



FACILITATING FOREIGN EXCHANGE RISK MANAGEMENT FOR BOND INVESTMENTS IN ASEAN+3

FACILITATING FOREIGN EXCHANGE RISK MANAGEMENT FOR BOND INVESTMENTS IN ASEAN+3



Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)

© 2015 Asian Development Bank
6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 632 4444; Fax +63 2 636 2444
www.adb.org; openaccess.adb.org

Some rights reserved. Published in 2015.
Printed in the Philippines.

ISBN 978-92-9257-056-9 (Print), 978-92-9257-057-6 (e-ISBN)
Publication Stock No. RPT157560-2

Cataloging-In-Publication Data

Asian Development Bank.
Facilitating foreign exchange risk management for bond investments in ASEAN+3
Mandaluyong City, Philippines: Asian Development Bank, 2015.

1. Regional cooperation. 2. Regional integration. 3. ASEAN+3. 4. Local currency bonds.
5. Foreign exchange risk management. I. Asian Development Bank.

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use. The mention of specific companies or products of manufacturers does not imply that they are endorsed or recommended by ADB in preference to others of a similar nature that are not mentioned.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) <https://creativecommons.org/licenses/by/3.0/igo/>. By using the content of this publication, you agree to be bound by the terms of said license as well as the Terms of Use of the ADB Open Access Repository at openaccess.adb.org/termsfuse

This CC license does not apply to non-ADB copyright materials in this publication. If the material is attributed to another source, please contact the copyright owner or publisher of that source for permission to reproduce it. ADB cannot be held liable for any claims that arise as a result of your use of the material.

Attribution—In acknowledging ADB as the source, please be sure to include all of the following information:
Author. Year of publication. Title of the material. © Asian Development Bank [and/or Publisher].
<https://openaccess.adb.org>. Available under a CC BY 3.0 IGO license.

Translations—Any translations you create should carry the following disclaimer:
Originally published by the Asian Development Bank in English under the title [title] © [Year of publication] Asian Development Bank. All rights reserved. The quality of this translation and its coherence with the original text is the sole responsibility of the [translator]. The English original of this work is the only official version.

Adaptations—Any adaptations you create should carry the following disclaimer:
This is an adaptation of an original Work © Asian Development Bank [Year]. The views expressed here are those of the authors and do not necessarily reflect the views and policies of ADB or its Board of Governors or the governments they represent. ADB does not endorse this work or guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use.

Please contact OARsupport@adb.org or publications@adb.org if you have questions or comments with respect to content, or if you wish to obtain copyright permission for your intended use that does not fall within these terms, or for permission to use the ADB logo.

Note: In this publication, “\$” refers to US dollars.

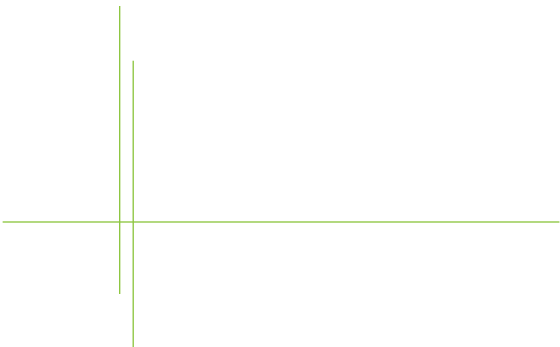
Contents

Tables	iv
Foreword	v
Abbreviations	vi
Executive Summary	vii
1. Introduction	1
2. Bond Market Investors and Their Behavior	4
3. General Comments on Foreign Exchange and Foreign Exchange Hedging	9
3.1 Offshore Hedging Markets	10
3.1.1 Non-Deliverable Forward/Offshore Forwards Markets	10
3.1.2 Offshore Foreign Exchange Swap Markets	11
3.1.3 Offshore Foreign Exchange Options	12
3.2 Onshore Hedging Markets	12
3.2.1 Legal Issues Affecting Onshore Swaps and Other Derivatives	13
4. Review of Measures to Facilitate Foreign Exchange Risk Management for Bond Investments	16
4.1 Measures to Facilitate Foreign Investor Transactions in the Foreign Exchange and Foreign Exchange Hedging Markets	17
4.2 Measures to Improve Liquidity of the Onshore Foreign Exchange Derivatives Market	20
4.3 Measures to Increase Cross-Border Access to Government Bond Markets and Improve Liquidity	21
5. Conclusions	26



Tables

1	International Swaps and Derivatives Association's Assessment of Legal Framework by Economy	14
2	Domestic Central Securities Depository (CSD) Links with International Central Securities Depositories (ICSDs) and Their Equivalent	23



Foreword

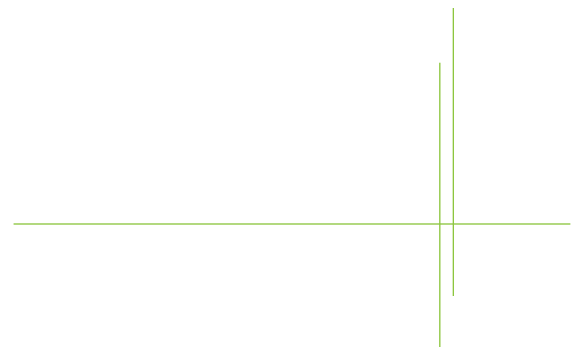
The Asian Development Bank has been working closely with the Association of Southeast Asian Nations (ASEAN) and the People's Republic of China, Japan, and the Republic of Korea—collectively known as ASEAN+3—to foster the development of local currency bond markets and facilitate regional bond market integration under the Asian Bond Markets Initiative (ABMI). ABMI was launched in 2002 to strengthen the resilience of the region's financial system by developing local currency bond markets as an alternative source to foreign currency denominated short-term bank loans for long-term investment.

Bond investors typically have a long position in local currency bond markets. To manage their foreign exchange (FX) risk, they may want to hedge that exposure for a period of time. They also want to be sure they can easily convert the local currency to dollars upon the sale of a bond. This study reviews the FX and FX hedging markets in ASEAN+3 as they relate to cross-border investments in local currency bonds, and makes recommendations to facilitate the development of the markets and FX risk management.

The study was undertaken under ABMI and funded by the Government of Japan and was prepared by Nicholas de Boursac, under the direction of Hsiao Chink Tang, senior economist, Economic Research and Regional Cooperation Department, and A. Noy Siackhachanh, senior advisor, Sustainable Development and Climate Change Department (SDCC). Additional assistance was provided by Noritaka Akamatsu, senior advisor, and Richard D. Supangan, senior economics officer, SDCC. Yvonne C. Osonia and Margarita Tirona, provided research assistance and logistical support. Special thanks are extended to officials of ASEAN+3 member countries and market participants who were generous with their time during the fieldwork for this project.

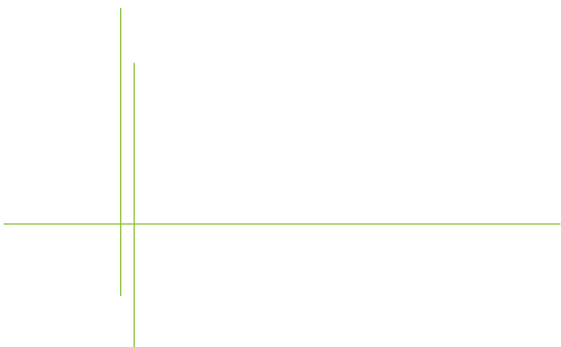


Ma. Carmela D. Locsin
Director General
Sustainable Development and Climate Change Department



Abbreviations

ABMI	Asian Bond Markets Initiative
ASEAN	Association of Southeast Asian Nations
ASEAN+3	Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea
CSD	central securities depository
FX	foreign exchange
ICSD	international central securities depository
ISDA	International Swaps and Derivatives Association
KIMPT	The Republic of Korea, Indonesia, Malaysia, the Philippines, and Thailand
NDF	non-deliverable forward
SWF	sovereign wealth fund
US	United States



Executive Summary


This report reviews the foreign exchange (FX) and FX hedging markets in ASEAN+3 as they relate to cross-border investments in local currency bonds, and makes recommendations to facilitate the development of the markets and FX risk management.¹

Bond investors typically have a long position in local currency bond markets. To manage their FX risk, they may want to hedge that exposure for a period of time. They also want to be sure they can easily convert the local currency to dollars upon the sale of a bond.

While the scope of this study is ASEAN+3, it focuses on five economies in particular: the Republic of Korea, Indonesia, Malaysia, the Philippines, and Thailand, which are collectively referred to as the KIMPT economies. The other ASEAN+3 economies either have very liquid FX markets (Hong Kong, China; Japan; and Singapore) or have markets that are still embryonic (Brunei Darussalam, Cambodia, the Lao People's Democratic Republic, Myanmar, and Viet Nam). The People's Republic of China warrants a special study of its own and is beyond the scope of this study.

Detailed data on hedging activity for the five KIMPT economies are not readily available; therefore, this report relies extensively on conversations with a number of important investors and their service providers. From these conversations, it is clear that the hedging instrument most commonly used by bond investors is the FX forward rather than the cross-currency swap. FX forward markets are generally more liquid and flexible, can be easily rolled over, and suit investors' need to hedge the value of a portfolio rather than a series of bond cash flows. Swaps are used by investors to take a position rather than to hedge, and by issuers to hedge their debt servicing obligations. FX options are used sparingly.

¹ ASEAN+3 refers to the 10 members of the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China, Japan, and the Republic of Korea.



There are a number of reasons that the KIMPT economies merit special attention:

- All five economies have active FX markets.
- Under normal market conditions, cross-border bond investors can easily hedge exposures in the five KIMPT currencies (Korean won, Indonesian rupiah, Malaysian ringgit, Philippine peso, and Thai baht) in the non-deliverable forward (NDF)/offshore market. But in times of stress, distortions can appear.
- In each economy, the local authorities have put in place some form of capital controls whereby onshore FX and FX hedging transactions are regulated on a “real demand principle” basis—the transaction must be linked to a qualifying underlying asset or transaction. These constraints are driven by the need to monitor and manage capital flows in and out of the economies in order to limit unwanted speculation.
- For reasons detailed in this report, many overseas investors rely on the NDF/offshore market to hedge their FX exposure even when they could legitimately use the onshore market because of their real demand.
- Local laws, in particular bankruptcy laws, are not as supportive as they could be of the development of the onshore FX and interest rate swap markets, and this further limits cross-border investors’ appetite for hedging onshore.
- With the notable exception of the Republic of Korea, and more recently Malaysia, not all measures required for well-developed, liquid, domestic debt capital markets have been put in place. Liquid onshore debt capital markets are important to the development of the liquid onshore hedging markets.

Capital controls and real demand principle regulations are designed to limit certain FX transactions and therefore represent barriers that inhibit onshore FX trading and restrict onshore FX markets.

They also add complexity to the purchase, sale, and hedging of cross-border bond investments by bona fide investors. Their impact is described in Section 4.1 of this report. In addition to higher costs, the complexity (or perceived complexity) significantly reduces the range of overseas investors, thus impacting the liquidity of FX markets and local currency bond markets.

These regulations effectively fence off the onshore market from the offshore market. When liquidity is divided into two pools, NDF/offshore FX and onshore FX, each pool is significantly less liquid and therefore more volatile. FX volatility adds costs to investors and is not desired by regulators.

The ideal situation—from both an issuer’s and an investor’s perspective—would be more integrated NDF/offshore and onshore FX markets to effectively create one pool of liquidity. Reducing the barriers to domestic markets and making domestic debt markets more liquid would help this integration. Because FX markets and debt capital markets are linked, the liquidity of the debt and FX markets reinforce each other and thereby lower volatility.

Singapore has achieved this outcome. Malaysia has moved a long way in this direction and could be a useful example of an interim regulatory regime in the process of integrating NDF/offshore and onshore markets.

While investors can generally manage their FX risk offshore today, this report attempts to identify the major issues they face in hedging FX risk onshore, and makes a number of recommendations toward making onshore markets more accessible and more integrated with offshore markets. The proposed measures also aim to widen the overseas investor base given that the best route to market stability is to have the widest and most diversified investor base.

Recommendations

- I. Consider measures that would make it easier for foreign investors to transact in the FX and FX hedging markets. Consider reviewing the real demand principle regulations associated with capital controls. The aim would be to reduce, as much as reasonable, barriers that separate the NDF/offshore market from the onshore market in a measured and suitably sequenced program, with the emphasis on making access easier for bona fide investors while simultaneously continuing to protect the currency from substantial short-term speculation:
 - consider reviewing the rules on cash balances, overdrafts, and borrowings;
 - consider reviewing the rules applicable to bond investors hedging onshore;
 - consider reviewing market information flows to ensure all investors, including foreign investors, have timely and appropriate information on domestic FX market activity;
 - consider reviewing the restrictions on domestic banks that limit their participation in the offshore FX and FX hedging markets;
 - consider ensuring the availability of US dollars for bond investors when they exit;
 - consider allowing offshore FX contracts to be deliverable onshore; and
 - generally aim to lower resulting investor execution, compliance, and documentation costs.
- II. Improve liquidity of onshore FX derivatives markets to facilitate their integration with offshore FX markets:
 - consider taking further steps to develop the domestic legal framework to ensure suitable treatment of derivatives and repurchases (repos) in bankruptcy in line with Basel III requirements, with the long-term aim of ensuring a clean legal opinion from the International Swaps and Derivatives Association and consistently suitable netting treatment under Basel III; and
 - consider reviewing the domestic FX fixing process to ensure it is always transparent and fair to all.
- III. Improve cross-border access to local currency government bond markets and hence their liquidity, which reinforces the development of onshore FX markets:
 - continue to implement the measures identified by the Group of Experts under the Asian Bond Markets Initiative and those included in the Asian Development Bank (ADB) 2013 report *Broadening the Investor Base for Local Currency Bonds in ASEAN+2 Countries*;

- consider exempting from domestic withholding tax income earned by cross-border investors in local currency government bonds (applicable to Indonesia, the Republic of Korea, and the Philippines);
- consider reviewing the barriers that discourage offshore investors from using existing links between local central securities depositories and central banks with international central securities depositories, and other global custodians (and their equivalent), so that offshore investors that choose to do so can more easily settle their bond sales and purchases through subaccounts offshore (applicable to Indonesia, the Republic of Korea, and the Philippines);
- consider issuing larger and deeper series of government bonds;
- continue to promote the development of a repo market;
- consider allowing cross-border repo of government bonds;
- consider strengthening the primary dealer system;
- continue to promote the development of the domestic institutional savings sector;
- continue to promote the development of the information and communication technology infrastructure that supports bond markets;
- consider promoting the use of the Global Legal Entity Identifier that will assist communications between regulators; and
- consider ways to reduce the cost and time needed to onboard new investors.

Introduction

1

The impediments to local currency foreign exchange (FX) and FX hedging are largely associated with insufficient liquidity resulting from underdeveloped FX and debt capital markets, as well as currency convertibility constraints imposed by authorities in the economy of the issuer. These constraints vary considerably across ASEAN+3, which comprises the 10 members of the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China, Japan, and the Republic of Korea.

Hong Kong, China; Japan; and Singapore. These three economies have liquid local currency FX and FX hedging markets, and their currencies are considered convertible. They have limited specific FX regulations. For example, the only notable regulation in Singapore limits the amount of Singapore dollars that certain categories of offshore borrowers can borrow from Singapore resident financial institutions for use offshore. Meanwhile, the Hong Kong dollar is pegged to the US dollar and is a special case.

Brunei Darussalam, Cambodia, the Lao People's Democratic Republic, Myanmar, and Viet Nam. The overall size and breadth of these economies and their financial markets means that it will be some time before their markets will be liquid. The bond markets and the FX markets of these economies are in their infancy. Recommendations for their development will need to be extensive, detailed, and tailored to their starting point—and are beyond the scope of this study.

The People's Republic of China. The development of Chinese renminbi hedging markets, both onshore and offshore, is being managed by various government bodies in a very deliberate manner, taking into account the unique characteristics of the domestic economy and its markets. The domestic authorities have a well-defined path. A review of this unique and complex case is also beyond the scope of this study.

The Republic of Korea, Indonesia, Malaysia, the Philippines, and Thailand. These five economies, which are collectively referred to in this report as the KIMPT economies, have partially convertible currencies with regulations that constrain onshore FX and FX hedging transactions. Regulations differ by economy, but all have the common objectives of protecting the domestic currency and economy from abusive currency speculation, and managing unwanted or excessive currency flows. These regulations are designed to restrict certain transactions, resulting in more complicated FX risk management that warrants review.

This report makes recommendations to improve the liquidity of onshore FX markets while taking into account the need to monitor and manage cross-border capital flows. Improved liquidity in onshore FX markets will improve the liquidity of local currency bond markets (and vice versa), and help integrate onshore and offshore markets. Improved liquidity will make these markets better able to withstand shocks and facilitate risk management for all.

As statistical data are not readily available in sufficient detail, the report is based on discussions that took place in June–October 2014 and comprised a broad range of international market participants, representing approximately 30 entities. These include the investment community (e.g., fund managers, international asset managers, and their back offices); their global bankers, both fixed income and FX; local and global custodians; trade associations and the service providers (e.g., law firms) that assist them; and various thought leaders. As local investors do not need FX to buy bonds in their local currency, the report focuses on investors active in cross-border transactions.

Discussions with investors and their advisors revealed that many investors in Asian bonds do not hedge their FX risk. Their objective is often to get exposure to both the domestic interest rate and the FX rate. Those that do hedge FX risk can do so easily in offshore markets, except in times of stress. For example, some implied interest rates in the Indonesian rupiah non-deliverable forward (NDF) market were negative in 2013 as a result of an imbalance between supply and demand. Bond investors typically hedge the value of their investment (not the future cash flow) using offshore FX forwards. FX forwards are more liquid and flexible, and suit their needs better than swaps.

While hedging offshore is easy, hedging onshore is more complicated in the KIMPT economies because of the “real demand principle” regulations put in place by local authorities to control capital flows. These regulations, which generally prohibit onshore hedges that are not tied to an underlying qualifying transaction, are targeted at speculators but affect all investors. The impact of these regulations on bona fide investors is detailed in Section 4.1. Because of their perceived complexity, the rules reduce significantly the demand from smaller bona fide investors that could potentially bring stability and diversity, and reduce the borrowing cost for issuers. The regulations also separate the onshore market from the offshore market.

While the existence of offshore markets is not undesirable per se, two silos of liquidity are much less liquid than one consolidated market. Therefore, integrating the onshore and offshore FX markets would generally be beneficial. To do this, the real demand principle rules may need to be updated to reflect the growth of these markets and, if possible, streamlined. Also, the development of the legal framework for an onshore derivatives market may need to be accelerated to make onshore markets more attractive to all investors and to have the widest possible range of investors. As a result, speculative and opportunistic investors will represent a smaller minority and hopefully be less disruptive. The markets, by being more liquid, will be more resilient.

The rest of the report is structured as follows. In Section 2, we discuss the different investor types and their hedging behavior. In Section 3, we review the hedging instruments and markets used by investors. In Section 4.1, we describe the impediments to onshore hedging and FX markets, and make recommendations on how rules could be made more market-friendly and transactions less costly. In Section 4.2, we present

recommendations for increasing domestic FX market liquidity, which would lead to the improvement and integration of onshore and NDF/offshore FX markets. In Section 4.3, we present recommendations for improving domestic government bond market liquidity. In Section 5, we conclude by summarizing the recommendations.

2


Bond Market Investors and Their Behavior

It is useful to categorize various bond market investors in order to analyze their investment and hedging behavior. However, it is not possible to obtain volume or pricing statistics with sufficient granularity across Asia, nor even for the five focus economies, that would permit a detailed analysis of cross-border investments, offshore FX, and FX hedging by investor category. Some central banks have such information on their markets but generally do not release this publicly. The comments below are based on conversations with important market participants.

Individuals. Globally, individuals hold less than 3% of bonds directly. Individuals will generally invest in bonds indirectly via the institutional savings sector. While we have no statistics for cross-border investment by individuals into the KIMPT economies, the amounts are assumed to be small and will not be a focus area for this report. Also, retail investors who invest directly themselves typically do not hedge their FX exposure.

Asian institutional savings sector. This sector includes pension funds; insurance companies; mutual funds; dedicated bond funds, including exchange-traded funds; and hedge funds. The domestic institutional savings sector based in one ASEAN+3 economy makes relatively limited cross-border investments in bonds issued by other ASEAN+3 economies. With a few exceptions, the Asian institutional savings sector is still in its infancy and remains domestically focused. In the case of Japan, the Republic of Korea, Malaysia, and Singapore, where this sector is more established, conversations with the global banks suggest that the portion of overseas investment is still very modest, with the main destination for overseas bond investments being the deep and liquid markets in Europe and the United States (US). In addition, Asian institutional savings sector investors may not have credit approval to invest directly in all five of the focus economies due to their often lower credit ratings than the more attractive European and US destinations. Also, withholding tax in some of these economies may make their bonds less attractive than those in developed economies without such a tax.

Our research found some investments from Japan and the Republic of Korea in Malaysian bonds, and by some Thai investors in Korean bonds, but reliable data are limited. We understand these investments are modest relative to the size of total cross-border investments.



Australian and New Zealand institutional investors, such as superannuation funds, report that they invest little in ASEAN+3 bonds, typically because their mandates are comparatively restrictive, and partly because their domestic tax systems favor investments in equities.

Given these findings and because institutional investors outside of Asia provide the bulk of cross-border investments in Asian bonds, this report is largely based on input from such investors based in Europe and the US, as well as their supporting service providers, including asset managers, banks, lawyers, custodians, and trade associations. However, as a rising tide raises all ships, improved FX and FX hedging markets will be good for both current and future cross-border investors in Asian economies. Therefore, the recommendations in this report will encourage more intra-Asian, cross-border investments in bonds.

It is useful to divide the investor universe into two broad categories of selling behavior: cyclical and structural. Cyclical investors are short-term, more opportunistic, and driven by trading opportunities and their view of short-term relative value. They will try to sell ahead of any expected downturn in the FX or bond markets. Structural investors are long-term and driven by the need to diversify and pick up yield. They will generally ride out anticipated downturns in market prices unless these are expected to be very large and/or permanent.

In the following subcategories, the only truly cyclical investor group is the first one: traders, hedge funds, and some sovereign wealth funds (SWFs). However, it is difficult for regulators to distinguish between a cyclical trade and a structural trade. The real demand principle regulations attempt to do this. Nevertheless, the real demand principle barriers affect them all and inhibit structural investors, especially smaller ones. The extent to which barriers can be ameliorated for the structural investor is described in Section 4.1.

Traders at banks' trading desks and leveraged hedge funds. These are typical cyclical investors aiming for an absolute return. They will trade when their view of the future value of a position is different from the value in the market. They will take positions that reflect their view of the outlook for the local currency interest rate and the FX rate. These traders act on both positive and negative views. These actions might be of concern to regulators and therefore much of the exchange control regime is directed at limiting their actions. Collectively, they can create momentum in the currency markets that is unwelcome. At times, they can bet against the central bank. While these investors are opportunistic and can be seen as speculators, outside crisis periods they are useful to the market as they provide liquidity. In times of stress, they will often buy FX and bonds when others are selling, thus providing needed market liquidity at a difficult time.

Emerging market dedicated bond funds, including Exchange-Traded Funds. Investors in emerging market funds are seeking diversification and the higher yields offered by emerging market debt. While these are structural investors, their behavior can appear cyclical in times of stress.

Retail funds represent about 40% of emerging market funds. Retail investors subscribe directly to these, and consequently such funds are subject to changes in the expectations of retail investors. For example, in 2013, there was a fear that the US Federal Reserve would start the tapering of quantitative easing, which led to a widespread belief that emerging market bonds would underperform. Retail investors rapidly

withdrew their money from emerging market funds, an action that was referred to as “risk off.” This forced emerging market fund managers to sell their assets (emerging market bonds) to obtain the cash needed to meet the redemption requests. As many emerging market funds sold emerging market bonds at the same time, emerging market bond prices dropped. Selling local currency bonds means that local currency must also be sold. Exchange rates were thus affected, further lowering the US dollar value of emerging market bonds, which in turn encouraged fund managers to sell even more quickly before the price dropped further. The drop in prices resulted in a drop in the net asset values of emerging market funds and that affected their performance, which was noticed by other retail investors, prompting further redemption requests by retail investors and additional bond sales and FX transactions.

When emerging market bonds are expected to outperform other asset classes, a similar process occurs in reverse, with retail investors’ money flowing into emerging market funds, which is referred to as “risk on.” This is money that fund managers will need to invest.

Because they often sell when the market is going down and buy when the market is going up, there is an appearance that fund managers are cyclical traders. In fact, the selling is prompted by the end investor’s perception of the relative attractiveness of emerging market bonds, not by the fund manager’s wish to speculate—nor, importantly, by his view of the future direction of the market.

J.P. Morgan and HSBC publish the most widely followed emerging market and Asian indices that include our five focus economies. A large number of funds track these indices or a modified version of the index. More than 90% of emerging market bond exchange-traded funds are passively invested as index trackers where asset managers take no view. Their mandate is to replicate the indices, holding all the assets included in the index in identical proportions. That also means that when they face redemptions, for example, they need to sell each bond in proportion to its share of the index.

Depending on their mandate and their manager, funds will hedge their currency exposure. For example, there are two versions of the J.P. Morgan Government Bond Index - Emerging Market Global Diversified (JPM GBI-EM Global Diversified)—one that is hedged and one that is not hedged. In the hedged version, a fund replicating the index would need to use 1-month NDFs at the end of each month and roll them forward every month. However, from our conversations with market participants, it seems that more than 90% of the index trackers track the unhedged index and therefore will not hedge.

Funds that do not track any index will have more flexibility to act on their views. They often keep an eye on the index, but in order to outperform their peers, they will time their entry into and their withdrawal from a particular market in view of their expectations of future price movements, as well as expectations of redemptions and inflows into their fund. They will also try to time their hedging activity to improve fund performance. Their decision to hedge the FX risk (or not) will be driven by their mandate and their view of the FX market. As emerging market bond funds, they often need to be nearly fully invested in emerging market bonds. The simplest and most cost-effective way to express their views is by adjusting the timing of their investment and the level of hedging. In times of stress in the FX markets and when investor redemptions are anticipated, a fund manager will anticipate that bonds need to be sold to meet redemption requirements and may move the hedge to 100% so as to lock in the fund’s net asset value.

Emerging market retail versus institutional funds. In general, retail funds will not hedge their FX risk because the retail investor is seeking exposure to emerging markets, which includes the FX exposure. They will rapidly pull out if this is no longer expected to be attractive. Institutional emerging market dedicated funds will tend to be stickier than retail funds because asset allocation decisions by the investing institution are generally taken with a longer time horizon. They may, in comparable circumstances, stay invested in bonds and hedge the FX risk when this makes sense.

It is important to note that pullbacks in the level of cross-border investments described above are generally relatively short-term. The reduction in cross-border investment in Indonesian government bonds, for example, in May–August 2013, which was known as the “taper tantrum,” was short-lived. By the end of 2013, total cross-border investment in Indonesian government bonds was back to the same level as the beginning of 2013. Similarly, the level of global cross-border investments in emerging market debt in April 2014 was higher than in April 2013. The long-term trend is for an increase in investment in emerging market debt, simply because the aggregate amount of institutional savings is growing and they need long-term, fixed-income assets to match their liabilities. Furthermore, there is reason to assume in coming years that the US pension fund industry will increase its asset allocation in emerging markets. For every 1% increase in allocation, the total funds available for investing in Asian emerging market debt will increase by several hundred billion dollars, enough to impact these markets.

Consequently, policies and measures to address these temporary changes in end-investor demand may not be needed in the long run. They are often not very effective and will generally not be helpful to market development. The target of FX rate management should probably be to continue to keep FX rates in line with medium-term economic fundamentals.

Global crossover funds. These funds comprise a mix of developed market bonds and emerging market bonds. They invest with the same philosophy as emerging market funds, but have somewhat more flexibility as they can change the developed–emerging market mix depending on their view and their mandate. The outlook for global bonds in general, not just emerging market bonds, will influence their investors’ flows. Again, there are two broad categories—the index trackers and the total return funds—and their hedging rationale is similar to that of emerging market funds discussed above.

Dedicated emerging market funds and global crossover funds are usually long the local currency—often their mandate prevents them from going short—and therefore their transactions in the NDF/offshore and onshore hedging markets are generally defensive not speculative. FX regulations should be designed in a way that is friendly to these investors. The bond investors most likely to take speculative positions are bank trading desks, leveraged hedge funds, and some SWFs.

Central banks. In contrast to the Asian institutional savings sector, Asian central banks invest in regional bonds, although a high portion of Asian central banks’ foreign reserves are still in euro-, Japanese yen-, and US dollar-denominated bonds. Central banks will generally invest in emerging market bonds in one of two ways. First, they buy bonds directly in their own name. This has the advantage of enhancing their relationship with the issuing economy but the disadvantage of being difficult, for relationship reasons, to sell in times of market stress. Investments through this channel will therefore tend to be long-term and

part of the bank's reserve management and diversification strategy. The duration of individual investments will, however, tend to be shorter (reportedly around 3 years). Central banks generally prefer markets with higher-quality credit and greater liquidity. Second, they invest in European or US-based emerging market funds. This has the advantage of anonymity and allows them to exit in times of stress. However, they have less direct control on where the funds are invested. They also may not benefit from the reduction in withholding tax, a concession often granted to central banks and SWFs when investing directly in emerging market bonds. Central banks tend not to hedge their exposure, as the purpose of their investment is to diversify their reserves.

Sovereign wealth funds. Many SWFs can be conservative and invest in the same manner as central banks (long-term, structural investors) and therefore will not hedge. Others can be aggressive and invest in the same way as leveraged hedge funds (short-term cyclical investors). Some established Asian SWFs are aggressively investing in Asian bonds as they have easy access to relevant information, can follow markets closely, and execute transactions well. These behave more like cyclical investors and may act on views and join the momentum created by the banks and hedge funds.

General Comments on Foreign Exchange and Foreign Exchange Hedging

3

In addition to the income from a bond, one key factor in determining the actual return on a cross-border bond investment is the exchange rate realized on exit. FX hedges are designed to reduce the risk of FX losses on exit by locking in the FX rate ahead of time.

Typically, bond investors will only hedge the FX exposure and keep exposure to the domestic interest rate. This is because if they hedged all future cash flows from their bond investments into dollars, they would get a dollar rate of return much lower than comparable US Treasuries and with a higher risk. In normal market conditions, it would make more sense economically to sell the bonds.

FX forwards are ideal for hedging a bond portfolio's FX exposure given that the FX exposure is the value of the bonds. The realized FX rate on exit is very important; therefore, any basis risk—the difference between the hedging FX rate and the actual exit FX rate realized—is problematic. This can occur when using an NDF because, as the name implies, the currency is not delivered.

From an investor's perspective, it is important that the

- onshore market has sufficient liquidity to enable the investor to purchase US dollars when the bond is sold,
- onshore spot FX fixing process should be transparent and fair since FX fixing is extensively used as a reference rate,
- investor can obtain the best rates available to execute FX and FX hedging transactions (good price transparency through well-distributed market transaction information), and
- NDF/offshore markets are liquid and integrated with liquid onshore markets so that hedges put in place through forwards have the minimum basis risk relative to the transacted exit FX rate.

Hedging can be done either offshore through an NDF or deliverable offshore forwards (when allowed), or onshore, with due consideration of the relevant regulations.

3.1 Offshore Hedging Markets

3.1.1 Non-Deliverable Forward/Offshore Forwards Markets

The currencies of the KIMPT economies are not fully convertible because the respective regulatory authorities have set rules that limit the free exchange of each of these currencies. The rules are generally meant to limit cyclical speculation and not to discourage bona fide portfolio investment, foreign direct investment, and normal trade flows.

In practice, however, the rules restrict FX transactions and make it more difficult for investors to access the onshore FX and FX hedging markets. As a result, offshore FX markets that are beyond the direct reach of the regulators have developed. These are NDF markets for currencies that restrict delivery to onshore banks such as Indonesia, and deliverable offshore markets as is the case for Thai baht.

In general, the NDF/offshore markets of KIMPT economies are considered relatively liquid, with 20–30 banks quoting competitive prices. They are viewed as more user-friendly than onshore markets for the following reasons:

- Onshore hedging often requires documentary proof of the underlying investment; NDF/offshore markets do not.
- Onshore transactions can be operationally complex to book because of the need to provide required documentation and comply with other regulations. NDF/offshore transactions are extremely simple administratively and will generally be preferred except when there is a significant cost difference.
- Onshore rules often restrict the hedge (e.g., it must match the underlying investment exactly and cannot be rolled over); NDF/offshore markets do not.
- Because NDF/offshore markets are relatively liquid, often with 20–30 banks quoting prices, price transparency is good. Particularly in times of stress, onshore pricing is not always clear.
- Investors may not be granted internal approval for their required credit lines for FX with onshore counterparties, but will generally be able to execute NDF/offshore transactions with their main international bankers offshore.
- Investors may not be granted credit lines by onshore counterparties, but will be granted credit by their regular offshore banks. These global FX lines may be collateralized by the assets of the fund.
- Onshore laws govern onshore transactions. Not all onshore markets benefit from clean legal opinions on the enforceability of hedging transactions. Investors may not have the required internal approval to contract in a particular jurisdiction. NDF/offshore agreements are typically standard global agreements under the laws of either the United Kingdom or the US.
- For markets that do not benefit from clean International Swap and Derivatives Association (ISDA) opinions, the netting of onshore derivative transactions may not always be possible. This makes them less attractive.

- Regulators have been known to change the rules onshore with a negative impact on cross-border transactions. NDF/offshore transactions are not subject to this regulatory risk.
- For investors with a base currency other than US dollars, NDF/offshore cross-currency contracts will generally be available while onshore cross-currency forwards may not be.
- Messages in NDF/offshore markets—confirmation, matching, payment, and settlement—are formatted, which allows straight-through-processing. In onshore markets, not all parties use the full suite of formatted messages, which results in more manual processing and a higher error rate.

Therefore, the bulk of hedging transactions for emerging market and global crossover funds for partially convertible currencies are done through short-term NDFs. Typically, these will be 1 (the most active), 3, 6, or 12 months, and rolled over for as long as the hedge is needed.

Once an NDF or offshore forward market has been established, it is very difficult (and generally not desirable) for the authorities to close it because of all the aforementioned advantages it provides to investors. In fact, as we will argue, increasing offshore market liquidity will enhance onshore market liquidity if they are well linked.

However, in times of stress there can be a mismatch in the local currency supply–demand balance in offshore markets. When this is coupled with a restricted onshore market and a prohibition on delivery of offshore contracts, it can lead to distorted NDF prices. For example, at times in 2013, the Indonesian rupiah NDF had an implied negative interest rate. As a result, the FX hedge may not track the realized exit FX rate, leading to basis risk.

The choice of tenor of the hedge (e.g., 1, 3, or 6 months, or 1 year or more) and decisions on the number of rollovers are influenced by (i) how long the bond itself is expected to be held, (ii) how long the hedge is expected to stay in place and if it will need to be adjusted, (iii) the administrative complexity and cost of rollover such as the bid–offered spread and transaction costs, and (iv) the investor’s view of the rollover risk.

The purchase of a bond must generally be made with an onshore local currency that needs to be delivered onshore to the custodians for settlement of the purchase. Similarly, when the bond is sold, the local currency is delivered by the buyer to the investor’s local custodian onshore and must be converted into US dollars for repatriation. For some currencies—including the Indonesian rupiah, Korean won, Philippine peso, and Thai baht—such contracts can only be executed onshore. In the future, NDFs and non-deliverable swaps will need to be centrally cleared. It is not yet clear how this will affect markets, but it may reduce liquidity.

3.1.2 Offshore Foreign Exchange Swap Markets

Although banks can offer investors the full range of hedging products, as discussed above, the preferred instruments for short-term hedging of partially convertible currencies offshore are the NDF and the offshore deliverable forward.

Hedging is done on a portfolio basis rather than bond by bond. The investor typically hedges the market value of the portfolio, which will change with movements in domestic interest rates. This can be easily done through a forward. Changes to the hedge are easy to execute. Forwards are available for tailor-made tenors that extend well beyond 1 year.

For hedges beyond 12 months, investors may continue to use an NDF. Alternatively, they can use offshore swaps, but without the exchange of principal (non-deliverable swaps). This uses fewer credit lines and less capital, and is therefore more cost-effective. The lack of exchange of principal means there is no exposure to onshore regulations that might affect the delivery of the local currency principal.

A standard cross-currency swap is generally not suitable, as the quarterly or semi-annual exchange of periodic payments will result in the hedging of the interest rate exposure and the FX risk, and therefore is equivalent to exiting a bond position. Unless an investor needs to do this for a short period, selling the bond would generally be easier. Swap markets are also less liquid than forward markets, and less flexible. Matching the periodic payments to the cash flow of the bond portfolio may be difficult.

Some investors use swaps as a substitute for a bond investment, going long in the domestic currency and thereby taking on both FX and interest rate exposure. This might be an easy and quick way into a new market. However, due to the increased cost of swaps resulting from Basel II and III, the Dodd-Frank Wall Street Reform and Consumer Protection Act in the US, and other postglobal financial crisis regulations, long-term swaps are much more expensive than in the past, and therefore less attractive. Spreads above reference rates will be larger. For this reason, swaps beyond 1 year are not frequent, and swaps beyond 3 years are rare.

For issuers, swaps are used to hedge their currency exposure. For example, a company in the Republic of Korea might issue a US dollar-denominated bond and swap the future cash flows into Korean won to have resulting won liabilities that cash flows from their Korean operations can service.

3.1.3 Offshore Foreign Exchange Options

To guard against low-probability but high-impact changes in FX rates, rather than hedge through NDFs and lose potential FX gains, some investors will buy protection (hedge) via out-of-the-money (therefore cheap) FX options. The market for these options is typically offshore and does not involve delivery of the local currency. The amount of activity in this market is quite low relative to total cross-border investments.

3.2 Onshore Hedging Markets

In Indonesia, the Republic of Korea, the Philippines, and Thailand, the delivery of the spot FX (needed when buying or selling the bond) is limited by regulation to onshore banks. As such, using an onshore hedge will avoid the basis risk resulting from divergence between the NDF and the onshore market.

The real demand principle regulations in the KIMPT economies are designed to limit access to the onshore forward hedging markets by only allowing certain FX transactions to be executed under certain circumstances. FX hedges by long-term bond investors are generally welcome, but they must produce evidence that the local currency purchases and sales are directly related to the underlying bond investment.

The rules are different for each of the five KIMPT economies. These rules are intrinsically coherent and interlocking, but are not always easy to understand from afar. Although the larger foreign bond investors currently active in these economies are now familiar with the rules, new investors will need Asia-based assistance to make sure they fully understand their options. This assistance is not always forthcoming. The rules also add to the administrative complexity and cost, and tend to discourage some new investors, in particular a large number of smaller investors.

Generally, funds will hedge onshore only if they are required by their mandate or when the price is significantly more favorable onshore and they can meet the regulatory requirements.

3.2.1 Legal Issues Affecting Onshore Swaps and Other Derivatives

In an active market, many transactions will be executed between participants who are sometimes buying and sometimes selling FX. It is useful to be able to net the transactions and their risk exposures, and provisions to this effect are included in international transaction documentation.

In the event of a bankruptcy, closeout-netting provisions allow the offsetting of derivative positions (e.g., swaps or forwards) to be netted off against each other, with one final payment being made. The less desirable alternative is for the transactions to be dealt with on a gross basis whereby each transaction is subject to the discretion of the bankruptcy judge. Netting is the most important risk reduction tool in modern financial markets. Collateral is widely used as a risk management tool in FX hedging contracts and their treatment in bankruptcy is also important.

Closeout-netting provisions and the ability to rapidly liquidate collateral are even more important in the Basel III environment as the absence of suitable treatment will affect banks' capital requirements for the transactions. In some economies, the bankruptcy courts do not immediately recognize the concept of closeout netting and do not allow immediate access to collateral.

If the transactions can be netted and the legal opinions received state that the netting provisions are enforceable, then the capital required to satisfy Basel requirements is only that required for a net position. If the provisions cannot be enforced, then the capital required is that of the gross aggregate of all the transactions. The domestic laws that affect netting and collateral are therefore important for onshore and cross-border hedging transactions. For a derivatives market to work well and be liquid, it is important that an appropriate legal framework is in place to ensure suitable treatment in bankruptcy.

The legal framework is assessed by ISDA as either clean, fairly clean, or unclear. A clean legal opinion indicates that legal enforceability is in place and Basel capital relief can be achieved. A fairly clean

legal opinion means that there remain some legal question marks with regard to enforceability. This is complicated and could depend upon factors such as type of counterparty, resolution powers, and structure of the judiciary. Basel relief might be achieved for some transactions and counterparties, but not others, though generally fairly clean is considered unsatisfactory. Unclean suggests there is a lack of netting certainty and exposures are generally treated on a gross basis.

Table 1 summarizes the status of ISDA’s review, as of June 2015, of the treatment of closeout netting and collateral in bankruptcy. ISDA opinions are accepted as “written and reasoned legal opinions” for Basel regulatory purposes.² As evident, these treatments are less than totally satisfactory in the five focus economies. Hence, for risk reduction reasons, investors will hedge offshore through an NDF or other offshore transactions, or if onshore through their onshore custodian bank (usually an international bank they use globally) and will rely on the global relationship to smooth out the consequences of any dispute.

Table 1: International Swaps and Derivatives Association’s Assessment of Legal Framework by Economy

Economy	Netting	Collateral
Indonesia	Fairly clean	Unclean
Republic of Korea	Fairly clean	Unclean
Malaysia	Fairly clean	Unclean
Philippines	Fairly clean	Clean
Thailand	Clean	Unclean
Australia and New Zealand	Clean	Clean
Hong Kong, China	Clean	Clean
Japan	Clean	Clean
Singapore	Clean	Clean
Mexico	Clean	Clean
Canada	Clean	Clean
Chile	Clean	Clean

Notes:

1. As of June 2015, information on Malaysia was being reviewed for a probable upgrade.
2. Brunei Darussalam, Cambodia, the People’s Republic of China, the Lao People’s Democratic Republic, Myanmar, and Viet Nam were not assessed.

Source: International Swap and Derivatives Association.

The absence of a suitable legal framework has important implications for the development of domestic FX and interest swap markets, and also impacts the domestic repurchase (repo) market for similar reasons. The desired objective is a clean ISDA opinion so that risk and capital requirements are effectively reduced.

² Bank for International Settlements. 1998. *International Convergence of Capital Measurement and Capital Standards*. Basel. <http://www.bis.org/publ/bcbsc111.pdf>; Bank for International Settlements. 2006. *International Convergence of Capital Measurement and Capital Standards: A Revised Framework (Comprehensive Version)*. Basel. <http://www.bis.org/publ/bcbs128.pdf>

Global banks and some investors will make their own evaluation of risks and rewards. In cases where the fairly clean opinions are sufficiently close to clean, and when they are confident that the judiciary will follow international precedents, they will be willing to be active onshore with contracts under local laws. Nevertheless, there is still great value in pushing to get clean status for domestic markets.

4 | Review of Measures to Facilitate Foreign Exchange Risk Management for Bond Investments

Under the Asian Bond Markets Initiative (ABMI), a Group of Experts has done extensive work to identify barriers to cross-border investments and made recommendations. This good work should continue.

In the five focus economies, control measures have been put in place that affect the liquidity of the FX, FX hedging markets, and local currency debt capital markets. While any one of these measures may be deemed to be relatively harmless, the cumulative impact of several can be significant, narrowing the overseas investor base and adding to the risk or the cost of bond purchases.

Domestic issuers ultimately pay the cost of these measures. They will need to offer investors a higher yield to offset the increased cost and/or risk, and also pay an illiquidity premium in order to attract more investors. Put another way, by reviewing any unnecessary impediments so they are less costly, while maintaining the desired level of exchange control, the authorities in the focus economies can improve the liquidity of their markets, lower borrowing costs, and accelerate the development of their bond markets. Also, as the reference government yield curve will be lowered, bonds issued by other domestic borrowers will be at lower yields.

To make markets more resilient to shocks and reduce the impact of cyclical investors, it is useful to broaden the investor base to attract more structural investors. Making access to the FX and bond markets easier, especially for smaller investors, and making these markets more liquid is the best means to achieve these objectives.

The review below identifies a number of the impediments and makes recommendations on how they can be adjusted, while keeping in mind the need to control capital flows. Ideally, rules should be stable, transparent, and changed only when making the market more liberal.

The best approach might be to set up several focused working groups in each economy made up of local regulators (e.g., ministry of finance, central bank, and financial markets regulator as appropriate) and active market participants (e.g., sell-side; buy-side; and custodians, both domestic and international).

Each working group could be focused on one problem area and review the relevant rules and make recommendations to adjust them. (In some of the KIMPT economies this is already happening.) This would supplement the work being done under ABMI.

4.1 Measures to Facilitate Foreign Investor Transactions in the Foreign Exchange and Foreign Exchange Hedging Markets

Recommendation 1: Consider reviewing the rules on cash balances and overdrafts

- Determine if the rules for bona fide investors could be simplified.
- Review the penalties for bona fide excess balances or overdrafts to determine if they could be made less draconian.
- Prior approval may not need to be sought for bona fide fails, rather just the reporting of fails ex post facto.
- When absent, reasonable de minimis limits could be established to reduce monitoring costs.
- Existing limits could be reviewed and revised upward. The KIMPT markets have grown significantly since they were established. Special limits could be established for certain accounts (e.g., international central securities depositories [ICSDs], global custodians, large asset managers) that reflect their underlying business.

Nonresident accounts are subject to rules that limit cash balances and/or overdrafts and borrowings. The purpose of these rules is to ensure that offshore speculators do not take speculative positions by keeping large positive balances when they expect a currency to appreciate, or tap overdraft and other credit facilities when they expect the local currency to depreciate. It is clear that any capital control regime needs to prevent such speculative positions.

However, when trading is frequent there can be failures to deliver US dollars, the local currency, or the security. These failures—colloquially referred to as fails—are generally the result of operational or communications mistakes, often because the delivery is at the end of a long chain of transactions and because the chain includes various cut-off times. In many cases, the fail is corrected in the following days. These fails can be for bona fide reasons that have no speculative element; if all the agreed transactions had been executed on time, there would have been no overdraft and no excess balance.

The limits on cash balances and overdrafts require investors to manage their accounts carefully, usually through one of the following solutions. The challenge or downside of each solution is included in parentheses:

- When allowed, they will prefund the local currency account to ensure there is no overdraft. (They will lose 1 day's interest.)
- They will only buy or sell the local currency when they know the sale or purchase of the bond is firm. (This requires careful monitoring and coordination.)

- They will buy the local currency from their custodian bank. The advantage of this is the custodian will be able to ensure delivery of the local currency on time, as opposed to waiting for a third-party FX bank. This will require the custodian to provide them with intraday, and sometimes overnight, US dollar credit facilities so that they can deliver the local currency even if the US dollars have not yet been received. (This is usually compensated through higher fees or poor FX rates as the custodians are in a monopoly situation.)
- They have an automatic sweep that converts an excess balance into US dollars at the end of the day and then converts back into the local currency in question at the opening of the next day. (This imposes costs through additional transactions.)
- A team of people monitor and manage the current accounts. (This entails additional staffing costs.)
- We understand that regulators can often exercise discretion and, when forewarned of a potential violation of the rules, will give transaction-by-transaction prior approval. (This requires Asian-based staff and costs money. Some investors, for policy reasons, will not want to risk that approval may not be forthcoming. Smaller investors find the approval process too complex and therefore a disincentive to investment.)

These solutions all cost money and are not always available to smaller institutional investors, who do not benefit from the handholding provided to larger investors by global intermediaries with Asian capabilities. Therefore, they may be discouraged from investing in bonds. Yet, these smaller investors collectively invest large amounts and are very useful for market development and stability.

Rules in some economies could usefully be reviewed to determine whether they could be made more user-friendly. In Thailand, for example, there is still a B300 million limit for cash balances in the Thai baht nonresident account; end-of-day balances in excess are charged a penalty of 1%. In Indonesia, these rules have been eliminated, except for balances resulting from the sale of Sertifikat Bank Indonesia. In the Philippines, the Bangko Sentral Registration Document system used to track currency inflows to permit repatriation is cumbersome, confusing, and costly.

Recommendation 2: Consider reviewing the rules that limit access to the onshore hedging market

- Rules that restrict onshore hedging impact liquidity and reduce the flexibility of investors. Offshore investors can find it difficult to understand exactly how to comply with the rules and may not have adequate information from their service providers (e.g., custodians in Thailand) to help them comply. This effectively closes the derivatives market to them.
- The rules could be reviewed with inputs from market participants. The litmus test should be the bona fide nature of the hedge.
- Investors could be required to self-declare the link between the bond and the hedge that would be subject to audit, as is the case in Mexico, rather than provide evidence each time.
- It would help international investors if the rules were clearly written in English and consistently and transparently enforced. Discretionary approvals by central banks could be limited to unusual cases and service providers could be encouraged to more proactively assist smaller, new-to-market investors in meeting the regulatory requirements for hedging.
- Some elements of Recommendation 1 could also be considered for these rules.

There are many examples of restrictions on onshore hedging that impact liquidity and reduce the flexibility of investors:

- A bond that has been hedged cannot be sold while the hedge is in place; the rules often state that the notional value of the hedge cannot exceed the value of the bond.
- The documentation required to link a hedge to the underlying investment is cumbersome and onerous.
- Hedging on a portfolio basis is not always allowed; the hedge and the underlying investment need to be settled on a gross payment basis—netting the transactions is not allowed.
- Hedges cannot always be freely rolled over.

In Indonesia, for example, although hedging can be done on a portfolio basis, the rules on how such hedges can be adjusted if a part of the portfolio is sold are not clear. As a result, portfolio hedging is in practice done only with the custodian bank where the bonds are held, which is far from ideal.

The reporting obligations associated with these rules can be quite onerous. Some flexibility would be helpful.

Recommendation 3: Consider reviewing the flow of transaction information

It is important that all investors have access to timely and appropriate information on market activity. This should include the current bids and offers, and the intraday summary of activity including prices and volumes (when appropriate). This information should also be available to offshore parties.

In some markets, chat rooms or their equivalent are still being used by traders. Chat rooms result in restricting the flow of information. We recommend actively discouraging their use.

Recommendation 4: Consider reviewing the rules that limit domestic banks' activity in domestic and offshore FX markets

We recommend reviewing restrictions on domestic banks that limit their activity in the onshore and offshore FX markets to determine their impact. It may be that the underlying prudential objectives can be met through other means that have less impact on market liquidity.

A number of restrictions on domestic banks in the KIMPT economies limit liquidity—thereby creating liquidity silos—and hinder integration of onshore and offshore markets. For example, in Indonesia, the Republic of Korea, and Malaysia, local banks have limits on their involvement in the offshore NDF markets. In Thailand, banks are not allowed to deal in NDFs in Thai baht with nonresidents. The Republic of Korea has net open position limits imposed on resident banks. In Indonesia, the net open position limits rules were changed so that they now have to be respected only at the close of business.

Recommendation 5: Explore the possibility of ensuring the availability of US dollars on exit

We recommend enabling the central bank to take steps to reassure bona fide investors that US dollars will always be available even in times of crisis.

Being able to repatriate the invested funds at a fair price is not always achievable. When regulations are tight and market liquidity has shrunk, it can be difficult for an investor to sell the local currency proceeds of a bond sale at a reasonable price. For example, in September–October 2013, it was at times difficult to find US dollars in the onshore Indonesian market.

Recommendation 6: Consider allowing offshore FX contracts to be delivered onshore

If offshore contracts were deliverable onshore—within certain rules, as they are in Malaysia and Thailand—then the offshore and the onshore FX markets would be closer to integration. As we view closer ties between the onshore and offshore markets as desirable, we recommend that this possibility be considered.

4.2 Measures to Improve Liquidity of the Onshore Foreign Exchange Derivatives Market

Recommendation 7: Consider reviewing domestic laws so as to determine the steps required to benefit from a clean ISDA legal opinion

We recommend a review, possibly with input from global banks and/or ISDA, of the gap between current and required legislation. Based on the review, consider taking the steps required to close that gap.

While this is a long-term initiative, it is an important one. A liquid derivatives market is an important component of an economy's financial infrastructure. But without appropriate netting and collateral legislation, it will be difficult to establish. As the resolution will require input from various branches of government, it will require high-level support and persistence. The target is a clean ISDA opinion (or its equivalent) in each economy.

As discussed in Section 3.2.1, the domestic legal framework does not fully support creditor rights in derivatives transactions. The resulting legal uncertainty limits the involvement of some foreign participants in onshore derivatives markets, forces some investors to use the NDF/offshore market, increases risks for domestic participants, and increases systemic risk.

Recommendation 8: Consider continuously reviewing the FX fixing process

It is important that onshore FX and interest rate fixings are predictable and transparent with well-defined and disciplined processes.

The process for onshore FX spot fixing has not always been transparent in the KIMPT economies. In some markets, interference by authorities or undue influence by key market players has affected the credibility of the onshore FX fixings. Fixings are an important component of markets.

4.3 Measures to Increase Cross-Border Access to Government Bond Markets and Improve Liquidity

We consider it important to take all necessary steps to improve the liquidity of local currency government bond markets and increase the access of foreign investors to these markets.

Barriers to cross-border investments in local currency government bonds limit market liquidity, resulting in poor onshore and offshore FX and interest rate swap markets.

The measures required to develop domestic capital markets will also make the onshore FX markets more liquid and transparent, leading to better NDF/offshore markets.

The ABMI Group of Experts touched on many of these issues in a 2010 report.³ In addition, in May 2013, ADB published a report recommending measures that would help broaden the investor base in local currency bond markets.⁴

The key to attracting the widest range of long-term, real-money investors—and therefore the most stable—into government bond markets is to make investing in them easy. It also must be easy to sell government bonds. Improving secondary market liquidity for government bond markets is therefore critically important.

In addition to the above recommendations, the important recommendations listed below generally apply to improve the FX and FX hedging markets.

Recommendation 9: Continue to implement the recommendations included in Part III of the ABMI Group of Experts report (2010) and ADB's report on broadening the investor base in local currency bond markets (2013).

³ ADB. Asian Bond Markets Initiative Group of Experts (GoE) Report for Task Force 4. Unpublished. [https://wpqr4.adb.org/LotusQuickr/asean3goe/Main.nsf/h_58E34A1388F9070B48257729000C0A4E/90F408746827C16248257729000C1334/\\$file/Part3.pdf](https://wpqr4.adb.org/LotusQuickr/asean3goe/Main.nsf/h_58E34A1388F9070B48257729000C0A4E/90F408746827C16248257729000C1334/$file/Part3.pdf)

⁴ ADB. 2013. *Broadening the Investor Base for Local Currency Bonds in ASEAN+2 Countries*. Manila. http://asianbondsonline.adb.org/publications/adb/2013/broadening_investor_base_lcy_bonds_asean.pdf?src=spotlight

Recommendation 10: Consider eliminating withholding tax on government bonds

Income received by foreign investors from government bonds should be exempted from withholding tax for the following reasons:

- Taxing foreign investors' income from government bonds in this way reduces the breadth of long-term investors; acts as a disincentive for trading; and adversely impacts market liquidity, the cost of debt, and FX markets.
- Investors that buy bonds require a higher yield. The tax has a negative impact on government finances as the higher cost of debt is not offset by the tax income.
- Some investors find it difficult to use double taxation agreements. They are not often set up in a suitable jurisdiction, and their beneficial owners are changing frequently. Unit trusts typically cannot use these agreements as they are not incorporated, and pension funds often cannot because many are not taxpayers.
- Some investors will not buy bonds subject to withholding tax.
- Tax reporting and withholding obligations can prevent the function of links to ICSDs, and their equivalent, excluding a wide range of investors.
- In the case of the Philippines, use of the double taxation treaty is so complex, it poses an almost insurmountable barrier for some overseas investors.
- We understand that the Republic of Korea reinstated the withholding tax in 2011 largely to (successfully) discourage cross-border investments.

Recommendation 11: Consider reviewing the barriers that inhibit foreign investment in bonds to be held at ICSDs and their equivalent

ABMI has discussed alternative solutions to using the current ICSDs, including the creation of an Asian equivalent and links between central banks and local central securities depositories (CSDs). We recommend that these efforts continue to be pursued.

We note that a number of ASEAN+3 economies have already established links with ICSDs. As interim measures, they provide real value to these economies. In some cases, there remain impediments that restrict their use. We recommend that these restrictions be reviewed. The ICSDs and their equivalent maintain their accounts onshore with the local CSD as omnibus accounts; the investors' accounts are subaccounts. The existence of the subaccounts does not impact capital control measures.

The use of their accounts at ICSDs significantly simplifies the payment and settlement process for overseas investors. This is particularly valuable for smaller investors. They are not required to understand and comply with the real need principle and other rules as they rely on the fact that the ICSDs do. They continue to give instructions to the ICSDs in the same electronic format that they do for other markets, and they receive reports back in the same format. They do not need to open local currency onshore accounts. Their approval, control, and audit processes are simplified. They can hedge their exposure offshore.

Table 2: Domestic Central Securities Depository (CSD) Links with International Central Securities Depositories (ICSDs) and Their Equivalent

Economy	Status of Links	Remarks
People's Republic of China	Established for offshore renminbi bonds	Linked via Hong Kong, China
Hong Kong, China	Established	Working well.
Indonesia	Not currently operational	There is a tax issue. Currency controls may be an impediment.
Japan	Established	Working well.
Republic of Korea	Not currently operational	Links worked in 2010; their re-establishment should be reviewed. Tax and account structure are current issues that prevent their use.
Malaysia	Established	Working reasonably well.
Philippines	Established	Tax issues and perception of documentation problems limit their use.
Singapore	Established	Working well.
Thailand	Established	Cash balance limits have inhibited their use.

Source: Author's compilation based on discussions with ICSDs.

The benefits to domestic markets should not be underestimated when links are combined with lowering barriers to entry; the breadth of investors can be significantly widened. In addition, investors will find it much easier than before to trade with domestic banks so that the domestic activity onshore will also broaden. When bonds denominated in Russian rubles could be held at ICSDs, domestic turnover tripled, government borrowing costs were reduced as yields dropped by 150 basis points, and cross-border investments grew significantly. The number of foreign institutional investors also increased very significantly, broadening the investor base.

In Indonesia and the Republic of Korea, it is not possible for offshore investors to hold their bonds at an ICSD or its equivalent (Table 2). We recommend that taking steps to set up these links, including addressing the tax issues, be considered. In the Philippines and Thailand, there remain some barriers that constrain the use of the links. In Malaysia, the links work reasonably well, but streamlining the remaining real demand principle rules may make them work better, which would be beneficial for all. We recommend considering the review and possible elimination of these remaining barriers detailed in Section 4.1.

Recommendation 12: Consider introducing larger and deeper series

Governments should issue bonds that have series that are larger and therefore deeper and more liquid. To do this, governments should

- issue the same series for a longer period of time and in larger amounts;
- have a program for retiring illiquid series; and
- concentrate all sovereign and quasi-sovereign debt in one issuer rather than have different agencies issue their own bonds, which are not fungible with the more liquid sovereign debt.

Recommendation 13: Continue to develop a repo market

Authorities should actively seek to develop the government bond repo market with the objective of having a liquid term repo market, with the delivery of bonds as opposed to “pledge repos,” so that traders can short the bonds.

Recommendation 14: Consider allowing cross-border repo transactions

As an interim measure, we recommend allowing nonresident investors to take a short position on a number of bonds, provided the investor can show that the portfolio’s overall net position is long.

Currently, nonresident investors are not allowed to take a short position in a bond or to engage in bond repo transactions. The current regulations mean that foreign investors cannot reduce their bond exposure except by the outright sale of bonds they own. This, in some cases, also means they will be forced to sell the local currency in order to comply with excess balance limits. It is important to note that bond repos are interest rate trading transactions with no FX component.

Recommendation 15: At the right time, consider establishing a primary dealer system

It is necessary to put in place a strong primary dealer system.

Recommendation 16: Continue to develop the domestic institutional savings sector

This recommendation entails developing pension funds, insurance companies, and mutual funds, and allowing them the flexibility to invest in other ASEAN+3 economies.

Recommendation 17: Continue to upgrade the required information and communication technology infrastructure

We recommend

- ensuring that the domestic CSDs are using SWIFT connectivity for multiple message types;
- pushing key market participants to use SWIFT messaging for a broader range of message types to accelerate the ability for transactions to be handled electronically via straight-through-processing, thereby reducing costs and errors; and
- automating presettlement trade matching.

Recommendation 18: Consider using the Global Legal Entity Identifier

The Global Legal Entity Identifier can be used to monitor participants' activity and improve communications between regulators. We recommend considering making use of the Global Legal Entity Identifier mandatory for local financial institutions.

Recommendation 19: Consider measures to reduce the cost of onboarding new investors

To reduce onboarding costs, while maintaining global standards in antimoney laundering and know-your-customer, we recommend

- reviewing the extent to which banks and custodians can rely on compliance with these standards in other jurisdiction to lower ASEAN onboarding costs;
- reviewing the possibility of an ASEAN+3 onboarding regime for the whole region, which would result in needing only one review; and
- reducing the need for the annual submission of notarized and consularized supporting documents.

5 | Conclusions

In summary, we recommend the following:

- I. Consider making it easier for foreign investors to transact FX and FX hedges. Consider reviewing the real demand principle regulations that separate the NDF market from the onshore market with the aim of, where possible, reducing the barriers in a measured and suitably sequenced program. The emphasis should be on making the rules simpler, clearer, and cheaper to comply with, while continuing to protect the currency from the risk of substantial short-term speculation. Consider reviewing the quality of information received by offshore investors and banks on domestic market activity. Consider ways to assure investors they can source US dollars when they exit. Consider allowing offshore FX contracts to be deliverable onshore.
- II. Consider steps to make onshore FX derivatives markets more liquid and better integrated with offshore FX markets. Consider reviewing the domestic legal framework that affects derivatives (and also repos) in bankruptcy. An important aim would be to ensure suitable treatment of closeout netting and collateral in bankruptcy. This would have several positive outcomes for banks and, by extension, capital availability and market liquidity. It would enable banks to reduce the capital needed to reserve against derivatives and repos in these markets from a gross basis to a net basis, improve the onshore liquidity of derivatives and repos, reduce systemic risks and hedging costs, and facilitate the development of infrastructure finance. This will generally be a lengthy process but, when completed, a key component of the financial market infrastructure will be in place. It would also remove an important impediment to offshore investors hedging onshore. Consider reviewing the FX fixing process to ensure it is transparent and fair to all.
- III. At the same time, promote the further development of liquid local currency government bond markets and make it easier for foreign investors to access. Domestic market liquidity positively impacts FX markets and facilitates hedging. Consider reviewing the application of withholding tax on income earned by foreign investors from government bonds. Also, facilitate the use of existing links with ICSDs and global custodians (and their equivalent) so that settlement of trades can take place offshore in subaccounts; set up new links if required. Consider issuing

larger and deeper series of government bonds. Continue efforts to further develop the repo market, primary dealer system, and domestic institutional investor base. Continue to invest in systems and information and communication technology infrastructure to improve efficiency and reduce costs.

Facilitating Foreign Exchange Risk Management for Bond Investments in ASEAN+3

The Asian Development Bank (ADB) has been working closely with the Association of Southeast Asian Nations (ASEAN) and the People's Republic of China, Japan, and the Republic of Korea—collectively known as ASEAN+3—to foster the development of local currency bond markets and facilitate regional bond market integration under the Asian Bond Markets Initiative (ABMI). ABMI was launched in 2002 to strengthen the resilience of the region's financial system by developing local currency bond markets as an alternative source to foreign currency denominated short-term bank loans for long-term investment.

Bond investors typically have a long position in local currency bond markets. To manage their foreign exchange (FX) risk, they may want to hedge that exposure for a period of time. They also want to be sure they can easily convert the local currency to dollars upon the sale of a bond. This study was undertaken under ABMI and funded by the Government of Japan. It reviews the FX and FX hedging markets in ASEAN+3 as they relate to cross-border investments in local currency bonds, and makes recommendations to facilitate the development of the markets and FX risk management.

About the Asian Development Bank

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to the majority of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



ASIAN DEVELOPMENT BANK

6 ADB Avenue, Mandaluyong City

1550 Metro Manila, Philippines

www.adb.org