Kong dollar and Korean won.

**With regard to modality, a natural way for local currency contribution to the CMIM may be to follow a voluntary and gradual principle and to provide members with another choice in addition to USD.** Based on the ratio of local currency usage and intra-regional trade and investment, a tentative gauge at this stage for the relative size of local currency contribution to the CMIM may fall in a range of 10 percent to 30 percent. To determine the eligibility of a local currency, a few key factors are considered, including the relative size of that economy in terms of GDP, its foreign trade, foreign reserves and financial transactions. The analysis shows that the Chinese RMB and Japanese Yen could be used as local currencies for contribution to CMIM while the Singapore dollar, Korean won and the Thai baht, or even other local currencies such as the Indonesian Rupiah, Malaysian ringgit and the Philippine peso could be considered. In addition, some practical issues such as exchange rates and interest rates are to be further examined.

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## 1. Introduction

1. In the wake of the Asian Financial Crisis (AFC), the ASEAN+3 Finance Ministers, at their meeting in Chiang Mai in May 2000, had agreed to establish Chiang Mai Initiative (CMI) in order to provide U.S. Dollar (USD) liquidity support through a network of bilateral swap arrangements, in addition to the existing ASEAN Swap Agreement in place among ASEAN member states since 1977. The outbreak of Global Financial Crisis (GFC) catalyzed ASEAN+3's efforts to further upgrade the CMI to CMI Multilateralization (CMIM) with a size of USD120 billion in 2010. CMIM was later further enhanced to a size of USD240 billion, and equipped with a crisis prevention function in 2014. AMRO was established in 2011 as the surveillance unit of CMIM and upgraded to International Organization status in 2016.

2. Every five (5) years, ASEAN+3 members must jointly carry out a basic review of the key terms and conditions of the CMIM to ensure that it remains up-to-date and reflects the respective circumstances of the members, as well as global economic and financial conditions. At the first periodic review in 2018, ASEAN+3 has adjusted the existing CMIM to put into practice co-financing with the IMF under the Global Financial Safety Net (GFSN) and also clarified a few ambiguous provisions. They, however, discovered a range of fundamental issues to be discussed on a mid- to long-term basis, one of which is the issue of local currency contribution to CMIM.

3. CMIM, as a currency swap, provides "U.S. dollar" liquidity support in exchange for local currency (as substantial collateral) in response to urgent short-term USD liquidity difficulties and/ or balance of payments (BOP) difficulties of member(s). If approved by the CMIM decision-making body, a borrower can swap its local currency with the approved amount of U.S. dollars from lenders. In this paper, the term "local currency contribution to CMIM" means that the lenders may contribute in the form of their local currency, jointly with or separately from the current liquidity support currency, that is U.S. dollar, to CMIM liquidity pooling and then the borrowing country will receive the local currency in order to address its urgent short-term liquidity difficulties and/ or BOP difficulties.

4. **In this region, U.S. dollar is still dominant in cross-border trade and investment, which means that the region will continue to be exposed to US policy and problems.** Negative impacts of such exposures were evident in the past. In recent years, together with deepen regional economic and financial integration, cross-border local currency usage has shown an upward trend supported by the authorities' policies. In this context, it's reasonable to consider whether there is a demand for local currencies during crisis, because if local currencies are to some extent used in trade and financial liabilities and assets in the region, then it is possible for local currencies to be used to pay for import, repay debt or provide liquidity during crisis period. In this case, local currency contribution to CMIM will be more efficient and benefit both sides while reduce the reliance on U.S. dollar and mitigate negative spillover effect from the U.S..

**5.** This study aims to explore the plausibility of providing local currency for crisis financing as part of CMIM liquidity support, and also to examine possible modality, based on regional integration and cross-border local currency usage in the region. This summary is based on several papers written by researchers from different perspectives. Bearing this in mind, first we examine recent developments in local currency usage in the region in the context of regional economic and financial integration in Chapter 2 (by Dr. Junko Shimizu and Dr. Chalongphob Sussangkarn). This focuses on how much cross-border local currency usage in ASEAN+3 region has increased and what kind of policies have been implemented by the authorities, while shedding light on the current state of regional economic and financial integration. Second, a feasibility study has also been conducted in Chapter 3 (by Dr. Soyoung Kim) to assess whether it is practical to provide local currency for CMIM liquidity support, the benefits and costs associated with doing so, and to show if there is any demand for local currencies in foreign reserves and local currency stability. Finally, Chapter 4 (by Dr. Lu Feng) explores the possible modality and key practical issues related to the implementation of local currency contribution to CMIM.



## 2. Regional Integration and Use of Local Currencies

### 2.1 Regional Economic and Financial Integration

6. The ASEAN+3 region has become the largest economic bloc and the economically fastest growing region in the world. As a whole, the region now accounts for more than a quarter (27 percent) of world GDP, having grown at an annual rate of about 4.6 percent in 2011-2017. Although affected by the global slowdown, the ASEAN+3 region has remained resilient since the GFC. The post-GFC period witnessed the region's extraordinary contributions to world GDP growth (1 percentage point per annum on average in the 2008-2017 period), compared to the U.S. (0.3 ppts) and the eurozone (0.1 ppts).

7. **As a whole, ASEAN+3 is becoming more integrated in terms of trade.** ASEAN+3 now accounts for around 30 percent of global trade, more than the eurozone (24 percent) and the U.S. (11 percent). Intra-regional trade among ASEAN+3 economies has steadily increased to over USD4 trillion, accounting for nearly half (47 percent) of its total trade in 2016. This is comparable to the 47 percent in the eurozone. In terms of exports, the intra-regional share of ASEAN-5 economies was nearly 60 percent in 2017. On the import side, the BCLMV and ASEAN-5<sup>2</sup> economies have largely maintained their import shares from the region at around 70 percent and 55 percent respectively, in 2017. The intra-regional import and export share for the Plus-3 economies, meanwhile, has been maintained at 40 percent to 45 percent.

8. **Intra-regional FDI flows have continued to surge, reaching about USD200 billion in 2016, while accounting for more than a half of total FDI inflows to the region's economies.** The share of intra-regional FDI inflows gradually increased from 46.8 percent in 2002 to 55.4 percent in 2016. By sub-region, FDI flows among the Plus-3 economies accounted about two-thirds while FDI inflows toward the ASEAN have increased significantly over the past 15 years. In terms of FDI stock, inward direct investment position from ASEAN+3 amounted to USD2.7 trillion in 2016, almost double of 2009. The share of inward FDI position in ASEAN+3 held by regional investors remained stable around 45 percent of total inward FDI.

9. **The growing trend in cross-border holdings of assets and liabilities shows that financial integration has progressed notably among ASEAN+3 economies in the past two decades.** Total cross-border holdings of assets held by ASEAN+3 economies amounted to about USD982 billion at the end of 2016, having expanded more than tenfold since 2001. Among the region's economies, Hong Kong, China and Singapore maintained their dominance as financial hubs. The share of intra-regional portfolio investment increased to around 14 percent in 2016 from less than 5 percent in 2002. In terms of total liabilities, China has been at the forefront in attracting portfolio investment from the ASEAN+3 region.

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<sup>2</sup> The country grouping "Plus-3" consists of China, Japan and Korea. "ASEAN-5" refers to Indonesia, Malaysia, Philippines, Singapore and Thailand, "BCLMV" comprises Brunei Darussalam, Cambodia, Lao PDR, Myanmar and Vietnam.

## 2.2. Overall Trend in USD Versus Local Currency Usage in the Region

### *The U.S. Dollar as a Key Currency in Asia*

**10. Despite high intra-regional trade in ASEAN+3 countries, the usage of the U.S. dollar as a key currency is still prevalent in trade and finance in the region due to network externalities in using international currencies.** Gopinath (2015) and Casas et al. (2017) indicate that the U.S. dollar's dominance as an invoice currency is significant in Asia, where the U.S. dollar invoice share is much greater than its U.S. trade share. **From BIS, SWIFT<sup>3</sup> and IMF's data, the U.S. dollar's dominance as a key currency is confirmed in FX markets, trade settlement and in the composition of FX reserves.**

### *Individual Country Data for Trade Settlement*

**11.** From five Asian countries' data disclosure on currency share of trade in the region, it is observed that local currency usage in trade has shown an upward trend in recent years. Some Asian currencies not only the Chinese RMB, but also the Thai baht, are utilized at a certain share for trade settlements with regional countries.

**12. For Japan, although the U.S. dollar is still dominant, the shares of regional currencies such as the RMB, THB and KRW have shown an upward trend both in Japanese export and imports.** According to JMOF data from 2000 to 2017, the JPY had a share of around 40 percent and mid-20 percent in global exports and imports respectively, while the USD's share stood at about 50 percent and 70 percent respectively. For Japanese exports to Asia, the share of JPY invoicing declined from 49.2 percent in 2010 to 43.2 percent in 2015, while the USD's share increased from 48.7 percent to 52.2 percent. For Japanese imports from Asia, more than 70 percent are invoiced in USD. However, even though the share is still low, we can see that other regional currencies, such as the use of RMB, THB and KRW, have increased significantly both in Japanese exports and imports in recent years. At a firm level, based on the latest RIETI<sup>4</sup> survey in Japan, **it is becoming more common for Japanese manufacturing firms to use Asian currencies for transactions within the region.** The share of not only the RMB, but also the THB and KRW have increased in Japanese exports to Asian countries.

**13. For Korea, local currency usage is increasing in its regional trade but to a varying degree across members.** According to Bank of Korea (BOK) data, the share of the USD in global exports and imports in Korea accounted for around or over 80 percent from 2000 to 2017. In terms of regional trade, the figure differs across economies. For Korean trade with Japan, the JPY even exceeded the USD with around 50 percent during that period, while the share of the KRW gradually increased to 6-7 percent in 2017. In Korean trade with China,

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<sup>3</sup> SWIFT stands for the Society for Worldwide Interbank Financial Telecommunications. It is a messaging network that financial institutions use to securely transmit information and instructions through a standardized system of codes.

<sup>4</sup> Research Institute of Economy Trade and Industry, Japan.

the USD's share declined to around 90 percent in 2017 from 97 percent in 2012 , while the shares of both the RMB and KRW increased significantly to 5-6 percent and around 2 percent respectively, in 2017. The USD is more dominant in Korean trade with ASEAN, with a 95-97 percent share in Korean exports and around 90 percent share in Korean imports.

**14. For Thailand, the share of Thai baht use in trade, especially with other ASEAN economies, has largely been rising in recent years.** Based on Bank of Thailand (BOT) data, in terms of global trade, the share of the USD has gradually decreased to mid-70 percent in 2017 while the share of THB has steadily increased to 13.8 percent in exports and 8 percent in imports in 2017. The increase in the THB's share is remarkable particularly in Thai trade with ASEAN countries. For exports to ASEAN, the share of the USD declined from 90 percent in 2000 to 72 percent in 2017 while the THB's share increased from 5 percent in 2000 to 23 percent in 2017. Similarly, THB's share in imports from ASEAN increased from 4% in 2000 to 13% in 2017. The share of THB in Thai exports to neighbouring countries, such as Lao (65.8%), Cambodia(42%) and Myanmar(47.5%), is particularly high.

**15. For Indonesia, the USD continues to play a dominant role in trade with a share of 95 percent in exports and 85 percent in imports in 2017, according to Bank Indonesia (BI).** However, usage of the Indonesian rupiah is gradually increasing. In exports, the share of the Indonesian rupiah has increased from 0.8 percent in 2010 to 1.5 percent in 2017, but it still remains very small. And when it comes to imports, the share of the Indonesian rupiah has again gradually increased from 1.5 percent in 2010 to 3.2 percent in 2017.

**16. For China, RMB settlement in trade and investment has been increasing significantly in recent years.** The RMB Internationalization Report shows that the RMB's share in China's trade has reached its historical high of 26 percent in 2015 from just 1 percent in 2010. However, the latest data shows a decline to 13.7 percent in 2017. In the area of investment, FDI settled in RMB has increased spectacularly from RMB91 billion in 2011 to RMB1,587 billion in 2015. Outward direct investment (ODI) settled in RMB, meanwhile, has also increased multifold from RMB16 billion in 2011 to RMB1,062 billion in 2016. By overseas regional distribution, Hong Kong, China accounted for 49.7 percent of all the RMB settlements in terms of volume in 2017, followed by Singapore with a share of 9 percent, Germany 5.6 percent, and Japan nearly 5 percent. **A survey conducted by the Bank of China in 2017 revealed that the RMB has been recognized as a currency of settlement by a majority of foreign entities, yet its functions as financing currency and investment currency had not been fully brought out yet and there was great potential for this in the future.**

#### *Country Case Study for Investment Transactions*

**17. The U.S. dollar is still the main currency used in international investment, but it is also expected that the JPY and the RMB will play an important role as investment currencies in the region.** According to IMF survey data (Coordinated Portfolio Investment Survey), the USD is the most commonly used currency for investment across the region but its share of use differs across regional economies such as Indonesia, Korea, Malaysia,

Philippines and Thailand. In the Philippines, more than 95 percent of portfolio investment assets are USD-denominated. Elsewhere, in Thailand for instance, the share of the USD is around 60 percent, followed by the JPY (10.17 percent) and the EUR (8.99 percent). Among these five countries, the RMB's share is the highest in Korea (2 percent), followed by Indonesia (1.27 percent). Based on BOJ data, the share of the USD in portfolio investment asset in Japan was 50.91 percent in 2017, followed by JPY (21.56 percent) and the EUR (13.14 percent). On the liability side, 94.68 percent of portfolio investment liability is denominated in JPY. In China, according to the RMB Internationalization Report 2018, cross-border RMB settlement under the capital account totalled RMB4.83 trillion in 2017, with a year on year increase of 4.7 percent. Of this amount, securities investment amounted to RMB1.9 trillion with a year-on-year increase of 219 percent, contributing most to the growth in RMB settlement under the capital account.

**18. Cambodia, Lao PDR and Myanmar have long been characterized by a high level of dollarization** to varying degrees, while local currencies, particularly the Chinese RMB and the Thai baht have been increasingly used in recent times, especially in the border areas, driven by increasing trade and investment among regional economies. Trade is mostly settled in U.S. dollars and Thai baht in Lao PDR, particularly for imports from Thailand (59.7 percent of total imports). In terms of FDI, investment from China almost doubled to USD1.3 billion, and was mostly in RMB. In Myanmar, meanwhile, trade with China and Thailand accounted for 50 percent of total trade, half of which is estimated to be in the form of border trades. In Cambodia, the Thai baht, the RMB and the Japanese yen are the top three local currencies used for cross-border trade and investment. The use of Thai baht for trade settlement with Cambodia increased to USD 400 million in 2017, accounting for 2 percent of total trade settlement. In investment front, the use of Chinese RMB increased to USD 77.8 million in 2017, which is 2.2 percent of total investment.

### **2.3. Promoting Local Currency Usage in the Region**

**19. The reliance on the U.S. dollar as the major currency for intra-regional trade and investment means that the region will continue to be exposed to U.S. dollar-related policies and problems.** Negative impacts of such exposures have been seen in the form of U.S. dollar shortages after the closure of Lehman Brothers, the volatile capital flows from excess liquidity created by quantitative easing policies, and the current upward interest rate path of the Federal Reserve. Therefore, the greater use of local currency in intra-regional trade and investment would better shield the region from these shocks coming from outside the region. However, local currency usage is unlikely to happen automatically due to entrenched market-determined preferences. That is why policy support by authorities is important in promoting the use of local currency.

**20. The key focus is on policies to set up efficient currency exchange markets, which will reduce the transaction cost for currency exchange.** The dominance of U.S. dollar usage for trade and investment is not because people are forced to transact in USD,

but because, in most cases, the U.S. dollar is the best currency to use, both in terms of minimizing risk, the low transaction costs associated with it and potential investment benefits. Taking major banks in Thailand, Malaysia and Indonesia as examples, the gap for U.S. dollar buy and sell (spreads) is the lowest among currencies. The reason why the gap for many local currencies in some countries is large is because there are no direct currency exchange markets between local currencies. Many transactions between currencies have to go through the U.S. dollar, which makes transaction costs higher. The lack of direct currency markets also makes hedging costs through forward contracts much more expensive. Therefore, government support will be needed to establish these markets. Japan is now promoting the development of offshore direct exchange markets between the Japanese yen and other currencies. In March 2018, a Memorandum of Cooperation was signed between Japan and Thailand to promote the use of local currencies, including direct exchange rate quotations and interbank trading between the two currencies.

**21. The most important development affecting the usage and holding of global currencies in the future is likely to be the increasing role of the RMB in the global financial system.** The RMB was included in the basket of SDR currencies in October 2016. China has been active in setting up many offshore clearing banks and direct currency exchange markets throughout the world, including in Asia, as part of its policy to internationalize the RMB together with the signing of many bilateral currency swap agreements. This has led to substantial reduction in the buy-sell gaps between the RMB and currencies with direct exchange markets with the RMB, such as the Thai baht, making it more attractive to move away from using the U.S. dollar to denominate trade and investment. However, RMB internationalization has to proceed with appropriate sequencing to avoid situations of large and rapid capital outflows that could drain substantial amounts of reserves, as has happened in the past. In addition, a deeper market for RMB financial assets, which allows RMB holders to access, is very essential.

**22. The Local Currency Settlement Framework (LCSF) provides a good model to promote cross-border local currency usage.** The LCSF between Malaysia and Thailand came into operation in March 2016. This was expanded to cover direct investment at the beginning of 2018 when Indonesia also joined the framework. For Thai exports to Malaysia, the share of baht plus ringgit jumped to 16.7 percent in the first year after the launch of LCSF from 15.2 percent before the LCSF, but declined again to 15.7 percent in the second year. For Thailand's imports from Malaysia, the share of the baht declined after the launch of LCSF and then increased again after about a year, but still only to a level less than before the LCSF, on average. **The current preliminary finding is still very tentative** since the impacts of the LCSF on local currency usage will have to be seen in the medium to long term. Promoting the use of local currencies will only work if the transaction cost becomes low enough to be worthwhile. Therefore, the LCSF needs to be developed together with efficient currency exchange markets.

**23. The Asian Bond Market Initiative (ABMI) and Asian Bond Funds (ABF) have bolstered the regional local currency bond market**, with the aim of attracting more of the region's savings towards investment in the region and avoiding the double mismatches that led to the AFC. The ASEAN+3 economies launched the ABMI in December 2002. An ABMI road map was developed in 2008 and further revised in 2012, which focused on boosting up the supply of and demand for local currency denominated bonds, relevant regulatory framework and infrastructure. Under the EMEAP,<sup>5</sup> ABF1 and ABF2 were launched in 2003 and 2004, using USD3 billion of reserves from central banks in the region to invest in sovereign/ quasi-sovereign bond markets, particularly local currency bonds in the case of ABF2. The ABMI has been focusing on the Credit Guarantee and Investment Facility (CGIF<sup>6</sup>) to provide guarantees on local currency bonds through capital increase. As with the promotion of the use of local currencies, promoting cross-border investment of local currency-denominated bonds will only be fully effective if there are efficient currency exchange markets, with low exchange transaction costs and extensive hedging instruments, between the currency of the investor and the currency the bonds are denominated in.

**24. Bilateral currency swap arrangements (BSAs) have promoted local currency usage in the region while complementing the CMIM.** The total amount of BSAs has increased to over USD300 billion so far. BSAs between the JMOF and some ASEAN central banks have a similar objective to CMIM (addressing BOP difficulties). Since 2017, the JMOF has completed a new round of negotiation with the BSP, BOT, MAS and BI, which allows the Japanese yen to be another choice in addition to the U.S. dollar. Other BSAs, denominated in local currency, are mainly focused on promoting bilateral trade and investment, maintaining financial stability, or providing liquidity support to financial institutions. After the GFC, the PBC has signed BSAs with BOK, HKMA, BNM, BI, MAS, BOT, and BOJ, which account for about half of the total amount of all BSAs signed by PBC. In 2013, the BOJ and MAS signed a BSA to provide local currency liquidity to counterpart financial institutions in their jurisdiction. In 2014, the BOK signed BSAs with BI and BNM, aiming to promote bilateral trade and financial cooperation. MAS and BI signed a BSA in November 2018. These BSAs have played an important role in promoting the use of local currencies as well as providing liquidity in times of financial stress, which also justifies the demand for local currencies both in peace time and crisis time.

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<sup>5</sup> The Executives' Meeting of East Asia-Pacific Central Banks is a cooperative organization of central banks and monetary authorities (simply referred to as central banks from hereon) in the East Asia and Pacific region. Its primary objective is to strengthen cooperation among its members. It comprises the central banks of eleven economies: the Reserve Bank of Australia, People's Bank of China, Hong Kong Monetary Authority, Bank Indonesia, Bank of Japan, The Bank of Korea, Bank Negara Malaysia, Reserve Bank of New Zealand, Bangko Sentral ng Pilipinas, Monetary Authority of Singapore, and Bank of Thailand. (Also see [www.emeap.org](http://www.emeap.org)).

<sup>6</sup> The Credit Guarantee and Investment Facility (CGIF) was established by the 10 members of ASEAN together with the People's Republic of China, Japan, Republic of Korea (ASEAN+3) and the Asian Development Bank (ADB). CGIF is a key component of the ABMI of the ASEAN+3 cooperation. It has been established to promote economic development, stability and resilience of financial markets in the region. The main function of CGIF is to provide credit guarantees for local currency denominated bonds issued by investment grade companies in ASEAN+3 countries. (See [www.cgif-abmi.org](http://www.cgif-abmi.org)).

### 3. Plausibility of Local Currency Contribution to CMIM

25. In Chapter 2, we summarize the developments of regional integration and cross-border local currency usage in the region. If local currencies are used in some trade and finance settlements, members may need local currencies to address BOP and/ or short-term liquidity difficulties during crisis periods. Therefore, in this chapter, we discuss the benefits and costs of local currency contribution to CMIM and analyze whether ASEAN+3 members have enough demand for local currencies in FX reserves and CMIM.

#### 3.1 Benefits and Costs of Local Currency Contribution to CMIM

26. We can see the following three benefits: **(a) When a borrowing country under CMIM need local currencies for crisis financing, using local currencies directly is more efficient and less costly** than exchanging U.S. dollars for local currencies. In addition, it is noted that the value of the U.S. dollar against local currencies fluctuates over time; **(b) the lending countries are able to decrease the burden of drawing on FX reserves because they can provide their own currencies.** Drawing on FX reserves may increase the likelihood of contagion in the lending countries. This may result in lenders being reluctant to draw on FX reserves. More fundamentally, holding FX reserves for potential drawing involves cost, but local currency does not; and **(c) there are various externalities.** It may promote trade and financial integration in the region. It may also promote local currency use in the region and weaken the over-dependence on the U.S. dollar. And finally, it may be regarded as a positive signal for local currency use in the market.

27. **Local currency contribution can, however, generate some costs if the borrowing country does not need local currencies for crisis financing under CMIM.** In this case, the U.S. dollar, instead of local currencies, is clearly better for the borrower because the borrower has to exchange the local currency for USD, which is inefficient and costly. In this case, first, the borrower must pay transaction costs involved in exchanging currencies. Second, the borrower may also exchange local currencies for less amount of U.S. dollar if local currencies depreciate against the U.S. dollar. In addition, as the borrower exchanges local currency for U.S. dollars, the local currency is likely to depreciate against the U.S. dollar, which may result in the instability of the local currency and increase the possibility of contagion risks to the members issuing that local currency concerned. If this happens, benefit (b) of not drawing on FX reserves may disappear. The local currency of the lending country will be also exposed to extra depreciation pressures, which can increase the possibility of contagion risks.

28. In sum, when there is demand, which is to say, a borrowing country does need local currencies during a crisis period, benefits are generated but no costs are involved. On the other hand, when that borrowing country does not need local currencies, all types of costs are generated potentially but benefits (a) and (b) are likely to disappear. The size of benefit (c) can also be important, but it is not so easy to measure. Therefore, **to discuss plausibility, we need to address whether there is a need for local currencies among members during the crisis period.**

### 3.2 Demand for Foreign Exchange Reserves (Reserve Adequacy)

29. First we estimate the demand for FX reserves based on past studies, then infer the demand for local currencies in FX reserves in the region. Traditionally, the main role of FX reserves was as a buffer against external real shocks such as export drops. The tequila crisis and AFC during the 1990s suggest that precautionary liquidity needs for FX reserves in order to absorb the impact of exogenous external financing shock has become more crucial than traditional needs for FX reserves to manage exchange rate level<sup>7</sup>.

30. Table 1 reports the size of four measures of FX demand for each member, together with the actual size of FX reserves. In some cases, the sizes of FX reserve demand are quite different across different measures in each member economy. Among the four measures, the “20 percent of M2” measure shows the largest number in Brunei, Indonesia, Myanmar, the Philippines, Thailand, Vietnam, China, and Korea. However, the “IMF rule” provides the largest number in Cambodia and Lao PDR while the “100 percent of short-term debt” measure provides the largest number in Malaysia, Singapore, Hong Kong, China and Japan.

**Table 1. Measures for FX Reserve Demand<sup>8</sup>**  
(U.S. dollar, millions, 2017)

	3 months of imports	100% of short-term debt	20% of M2	IMF rule	Actual FX reserves
Brunei	1,506	..	2,103	..	3,488
Cambodia	3,317	1,727	3,911	4,066	12,200
Indonesia	48,375	54,756	80,999	73,592	130,203
Lao P.D.R.	1,340	710	<u>516</u>	1,344	1,270
Malaysia	56,249	143,337	77,365	123,088	102,446
Myanmar	3,495	762	7,018	5,715	5,214
Philippines	20,951	19,963	49,551	33,179	81,565
Singapore	140,367	1,085,132	84,011	477,552	279,902
Thailand	77,689	71,904	103,640	76,020	202,562
Vietnam	56,811	19,959	69,497	65,786	49,497
China	605,728	1,109,306	4,958,823	3,197,649	3,235,350
Hong Kong, China	160,453	1,048,002	<i>241,641</i>	601,363	431,442
Japan	218,823	2,584,425	2,399,228	1,704,287	1,264,141
Korea	166,220	170,445	447,682	272,642	389,248

Note: The IMF rule is 30% of short-term debt plus 15% of other portfolio liabilities (calculated as equity and portfolio funds' share plus long-term debt securities as of June 2017 June) plus 5% of M2 plus 5% of exports for economies with flexible exchange rate regimes. Multipliers for other exchange rate regime countries are 30%, 20%, 10% and 10%, respectively. Short-term debt is calculated on a remaining maturity basis but the figures for Cambodia, Lao PDR, Myanmar, Singapore, Hong Kong, China and Japan are based on original maturity, but some numbers (shown in italics) are calculated based on 2016 data and others (underlined) are calculated based on 2010 data.

Source: IMF IFS/CPIS/WEO/ARA, WDI

### 3.3 Demand for Local Currencies in Foreign Exchange Reserves

31. We first discuss what types of information are needed to infer the demand for local currencies in FX reserves. To summarize: first, high local currency use in imports implies a

<sup>7</sup> IMF, 2013, Assessing Reserve Adequacy – Further Consideration

<sup>8</sup> As with EMs, traditional approaches—including the 3-month import rule, 20% broad money coverage, and 100% short-term debt coverage—remain useful tools. Nonetheless, while these methods are simple and easy to apply, their basis may not necessarily reflect country specificities and/ or properly capture multiple motives for holding reserves. (IMF, Guidance Note on Reserve Adequacy, 2016).



high demand for local currencies in FX reserves. High local currency usage in exports may be positively related to a high demand for local currencies in FX reserves. Second, high local currency composition of foreign liabilities implies a high demand for local currencies in FX reserves. And finally, high local currency composition of foreign assets, in relation with capital flight, may also imply a high demand for local currencies.

**32. We deduce the demand for local currencies in FX reserves by inferring how much local currency is likely to be needed** in the demand for FX reserves based on various measures. That is, we calculate the likely portion of local currency demand out of total demand for FX reserves calculated in the previous section, and multiply the portion by total demand for FX reserves to obtain the demand for local currencies in FX reserves.

**33. We use the following information on local currency shares.** For the three-month import measure, we use local currency share data in import settlements. For the 100 percent of short-term debt measure, we use the local currency composition data for foreign liabilities, because it is not particularly easy to obtain data on currency composition for short-term debt only. For the 20 percent of M2 measure, we use the local currency composition data for foreign assets. For the IMF rule components such as imports and short-term debt, the same data is used as explained above. For other portfolio liabilities in the IMF rule, we use the local currency composition data for foreign liabilities, and for exports, we use the local currency share data in export settlements.

**34.** Table 2 reports the demand for all local currencies in FX reserves in each member. We compare the demand for local currencies in FX reserves with the maximum amount of withdrawal from CMIM to infer whether there is enough local currency demand to be used in CMIM arrangements. For example, if the demand for local currencies in FX reserves is far smaller than the size of the potential CMIM withdrawal, then introducing local currency contribution to the CMIM arrangement may not be desirable since there is not enough demand for local currencies. However, if the former is far larger than the latter, then it may be worthwhile to further consider local currency contribution to the CMIM arrangement because there is enough demand when compared to the size of the potential CMIM withdrawal. In the last row (“Total”) of Table 2, the aggregates of all ASEAN+3 members are reported. For the 100 percent of short-term debt measure and the IMF rule, we report an additional number in brackets for the aggregate of all ASEAN+3 members. That is the aggregate excluding Hong Kong, China and Singapore, which are huge offshore financial centers, which may mean that the demand for foreign exchange could be exaggerated when assessed based on the size of financial assets and liabilities. To avoid such a potential problem, we report the additional aggregate number, excluding Hong Kong, China and Singapore, for two measures that are based on the size of financial assets and liabilities.

**Table 2. Demand for Local Currencies in FX Reserves  
(U.S. dollar, millions, 2017)**

	Three months of imports (LCY composition)		100% of short-term debt (LCY composition)		20% of M2 (LCY composition)		IMF rule (LCY composition)		Maximum withdrawal (CMIM)
Brunei	240	80%	..	..	335	112%	..	..	300
Cambodia	528	44%	275	23%	623	52%	648	54%	1,199
Indonesia	3,212	15%	4,008	18%	607	3%	3,583	16%	21,896
Lao P.D.R.	213	71%	113	38%	82	27%	214	71%	300
Malaysia	3,844	18%	22,574	103%	4,936	23%	13,951	64%	21,896
Myanmar	557	93%	121	20%	1,118	186%	910	152%	600
Philippines	859	4%	739	3%	606	3%	944	4%	21,896
Singapore	21,090	96%	163,041	745%	12,623	58%	71,752	328%	21,896
Thailand	5,671	26%	8,125	37%	15,053	69%	8,591	39%	21,896
Vietnam	9,049	91%	581	6%	2,022	20%	4,773	48%	9,917
China	12,115	50%	154,569	632%	690,955	2826%	419,156	1714%	24,452
Hong Kong, China	24,168	398%	71,264	1172%	16,432	270%	46,170	759%	6,079
Japan	3,064	12%	0	0%	23,992	92%	6,668	26%	26,111
Korea	13,131	41%	3,409	11%	53,274	165%	16,048	50%	32,255
<b>Total</b>	<b>97,741</b>	<b>46%</b>	<b>428,819</b> (194,514)	<b>204%</b> (106%)	<b>822,658</b>	<b>390%</b>	<b>593,408</b> (475,486)	<b>282%</b> (260%)	<b>210,694</b> (182,719)

Note: Figures are derived by multiplying the demand for FX reserves by the relevant local currency composition ratio. Demand for its own currency is not counted. Invoicing currency data for imports, currency composition data for short-term debt, currency composition data for foreign liabilities, currency composition data for other portfolio liabilities, and invoicing currency data for exports are used to calculate relevant local currency composition ratios for imports, short-term debt, M2, other portfolio liabilities (in the IMF rule), and exports (in the IMF rule), respectively. Currency invoicing and composition data are collected from Chapter 2, the survey, and the IMF CPIS. FX reserves in local currency are estimated by applying the compositions of Chinese RMB and Japanese yen in world international reserves (IMF COFER, 2017).

**35.** The total number suggests that the demand for local currencies is far larger than the maximum amount of withdrawal from CMIM based on all measures, except for the first measure (somewhat out of date). Based on the first, second, third and the fourth measures, the demand for local currencies is 46 percent, 204 percent, 390 percent and 282 percent of the maximum withdrawal from CMIM, respectively. The aggregate numbers for the two measures, excluding Hong Kong, China and Singapore, are still larger than 100 percent, at 106 percent and 260 percent.

**36.** To summarize, there is substantial demand for local currencies in FX reserves, provided that the basis for four measures (three months of imports, 100 percent of short-term debt, 20 percent of M2, and the IMF rule) may properly capture multiple motives for holding reserves by each economy. The size of the demand is large in comparison with the size of the maximum withdrawal from CMIM. This may be regarded as a favorable result in terms of using local currencies for CMIM liquidity support.

### 3.4 Net Demand for Local Currencies in CMIM

**37.** The net demand for local currencies in CMIM is deduced by subtracting estimated actual FX reserves from the demand for local currencies in FX reserves. This net demand can represent the demand for local currencies in CMIM arrangements. To roughly infer the size of local currencies in FX reserves, we simply multiply the actual

**reserve holdings by the local currency ratio in the world international reserves.** For local currencies, we only consider the Chinese RMB and Japanese yen, for which the numbers are provided.<sup>9</sup> However, this is only a rough estimate and these numbers should therefore be used as rough reference points only, without strong conclusions being derived from them.

**38. Table 3 reports net demand for local currencies in CMIM based on the four measures.** We can see that the estimated size of the actual FX reserves in local currencies (last column) tends to be smaller than the maximum withdrawal from CMIM in all members but China. The net demand for local currencies in CMIM is still more than 100 percent of the maximum withdrawal of CMIM based on the third and fourth measures for the aggregate of ASEAN+3, which likely suggests that there is sufficient demand for local currency use in CMIM, even after considering the existing local currency FX reserves. except for Cambodia, Indonesia, and the Philippines, net demand is positive based on at least one measure in all members.

**Table 3. Net Demand for Local Currencies in CMIM  
(U.S. dollar, millions, 2017)**

	3 months of imports		100% of short-term debt		20% of M2		IMF rule		Maximum withdrawal (CMIM)	FX reserves in LCY
<b>Brunei</b>	27	9%	..	..	122	41%	..	..	300	213
<b>Cambodia</b>	-218	-18%	-471	-39%	-123	-10%	-98	-8%	1,199	746
<b>Indonesia</b>	-4,750	-22%	-3,954	-18%	-7,355	-34%	-4,380	-20%	21,896	7,962
<b>Lao P.D.R.</b>	136	45%	35	12%	4	1%	136	45%	300	78
<b>Malaysia</b>	-2,421	-11%	16,309	74%	-1,329	-6%	7,686	35%	21,896	6,265
<b>Myanmar</b>	238	40%	-198	-33%	799	133%	591	99%	600	319
<b>Philippines</b>	-4,129	-19%	-4,249	-19%	-4,382	-20%	-4,044	-18%	21,896	4,988
<b>Singapore</b>	3,973	18%	145,924	666%	-4,494	-21%	54,635	250%	21,896	17,117
<b>Thailand</b>	-6,716	-31%	-4,262	-19%	2,666	12%	-3,796	-17%	21,896	12,387
<b>Vietnam</b>	6,022	61%	-2,446	-25%	-1,005	-10%	1,746	18%	9,917	3,027
<b>China</b>	-148,106	-606%	-5,652	-23%	530,734	2170%	258,935	1059%	24,452	160,221
<b>HongKong,China</b>	-2,216	-36%	44,880	738%	-9,952	-164%	19,786	325%	6,079	26,384
<b>Japan</b>	-13,202	-51%	-16,265	-62%	7,727	30%	-9,597	-37%	26,111	16,265
<b>Korea</b>	-10,672	-33%	-20,395	-63%	29,470	91%	-7,756	-24%	32,255	23,804
	-182,035	-86%	149,043	71%	542,882	258%	313,632	149%	210,694	279,776
<b>Total</b>			(-41,761)	(-23%)			(239,211)	(131%)	(182,719)	(236,275)

Note: The figures are derived by multiplying the demand for FX reserves by the relevant local currency composition ratio. Demand for its own currency is not counted. Invoicing currency data for imports, currency composition data for short-term debt, currency composition data for foreign liabilities, currency composition data for other portfolio liabilities, and invoicing currency data for exports are used to calculate relevant local currency composition ratios for imports, short-term debt, M2, other portfolio liabilities (in the IMF rule), and exports (in the IMF rule), respectively. Currency invoicing and composition data are collected from Chapter 2, the survey, and the IMF CPIS. FX reserves in local currency are estimated by applying the compositions of Chinese RMB and Japanese yen in world international reserves (IMF COFER, 2017).

**39. To summarize, the net demand for local currency in CMIM tends to be positive.** This suggest there is room for introducing local currency contribution to CMIM, even after taking into account the current level of local currencies in actual FX reserves. However, this result should be interpreted with caution, because the data is far from perfect.

<sup>9</sup> We assume that China does not hold Chinese RMB as reserves and Japan does not hold Japanese yen as reserves.

### 3.5 Stability of Local Currencies

40. If some local currencies are not really needed by the borrowing country for crisis financing under CMIM, it is simply inefficient to use local currencies for CMIM because the borrower needs to exchange local currency for the currencies needed, for example, U.S. dollars. In such a case, **when local currencies are unstable, the transaction cost is likely to be large.** According to the calculation of the exchange rate against the U.S. dollar, volatility of any local currencies is clearly not larger than those of international reserve currencies. However, this does not necessarily mean that the currencies of these members are as stable as than the well-known international reserve currencies. These members tend to have more rigid exchange rate regimes in place, which may explain the low volatility.

41. **If local currencies are subject to more pressure or speculative attacks, the currencies are more likely to experience a crisis and lose value.** The result of the exchange market pressure index(EMPI) shows that some currencies of ASEAN+3 members (China, Japan, Korea and Vietnam) are as stable as popular non-US international currencies in various sub-periods. In recent years, the currencies of China, Japan and Korea have been as stable as those of UK, Canada, and the eurozone.

42. In addition, **internationalization of the currency and liberalization of capital account transactions are also important for the use of local currencies for CMIM liquidity support.** When currencies are more internationalized and capital accounts are more liberalized, borrowing countries are likely to feel more comfortable. According to an analysis on internationalization and capital control measures, the Japanese yen is among the most popular international currencies in the world with a liberalized capital account. The level of internationalization of the Chinese RMB, meanwhile, is at about the level for the Swiss Franc, but a high degree of capital controls are still in place in China. The Singapore dollar, Hong Kong dollar and Korean won are next in terms of the level of internationalization, and the degree of capital controls in these countries is low.

43. The results on stability of the currency, internationalization of the currency, and liberalization of capital account transactions, indicate that Japanese Yen, Chinese Yuan, and Korean Won may be first considered as eligible local currencies for the use of local currencies for CMIM liquidity support.

**Table 4. Various Measures of Currency Internationalization (proportion, %)**

	Official foreign exchange reserves <sup>1</sup>		International debt securities outstanding <sup>2</sup>		Foreign exchange market turnover <sup>3</sup>	
	2014	2017	2010	2017	2010	2016
U.S. dollars	63.67	62.72	31.66	45.07	84.86	87.58
Euros	21.03	20.15	46.93	39.20	39.04	31.39
Pounds sterling	4.07	4.54	9.87	8.27	12.88	12.80
Australian dollar	2.11	1.80	1.43	1.19	7.59	6.87
Canadian dollar	1.99	2.02	1.53	0.59	5.28	5.14
Swiss franc	0.23	0.18	1.97	0.88	6.30	4.80
Chinese renminbi	1.11	1.22	0.08	0.43	0.86	3.99

<b>Hong Kong dollar</b>	...	...	0.33	0.37	2.37	1.73
<b>Japanese yen</b>	3.45	4.89	3.70	1.80	18.99	21.62
<b>Korean Won</b>	...	...	0.01	0.00	1.52	1.65
<b>Indonesian rupiah</b>	...	...	0.03	0.06	0.15	0.20
<b>Malaysian ringgit</b>	...	...	0.03	0.01	0.28	0.36
<b>Philippine peso</b>	...	...	0.01	0.01	0.17	0.14
<b>Singapore dollar</b>	0.06	...	0.15	0.18	1.42	1.81
<b>Thailand baht</b>	...	...	0.01	0.02	0.19	0.36
<b>Other currencies</b>	2.28	2.49	2.27	1.92	37.28	36.38

Note: "..." indicates that data is not available. Each foreign exchange transaction involves two currencies, and the total share of all currencies in foreign exchange market turnover is 200 percent.

Source: IMF COFER (for 2017) and IMF survey on the holdings of currencies in official foreign currency assets (for 2014); BIS Quarterly Review; BIS Triennial Central Bank Survey, Net-net basis, daily average in April, in percent

## 4. Modality of Local Currency Contribution to CMIM

44. Following the analysis on benefits and costs, as well as the demand for local currency for CMIM liquidity support, we now discuss some practical issues regarding the modality, which includes possible size, eligibility of currency, modes, exchange rates, interest rates, and so forth.

### 4.1. Possible Size of Local Currency Contribution to CMIM

45. Though the specific scale of local currency contribution for a given rescue program is likely to be decided on a case-by-case approach when a crisis situation arises, it is useful to explore the relative size of local currencies in the total amount of the CMIM from a general perspective. In principle, the desired relative size should be determined by the actual and potential use of local currency for international transactions in the region. The issue can be discussed through observations of empirical evidence from two perspectives.

46. **First, the share of local currency usage in cross border transactions can be roughly estimated for the lower range of the possible size.** Based on available information, the trade invoicing and settlement in local currencies is between 10 percent and 20 percent. The figures in the area of cross-border financial assets and liabilities are more varied, and at this stage **we select a 10 percent to 15 percent estimate.** These estimates can be considered as being nearer the lower range for the possible size of local currency contribution to CMIM.

47. **Second, the issue of possible size is examined through assessing factors such as the current intra-regional trade ratio, the intra-regional investment ratio**, which may imply possible intensity of demand for local currency usage during crisis periods, and therefore be useful in gauging the upper range of the size of local currency contribution. According to IMF data, the intra-regional concentration ratio in international trade for ASEAN+3 members in recent years has been more or less stable at around 42-43 percent, while the intra-regional concentration ratio in FDI was higher with larger variations, fluctuating between 51 percent and 55 percent. Although the intra-regional ratio of portfolio investment has shown a somewhat upward trend in 2005-2016, the simple average of the indicator over the period was only 10.5 percent.

48. It may be hypothesized that the higher the intra-regional concentration ratios, the larger the relative demand for resources denominated in local currency, and therefore local currency use in CMIM. It should be noted that the potential role of intra-regional concentration ratios for different components of the BOP may be different in this context. Considering that the imperative to finance maturing debts and pay import bills may present a more urgent challenge in the crisis period, the intra-regional concentration ratios for portfolio investment and trade may have bigger weights while smaller weight for FDI in gauging the potential local currency demand. we may assign subjective weights of 0.5, 0.3 and 0.2 for portfolio investment, trade and FDI respectively. Using the simple average of the three intra-regional concentration ratios

in the most recent three years, **the weighted average intra-regional concentration ratio for the three main components of BOP is about 30 percent**  $[(0.50) 13.5 + (0.20) 54 + (0.30) 43 = 30.45]$ .

49. In sum, it is suggested that 10-15 percent may be regarded as a rough estimate for the lower range of the possible size of local currency contribution to CMIM. In light of the intra-regional concentration ratio for various cross border transactions, we could pick up 30 percent as an upper estimate for the relative size of local currency contribution to CMIM. As a result, **a tentative gauge at this stage for the relative size of local currency contribution to CMIM may fall in the range of 10 percent to 30 percent.**

#### 4.2. Eligibility of Currency

50. In principle there may be two ways to deal with this issue. **The first is universal eligibility according to which all members' currencies may be used for the purpose of local currency contribution to CMIM.** In practice, the likelihood of a universal eligibility scenario may be slim. **The second is partial eligibility, wherein only selected currencies are used for local currency contribution to CMIM.** In this case, the currencies should be selected based on a set of criteria, which could primarily focus on the relative importance of a given local currency in international transactions and the relative size of the economy by which the currency is issued.

51. Referring to the conventional definition of SDR basket currencies (export criteria and freely usable) and reserve currencies (liquid and convertible), we **analyze the four important factors, namely relative size of GDP, foreign trade, foreign financial transactions and FX reserves**, while also considering members' views on factors in assessing eligibility of local currency.

52. Among the four variables (GDP, foreign trade, foreign financial transactions, foreign reserves), the relative size of foreign trade and foreign financial transactions are regarded as the most important factors in assessing the eligibility of currencies to be included as one of the local currencies in which contributions to the CMIM can be made, according to members' views. We could assign a subjective weight for each of the four indicators for members in 2016 simply using the numbers of members ranked 1 and 2 for a given indicator. Using the weights, we give a score for each member in Table 5.

53. The higher the value of the score for a member, the more suitable its currency for local currency contribution to CMIM. **Based on this, our findings give China the highest score, followed by Japan.** The second group includes the Singapore dollar, Korean won and the Thai baht. They are followed by the Indonesian rupiah, Malaysian ringgit and Philippine peso.

54. Based on the findings, **from a narrow range choice, the Chinese RMB and the Japanese yen could be used as local currencies for contribution. From a wider range choice, the Singapore dollar, Korean won and the Thai baht, or even other local**

currencies such as the Indonesian rupiah, Malaysian ringgit and the Philippine peso could be considered.

**Table 5. Regional Share of Selected Economic Indicators for CMIM Members (% , 2016)**

	GDP in current U.S. dollars	Trade in goods and services	Reserves (including gold)	Foreign assets (excl. reserves)	Score
Brunei	0.1	0.1	--	--	0.1
Cambodia	0.1	0.3	0.1	0.1	0.2
China	54.8	38.4	53.4	17.6	42.9
Hong Kong, China	1.6	11.0	6.7	21.7	9.7
Indonesia	4.6	3.0	2.0	0.9	2.6
Japan	24.2	14.6	21.1	37.2	20.3
Korea	6.9	10.3	6.4	4.5	8.0
Lao PDR	0.1	0.1	--	--	0.1
Malaysia	1.5	3.5	1.6	1.5	2.4
Myanmar	0.3	0.3	0.1	0.0	0.2
Philippines	1.5	1.6	1.4	0.4	1.4
Singapore	1.5	8.7	4.2	15.0	7.1
Thailand	2	4.7	3.0	1.1	3.4
Vietnam	1	3.4	--	--	1.6
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Notes and source: -- means that data is not available. \*Table reports both data for Hong Kong, China and the aggregate data for mainland China and Hong Kong, China, total members are called "ASEAN+4". Data used in this table is from the World Development Indicators, WB, 2018.5.21 and the IMF CPIS, available online at <http://www.imf.org/external/np/sta/pi/cpis.htm>, accessed 16 November 2017.

**55. A final point of consideration is that not all members take a neutral or accommodative stance towards the possibility of their currency being selected as local currency for contribution to CMIM.** Some members may think that the implication of their currencies being selected in this context may be at odds with the existing laws or regulations regarding the internationalization of their currencies.

#### **4.3 Modes of Local Currency Contribution to CMIM**

**56. One issue about the mode is “voluntary” versus “mandatory” .** The voluntary approach means that local currency contributions are based on bilateral consultations between borrowing countries and lending countries, and therefore may be implemented in a more flexible manner. In contrast, the mandatory approach implies that the new established rule will be applied systematically if local currency contribution is accepted. Because local currency contribution is pre-conditioned upon actual demand for local currency from borrowing countries, **it should be voluntary in nature rather than mandatory.**

**57. The IMF bailout package for Mongolia’s BOP difficulties in 2017 can help illustrate this point.** Since China is Mongolia’s largest import partner and major investor in Mongolia, having access to extra resources in RMB is helpful in enabling Mongolia combat the external crisis. Given this context, China participated in the IMF-led bailout package by contributing RMB15 billion through a three-years bilateral swap arrangement (IMF, 2017).

**58. Another question that may need to be considered in this context is whether local currencies can only be used for the IMF De-linked Portion, or for both the IMF De-linked and IMF-Linked Portions.** We tend to think that the proposed local currency contribution should necessarily be at odds with a possible bailout program coordinated by the IMF. The above-mentioned IMF-led bailout program for Mongolia with Chinese contribution of RMB15



billion highlights the possibility for an IMF-led rescue package in which a member country participates by contributing local currency. This also implies compatibility between local currency contribution to CMIM and the potential IMF-Linked Portion rescue program. It is therefore our cautious suggestion that **local currency contribution should apply to both, the IMF De-linked Portion as well as the IMF-Linked Portion of the CMIM.**

**59. The third issue is that of exchange rates.** Under local currency contributions, we may need to define and use exchange rates between currencies of lending countries and borrowing countries. Now, there are some direct quotations between members' currencies, such as Chinese RMB, Japanese yen, Singapore dollar and Korean won. However, direct exchange quotations do not exist between other members' currencies, particularly the CLMV countries. We will try to support such a direct transaction market in the region in order to recognize each bilateral exchange rate. Before that happens, the cross rate for local currencies through transactions with the U.S. dollar may be considered.

**60. Finally, interest rates could be another issue.** Under the current framework, LIBOR is used as the benchmark interest rate for the U.S. dollar. In case of local currency contributions, domestic interbank interest rates could be used. For example, SHIBOR for RMB, TIBOR for Japanese yen, KORIBOR for Korean won, SIBOR for Singapore Dollar, JIBOR for Indonesian Rupiah, KLIBOR for Malaysian Ringgit, and the like. For economies in which interbank markets are not very active, a deep and liquid money market needs to be further developed. On possible special occasions, some other alternative interest rates could also be considered.

## 5. Summary

**61.** In the context of the tightening in global financial conditions, the CMIM should be further enhanced to improve its readiness for the next crisis as an important part of the regional financial safety net. The use of local currencies in CMIM liquidity support may be one option for enhancing the CMIM, based on the feasibility analysis.

**62.** The potential for the use of local currencies in trade and finance has been gradually increasing as the ASEAN+3 economies have become more integrated. The size of intra-regional FDI flows has continued to surge, reaching about USD200 billion in 2016, accounting for more than a half of total FDI inflows. The rising trend in cross-border holdings of assets and liabilities also shows that financial integration has progressed substantially in the past two decades. It is also notable that on the basis of data on currency share of trade in the region disclosed by five Asian countries (Japan, Korea, Thailand, Indonesia and China), it is observed that local currency usage in trade has been on an upward trend in recent years. Some Asian currencies, not only the Chinese RMB, but also the Thai baht have increasingly used for trade settlements with regional countries.

**63.** If local currencies are used in some trade and finance settlements, member may need local currencies to address BOP and/ or short-term liquidity difficulties in which a country is not able to obtain sufficient financing on affordable terms to meet any international payment obligations during crisis periods. It was found that only when there is demand for using local currency for CMIM liquidity support for countries with BOP difficulties, are benefits generated without any costs incurred. This study shows that there is substantial demand for local currencies in FX reserves, provided that the basis for four measures (three months of imports, 100 percent of short-term debt, 20 percent of M2, and the IMF rule) may properly capture multiple motives for holding reserves by each economy. It is also suggested that if some local currencies are not really needed by the borrowing country due to their instability, it is simply inefficient to use local currency because the borrower needs to exchange local currencies for the currencies needed, for example, the U.S. dollar. In such a case, when local currencies are unstable, the cost is likely to be large.

**64.** Finally, the paper has discussed the possible modality of local currency contribution to CMIM, including the size and mode, currency eligibility, exchange rates, interest rates and the like. A more pragmatic way is to add a choice of local currency to the CMIM and adopt a voluntary and gradual approach. At the beginning, a pilot program based on bilateral interests could be considered. As local currencies are more widely used in the region and greater needs for local currencies in CMIM are confirmed, a more concrete way like some portion of contribution may be designed further.

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