

GOOD PRACTICES FOR DEVELOPING A LOCAL CURRENCY BOND MARKET

Lessons from the ASEAN+3 Asian Bond Markets Initiative

MAY 2019

GOOD PRACTICES FOR DEVELOPING A LOCAL CURRENCY BOND MARKET

Lessons from the ASEAN+3 Asian Bond Markets Initiative

MAY 2019



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

© 2019 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

Some rights reserved. Published in 2019.

ISBN 978-92-9261-610-6 (print), 978-92-9261-611-3 (electronic)
Publication Stock No. TCS190146-2
<http://dx.doi.org/10.22617/TCS190146-2>

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. No part of this report represents the official views or opinions of any institution that participated in activities under ABMF or the Asian Bond Markets Initiative.

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 “economy” 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 this license. For attribution, translations, adaptations, and permissions, please read the provisions and terms of use at <https://www.adb.org/terms-use#openaccess>

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.

Please contact pubsmarketing@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.

Notes:

Corrigenda to ADB publications may be found at <http://www.adb.org/publications/corrigenda>.

In this report, International Organization for Standardization (ISO) international standards (ISO 3166 for economy codes and ISO 4217 for currency codes) are used to reflect the discussions of the ASEAN+3 Bond Market Forum to promote and support implementation of international standards in financial transactions in the region.

ADB recognizes "Hong Kong" as Hong Kong, China; "China" as the People's Republic of China; "Korea" as the Republic of Korea; "Vietnam" as Viet Nam; and "Hanoi" as Ha Noi. ASEAN+3 comprises the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China, Japan, and the Republic of Korea. The economies of ASEAN+3 as defined in ISO 3166 include Brunei Darussalam (BN; BRN); Cambodia (KH; KHM); People's Republic of China (CN; CHN); Hong Kong, China (HK; HKG); Indonesia (ID; IDN); Japan (JP; JPN); Republic of Korea (KR; KOR); Lao People's Democratic Republic (LA; LAO); Malaysia (MY; MYS); Myanmar (MM; MMR); Philippines (PH; PHL); Singapore (SG; SGP); Thailand (TH; THA); and Viet Nam (VN; VNM). The currencies of ASEAN+3 as defined in ISO 4217 include the Brunei dollar (BND), Cambodian riel (KHR), Chinese renminbi (CNY), Hong Kong dollar (HKD), Indonesian rupiah (IDR), Japanese yen (JPY), Korean won (KRW), Lao kip (LAK), Malaysian ringgit (MYR), Myanmar kyat (MMK), Philippine peso (PHP), Singapore dollar (SGD), Thai baht (THB), and Vietnamese dong (VND).

Contents

Tables, Figures, and Boxes	vii
Foreword	ix
Acknowledgments	x
Abbreviations	xi
Executive Summary	xiii
I. Introduction	1
Objective and Structure of the Paper	1
II. Need for a Local Currency Bond Market and G20 Recommendation	3
A. Local Currency Bond Market and Financial Stability	3
B. Local Currency Bond Market and Infrastructure Finance	4
C. Global Efforts	4
III. Development of the Local Currency Bond Markets in ASEAN+3	5
A. 1997/98 Asian Financial Crisis and Asian Bond Markets Initiative	5
B. The Global Financial Crisis and the Success of ASEAN+3 Local Currency Bond Markets	8
IV. Functions of a Bond Market	11
A. Functions of a Government Bond Market	11
1. Public Finance	11
2. Benchmark and Risk-Free Rate to Develop a Market	12
3. Creation of High-Quality Liquid Assets to Meet Regulatory Demand	12
B. Functions of a Corporate Bond Market	13
1. Market-Based Financial Intermediation	13
2. Institutional Evolution and Corporate Bond Market Development	14
V. Roles of Relevant Stakeholders and Building Blocks for Bond Market Development	16
A. Ministry of Finance	16
1. Public Finance and Debt Management	16
2. Auction	18
3. Scheduled Debt Issuance Program to Create a Benchmark	18
B. Central Bank	19
1. Issuing Agent and Registrar of the Government	19
2. Monetary Operations and the Bond Market	20
3. Government Cash Management and Monetary Operations	21
C. Securities Market Regulators	21
1. Functions of Securities Market Regulators	23
2. Roles of Securities Market Regulators in Developing Corporate Bond Markets	23
D. Self-Regulatory Organizations	24
E. Issuers	25
1. Corporate Finance and Asset-Liability Management	25
2. Infrastructure Finance	26

Contents

F.	Underwriters	27
1.	Type of Underwriting	27
2.	Types of New Issue Transactions	28
3.	Key Practices in New Issue Underwriting Process	31
4.	Due Diligence	31
5.	Comfort Letter	33
6.	Management Certificate	34
7.	Market Making and Matching	34
G.	Credit Rating Agencies	35
1.	Functions of a Credit Rating Agency	35
2.	Limitations and Reservations to Credit Rating	37
H.	Investor Base	39
1.	Institutional Investors	39
2.	Retail Investors	42
3.	Importance of Professional Investors	43
I.	Intermediaries in Secondary Markets	45
1.	Brokers	45
2.	Dealers	45
3.	Interdealer Brokers	45
4.	Paying Agents and Fiscal Agents	46
5.	Facility Agents	47
6.	Transfer Agents	48
7.	Conversion Agents	48
8.	Trustees or Bondholder Representatives Concept(s)	48
9.	Sharia Capital Market Experts or Similar Authority (<i>Sukuk</i> only)	51
J.	Organized Markets	51
1.	Over-The-Counter	51
2.	On Exchange	53
K.	Securities Settlement and Safekeeping Infrastructure	56
1.	Clearing House	56
2.	Central Counterparty	57
3.	Central Securities Depository	57
4.	Custodians	60
VI.	Necessary Ecosystem for the Development of a Bond Market	64
A.	Robust Legal Framework	64
1.	Market Integrity and Fairness	65
2.	Company or Enterprise Law	67
3.	Bankruptcy and Insolvency Law	68
4.	Definition of Default	69
5.	Need for A Clear Definition of Technical Terms	70
B.	Accounting and Financial Reporting Standards	72
1.	International Financial Reporting Standards as Conduit to Comparable Disclosure Information	73
2.	International Financial Reporting Standards Reflected in Domestic Accounting and Financial Reporting Standards	73
3.	Acceptance of International Financial Reporting Standards by Listing Places	75
4.	Corporate Disclosure and Governance (ASEAN Corporate Governance Scorecard)	75
C.	Credit Information and Credit Enhancement	76
1.	Credit Assessment: What to Measure and How	76
2.	Credit Enhancement: Objective and How	77
D.	Transparency in the Market	78
1.	Over-the-Counter and Price Information	78
2.	Trading Rules and Market Practices	79
3.	Information Services	80
E.	Efficiency and Safety in Trading and Settlement	82
1.	Immobilization and Dematerialization	83
2.	Delivery-Versus-Payment	83

Contents

3.	Benefits of Utilizing Information and Network Technologies Including International Standards	84
4.	Harmonization and Standardization of Bond Market Infrastructures	85
5.	Current Situation in ASEAN+3	85
6.	Future Perspectives Utilizing Latest Technologies and Implementing Regional Initiatives	88
F.	Communication Between the Government and Market Participants	88
1.	Primary Dealers	89
2.	Self-Regulatory Organization	90
3.	Industry Association	90
G.	Market Liquidity	90
1.	Measurements of Market Liquidity and their Limitations	91
2.	Policy Measures to Support Liquidity	91
3.	Interaction Between Primary and Secondary Markets	91
4.	Repurchase Agreements and Securities Lending and Borrowing Functions	92
5.	Note Issuance Program and Reverse Enquiry Opportunity to Facilitate Issuance	94
H.	Taxation	95
1.	Key Aspects of Taxation in Relation to the Bond Market	96
2.	Tax Incentives and Exemptions	96
3.	Tax Processing	98
I.	Professional Investors Bond Market	99
1.	Professional Markets (Exempt) Regimes	99
2.	Disclosure in Public and Professional Markets	101
3.	Ring-fencing Requirement in a Professional Market	103
4.	Benefits of a Professional Investors Bond Market	103
VII.	Sequencing, Mapping, and Institutional Arrangements of Building Blocks	106
A.	Coordination Among Policy-Making Authorities	106
B.	Bond Market Development Master Plan and Roadmap	107
C.	Some Key Takeaways from ASEAN+3	108
VIII.	Role of Regional Cooperation	109
A.	Peer Support and Encouragement	109
1.	Establishing Common Understanding and Objective	109
2.	Information Sharing and Dissemination through Regional Platforms	110
B.	Market Integration through Standardization	111
1.	Open Regionalism and Market-Led Integration of ASEAN+3	111
2.	Market Fragmentation as a Barrier to Integration	111
3.	Setting Standards to Ensure Interoperability	112
C.	Role of Multilateral Development Banks in Regional Cooperation and Integration	112
IX.	Conclusion	114
	References	115
	Glossary	119
	Annexes	121
	Annex 1: Checklist of Good Practices for Developing a Government Bond Market	121
A.	Preconditions	121
B.	Public Finance and Debt Management	121
C.	Money Markets and Monetary Policy Operations	122
D.	Bond Issuance and the Primary Market	123
E.	Investor Base	125
F.	Intermediaries and Secondary Markets	126
G.	Securities Custody and Settlement Infrastructure	128
H.	Accounting and Taxation Framework Conducive to Bond Market Development	129
	Annex 2: Overview of the Asian Bond Markets Initiative	131
A.	Background and Brief History	131
B.	Work of Asian Bond Markets Initiative Task Forces	133

Annex 3: Infrastructure Bonds	137
A. Recent Experiences in the Region	137
B. Lessons from Other Markets	138
C. Promoting Infrastructure Bond Financing	138
Annex 4: Green Bonds	140
A. A Primer on Green Bonds	140
B. ASEAN+3 Experience with Local Currency Green Bonds	142
C. Promoting Green Bond Markets	143
Annex 5: Do Local Currency Bond Markets Promote Financial Stability in Developing Economies? Some Empirical Evidence	146
Annex 6: Case Studies	148
The Objective of Case Studies	148
A. Republic of Korea	148
B. Japan	159
C. Indonesia	168
D. Malaysia	169
E. Thailand	171
F. Viet Nam	172
Annex 7: Bankruptcy and Insolvency Laws in ASEAN+3	174
Annex 8: Definition of Default in ASEAN+3	181
Annex 9: Credit Guarantee and Investment Facility	188
Annex 10: How to Formulate the ASEAN+3 Multi-Currency Bond Issuance Framework Market	194
A. The Most Suitable Professional Market (or Market Segment)	194
B. AMBIF Investors as the Essential Basis for the AMBIF Components	194
C. ASEAN+3 Multi-Currency Bond Issuance Framework Market	194
D. The Way to Connecting the Markets	195
E. Elements of the ASEAN+3 Multi-Currency Bond Issuance Framework	197

Tables, Figures, and Boxes

Tables

1	Government Bond Bid–Ask Spreads	10
2	ASEAN+3 Economies with Scheduled Auctions	19
3	Central Securities Depositories for Government and Corporate Bonds in ASEAN+3	20
4	Securities Market Regulators in ASEAN+3	22
5	Self-Regulatory Organizations in ASEAN+3	25
6	Credit Guarantee Facilities in ASEAN+3	27
7	ASEAN+3 Economies with Primary Dealer System	29
8	Rating Requirements in ASEAN+3	36
9	Domestic Credit Rating Agencies in ASEAN+3	37
10	List of Professional Investor Concepts in ASEAN+3	44
11	Sources of Bond Pricing Information in ASEAN+3	46
12	Overview of Bond Trustee, Bondholders Representative, or Equivalent Concept in ASEAN+3 ...	50
13	List of Over-the-Counter Markets and Self-Regulatory Bodies in ASEAN+3	52
14	ASEAN+3 Exchanges with Profile Listing Function	55
15	Central Securities Depositories for Government and Corporate Bonds in ASEAN+3	59
16	Domestic Financial Reporting Standards and Compliance with International Financial Reporting Standards in ASEAN+3	74
17	Links to Information on ASEAN+3 Government Securities	81
18	Professional Markets (Exempt) Regimes in ASEAN+3	100
19	Outstanding Local Currency Borrowings (as of 10 September 2018)	113
A2.1	ASEAN+3 Major Milestones	133
A2.2	ASEAN+3 Multi-Currency Bond Issuance Framework Bond Issue	136
A6.1	Types and Issuance Period of Korea Treasury Bonds	151
A6.2	Categories of Japanese Government Bonds	160
A9.1	Guarantee Approvals, Issuances and Redemptions	189
A9.2	Issued Guarantees by Economy and Currency	189
A9.3	Guarantees Issued by the Credit Guarantee and Investment Facility (2013–2019)	192
A10.1	Elements and Brief Description of the ASEAN+3 Multi-Currency Bond Issuance Framework	197

Figures

1	Size of Local Currency Bond Markets.....	xiv
2	Asian Bond Markets Initiative Organizational Chart.....	7
3	Growth of Emerging East Asian Local Currency Bond Markets	7
4	Size of Domestic Bonds Outstanding as a Share of GDP for ASEAN+3, Canada, and Selected European Economies.....	8
5	Local Currency Government Securities Maturity Profile	9
6	Mean Scores by Economy	76
7	ASEAN+3 Government Bond Market Diagram.....	86
8	ASEAN+3 Corporate Bond Market Diagram.....	87
9	Possible ASEAN+3 Linkages under CSIF	88
10	Global <i>Sukuk</i> Issuances	97
11	Professional Investors Bond Market	105
A2.1.	Structure of the Asian Bond Markets Initiative	134
A6.1	Level of Transparency Over Time.....	157
A6.2	Structure of the Over-the-Counter Bond Market Information Collection and Disclosure	157
A6.3	Size of Japan’s Local Currency Bond Market.....	159
A6.4	Corporate Bond Issuance	161
A6.5	Japan’s Fiscal Investment and Loan Program.....	162
A6.6	Japanese Government Bonds Outstanding.....	163
A6.7	Thailand’s Domestic Bond Market Development Committee.....	171
A6.8	Domestic Bond Market Development Steering Committee, 2005–.....	172
A10.1	Identifying Each Economy’s Professional Market(s).....	195
A10.2	Identifying Professional Market Elements.....	196
A10.3	Combining Professional Market Elements to Arrive at ASEAN+3 Multi-Currency Bond Issuance Framework.....	196
A10.4	Selling and Transfer Restrictions in an Intraregional Professional Market	197

Boxes

1	Brief History of Credit Rating Agencies.....	38
A2.1	AsianBondsOnline	135

Foreword

The Asian Development Bank (ADB) is 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 develop local currency (LCY) bond markets and facilitate regional bond market integration under the Asian Bond Markets Initiative to strengthen the resiliency of the region's financial systems.

Thanks to the efforts of member governments, LCY bond markets in ASEAN, the People's Republic of China, and the Republic of Korea have grown rapidly since the 1997/98 Asian financial crisis, with total bonds outstanding reaching more than USD12.7 trillion in 2018. This remarkable development resulted from both the efforts of individual governments and through regional cooperation among ASEAN+3 member economies.

As the Group of Twenty has stated, the development of LCY bond markets plays an important role in diversifying financial intermediary channels and mitigating the impacts of financial crises on the real economy. In addition, bond markets should be developed to support infrastructure finance. ADB has estimated that developing Asia will need to invest USD26 trillion from 2016 to 2030 (or USD1.7 trillion per year) in infrastructure to support the region's continued growth. Therefore, it is critical to mobilize the region's vast savings through LCY bond markets to meet the enormous investment needs.

Good Practices for Developing a Local Currency Bond Market shares the experiences of ASEAN+3 and provides a comprehensive picture of fostering LCY bond market development. Of course, every market has its own unique features that make it impossible to apply a one-size-fits-all approach across ASEAN+3. However, we can draw some lessons from the region's varied experiences on how to expedite the process of LCY bond market development in a developing economy.

Lastly, I would like to highlight that this report should be seen as an outcome of regional cooperation. The report is largely based on knowledge outputs produced by the ASEAN+3 Bond Market Forum, a platform that bring the region's public and private sector experts together to foster harmonization and standardization particularly *ASEAN+3 Bond Market Guides*, which are joint products of forum members and experts. The collective knowledge of ASEAN+3 officials and experts as a regional public good hopefully can contribute to further developing LCY bond markets in ASEAN+3 as well as the rest of the world.



Yasuyuki Sawada
Chief Economist and Director General
Economic Research and Regional Cooperation Department

Acknowledgments

Good Practices for Developing a Local Currency Bond Market was prepared by the Financial Cooperation and Integration Team under the Office of the Chief Economist of the Economic Research and Regional Cooperation Department (ERCD) of the Asian Development Bank (ADB), under the overall supervision of Satoru Yamadera, Principal Financial Sector Specialist. The ADB drafting team comprised Satoru Yamadera, Principal Financial Sector Specialist; Kosintr Puongsophol, Financial Sector Specialist; Matthias Schmidt, ADB consultant; Shigehito Inukai, ADB consultant; Taiji Inui, ADB consultant; Nopamon Thevit Intralib, ADB consultant; and Jae-Hyun Choi, ADB consultant. The sections on credit ratings and *Annex 9: Credit Guarantee and Investment Facility* were contributed by Kiyoshi Nishimura, CEO, Credit Guarantee and Investment Facility. The section on XBRL was contributed by Yoshiaki Wada, XBRL International. *Annex 2 (Box 1): AsianBondsOnline* and *Annex 5: Do Local Currency Bond Markets Promote Financial Stability in Developing Economies? Some Empirical Evidence* were contributed by Donghyun Park, Principal Economist, and Shu Tian, Economist, both with ERCD. *Annex 2: Overview of the Asian Bond Markets Initiative* and data assistance were provided by Abigail Golena, ADB consultant.

The ADB drafting team would like to express special thanks to ASEAN+3 Bond Market Forum (ABMF) members and experts for their support and contributions to previous ABMF publications, which formed the bases for this publication. ABMF was established with the endorsement of the ASEAN+3 finance ministers in 2010 as a common platform to foster the standardization of market practices and harmonization of regulations relating to cross-border bond transactions in the region. ABMF members comprise experts from both the public and private sectors in the ASEAN+3 region, including ministries of finance, central banks, bank regulators, securities market regulators, stock exchanges, central securities depositories, market associations, banks, securities companies, and information technology vendors.

The team also would like to thank Noritaka Akamatsu, a former Senior Advisor to ERCD, who conceptualized the initial work on good practices. The first edition of the *Good Practices in Developing Bond Market: with a focus on government bond market paper* was endorsed by the 20th ASEAN+3 Finance Ministers and Central Bank Governors' Meeting (AFMCM+3) in Yokohama, Japan in May 2017 and published on the *AsianBondsOnline* website. It was updated for the 21st AFMCM+3 in Manila, Philippines in May 2018.

Lastly, the team would like to thank Shah Zain, Chief Business Officer, Bond Pricing Agency of Malaysia; Wahyu Trenggono, Director, PT Penilai Harga Efek Indonesia; and Jonathan Grosvenor, Advisor, Treasury Department, ADB for kindly reviewing the draft and giving us comments.

No part of this report represents the official views or opinions of any institution that participated in activities under ABMF or the Asian Bond Markets Initiative. The ADB drafting team bears sole responsibility for the contents of this report.

ADB Drafting Team
May 2019

Abbreviations

ABMF	ASEAN+3 Bond Market Forum	FOP	free-of-payment
ABMI	Asian Bond Markets Initiative	FRIA	Financial Rehabilitation and Insolvency Act
ABO	<i>AsianBondsOnline</i>	G20	Group of Twenty
ADB	Asian Development Bank	GDP	gross domestic product
AFMI	African Financial Markets Initiative	HNWI	high-net-worth individual investors
ALM	asset-liability management	HQLA	high-quality liquid assets
AMBIF	ASEAN+3 Multi-Currency Bond Issuance Framework	ICMA	International Capital Market Association
AMRO	ASEAN+3 Macroeconomic Research Office	IDR	Indonesian rupiah
ASEAN	Association of Southeast Asian Nations	IFAWG	G20 International Financial Architecture Working Group
ASEAN+3	Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea	IFRS	International Financial Reporting Standards
BAHTNET	Bank of Thailand Automated High-value Transfer Network	IMF	International Monetary Fund
BIC	Business Identifier Code	IOSCO	International Organization of Securities Commissions
BIS	Bank for International Settlements	ISIN	International Securities Identification Number
BNM	Bank Negara Malaysia	ISO	International Organization for Standardization
BOK	Bank of Korea	KOFIA	Korea Financial Investment Association
BOT	Bank of Thailand	KRW	Korean won
CCP	central counterparty	KRX	Korea Exchange
CEO	Chief Executive Officer	KSD	Korea Securities Depository
CFO	Chief Financial Officer	KTB	Korea Treasury Bond
CGIF	Credit Guarantee and Investment Facility	KTS	KRX Electronic Bond Trading System
CIS	collective investment schemes	KYC	know-your-customer
CRA	credit rating agency	Lao PDR	Lao People's Democratic Republic
CRPA	Corporate Restructuring Promotion Act	LCR	liquidity coverage ratio
CSD	central securities depository	LCY	local currency
CSDCC	China Securities Depository and Clearing Corporation	LIBOR	London interbank offered rate
CSIF	Cross-Border Settlement Infrastructure Forum	MDB	multilateral development bank
CWUMPO	Companies (Winding Up and Miscellaneous Provisions) Ordinance	MGS	Malaysia Government Securities
DVP	delivery-versus-payment	MOEF	Ministry of Economy and Finance of the Government of Korea
EMEAP	Executives' Meeting of East Asia-Pacific Central Banks	MTM	mark-to-market
EPF	Employees Provident Fund	MYR	Malaysian ringgit
EUR	euro	NAFMI	National Association of Financial Market Institutional Investors
FESB	Foreign Exchange Stabilization Bond	NBMC	National Bond Market Committee
FMI	financial market infrastructure	OECD	Organisation for Economic Co-operation and Development
		OJK	Otoritas Jasa Keuangan (Indonesian Financial Services Authority)

Abbreviations

OTC	over-the-counter	SLB	securities lending and borrowing
PD	primary dealer	SRO	self-regulatory organization
PHP	Philippine peso	SSF	single submission form
PLC	publicly listed company	STP	straight-through processing
PPP	public-private partnership	SWIFT	Society for Worldwide Interbank Financial Telecommunications
PRC	People's Republic of China	ThaiBMA	Thai Bond Market Association
QIB	qualified institutional buyer	THB	Thai baht
RTGS	real-time gross settlement	TSA	Treasury Single Account
SAS	Statements on Auditing Standards	US	United States
SEC	Securities and Exchange Commission	USD	United States dollar
SECC	Securities and Exchange Commission of Cambodia	XBRL	eXtensible Business Reporting Language

Executive Summary

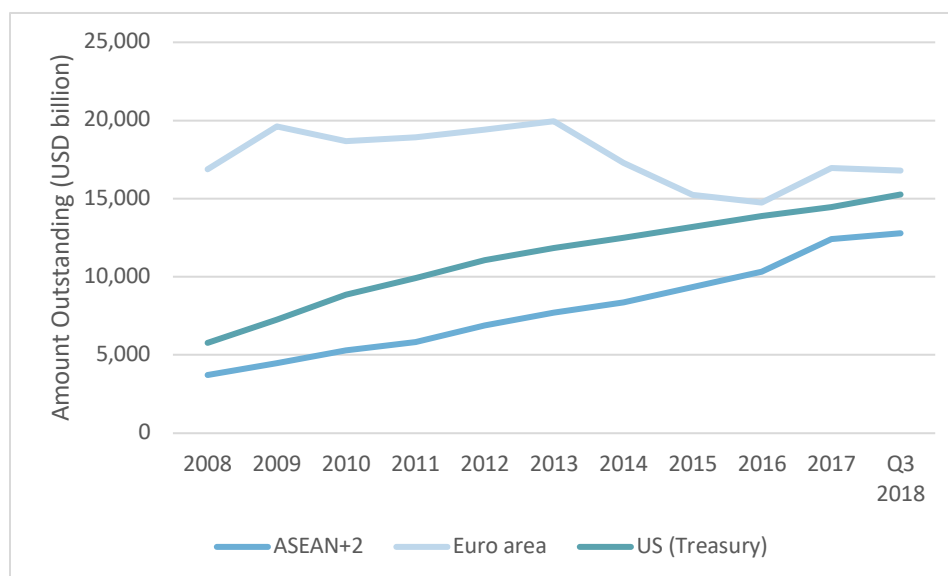
1. This study seeks to share the good practices of the Asian Bond Markets Initiative (ABMI), an initiative of the Association of Southeast Asian Nations plus the People's Republic of China (PRC), Japan, and the Republic of Korea—collectively known as ASEAN+3—to develop local currency (LCY) bond markets. It is difficult to develop an LCY bond market because it involves the close coordination of a number of complex, separate activities. It requires the engagement and commitment of the government, relevant regulatory authorities, and market participants; the establishment of key market infrastructure such as the central bank's real-time gross settlement system and a central securities depository; enabling environments via the legal framework and accounting practices; and the appropriate sequencing of milestone events, otherwise, it might generate a chicken-and-egg situation. The study aims to show what is necessary to create and develop a bond market and how these factors can interact with one another based on the experiences of ASEAN+3 member economies. The study takes a block-building approach by highlighting the necessary components for the development of an LCY bond market. It then explains the enabling environment and ecosystem needed to support this development.

2. The 1997/98 Asian financial crisis revealed that the lack of a domestic bond market creates major financial risks. ASEAN+3 member economies responded to the crisis with a concerted effort to guard against such risks. They recognized that the development of LCY bond markets was necessary to provide an alternative source of funding to foreign-currency-denominated bank loans in order to minimize the currency and maturity mismatches that had made the region vulnerable to the sudden reversal of capital flows. They agreed to develop their LCY markets to avoid a recurrence.

3. Likewise, at the G20 Cannes Summit in 2011, the Group of Twenty (G20) launched an initiative to develop LCY bond markets. G20 recognized that a well-developed LCY bond market (i) increases a country's ability to withstand global capital flows; (ii) reduces its reliance on foreign currency borrowing and lessens exchange rate risks; (iii) contributes to the reduction of current account imbalances; (iv) lowers the need for large precautionary reserve holdings; and (v) allows bank and corporate balance sheets to adjust more smoothly, hence, improving the capacity of macroeconomic policies to respond to external shocks.

4. Since the establishment of ABMI, the five original members of ASEAN, namely, Indonesia, Malaysia, the Philippines, Singapore, and Thailand, plus the PRC, the Republic of Korea, and Viet Nam have achieved remarkable progress in developing their respective domestic bond markets. Total market capitalization in the region has surpassed USD12.7 trillion in September 2018, which is coming closer to the amount of EUR-denominated bonds issued by the residents of the euro area (Figure 1). Among this grouping, Indonesia and Thailand have made concerted efforts to develop their markets, including the establishment of strong public debt management capacities. The Republic of Korea and Malaysia have developed bond markets that are well balanced between the government and corporate segments, with significant depth in both. The PRC's LCY bond market has become one of the largest in the world and still has room to grow. Many governments in the region have put in place sound market infrastructure in line with the level of development of their respective bond markets.

Figure 1: Size of Local Currency Bond Markets



ASEAN = Association of Southeast Asian Nations, Q = quarter; US = United States; USD = United States dollar.
 Notes: ASEAN+2 refers to ASEAN plus the Republic of Korea; Hong Kong, China; and the People's Republic of China.
 Euro area refers to euro-denominated debt securities issued by euro area residents. US (Treasury only) includes bills, notes, bonds, treasury inflation-protected securities, and floating rate notes.
 Sources: AsianBondsOnline, CEIC, European Central Bank, International Monetary Fund, and Securities Industry and Financial Markets Association.

5. A bond market has two main components: a government segment and a corporate segment. A government bond segment enables the government to raise funds from the market while a corporate bond segment allows companies to do the same. In general, a government needs to develop the bond market in order to support a fiscal policy that maintains economic stability and to support public infrastructure investment. The cost of infrastructure can be shared across generations through the issuance of bonds. Meanwhile, a corporate bond market links private sector borrowers directly with lenders. This creates more borrowing and investment opportunities. Corporate bonds can supplement and substitute for bank loans, thus creating another financial intermediary channel. The corporate bond market can also support financial stability when the banking system is malfunctioning.

6. To develop a bond market, it is necessary to consider who the relevant stakeholders are and what building blocks are needed to sufficiently develop the market. The relevant stakeholders and necessary building blocks include (i) the Ministry of Finance as a government bond issuer; (ii) the central bank as a fiscal agent, registrar for government bonds, and market participant conducting monetary operations in the bond and money markets; (iii) securities market regulators as the guardian of market integrity; (iv) self-regulatory organizations that exercise regulatory power via the delegation of authority from the regulator; (v) issuers who borrow funds from the market; (vi) underwriters who raise funds from investors on behalf of issuers; (vii) credit rating agencies who assess the creditworthiness of issuing entities or an obligation; (viii) investors, particularly institutional investors such as banks, insurance companies and pension funds; (ix) intermediaries in secondary markets such as brokers, dealers, and price information providers; (x) organized markets to provide a trading place and a fair price-finding mechanism; and (xi) securities settlement and safekeeping infrastructure to ensure the smooth fulfillment of transactions and asset safety.

7. To create a bond market, it is necessary to consider interactions among these building blocks and the enabling environment and ecosystem needed to support the market's functioning and integrity. To build and maintain a well-functioning bond market, particularly a corporate bond market, it is necessary to have a comprehensive and robust legal framework in place. Generally, the legal framework of a bond market consists of a number of fundamental laws—including a company or enterprise law, and bankruptcy and

insolvency laws with a clear definition of default—as well as key legislation that applies specifically to the bond market, such as a securities law or its equivalent, and its implementing decrees and provisions, market regulations and rules, and circulars and guidelines issued by the securities market regulator(s).

8. Accounting rules and financial reporting standards are the basic language of business and are indispensable for the development of a capital market. They can provide the status of a company's financial situation to internal and external parties in a comparable manner. There should be full, accurate, and timely disclosure of financial results, risks, and other information that is material to investor decision making. Initial and continuous disclosures are key aspects of debt securities issuance and trading. To increase cross-border bond investment, it is desirable to have harmonized disclosure data and comparable financial reporting treatment across different markets based on the International Financial Reporting Standards.

9. Credit assessment, or credit analysis, aims to measure the creditworthiness of a borrower, whether a government, corporate, or an individual. Creditworthiness is the lender's judgment of a borrower's ability to honor its financial obligations under a loan, bond, or other financial contract; that is, an evaluation of the likelihood of a borrower defaulting on its financial obligations. Traditionally, creditors have relied on their subjective judgment to assess the creditworthiness of a borrower. However, quantitative assessments based on statistical models and the use of credit scoring systems have become more common for credit assessment. Human judgment still plays a role in qualitative judgment to a varying degree, depending on the creditor institution, and it can be a key factor in the determination of the borrower's creditworthiness.

10. The availability of information and market transparency also supports bond market development. To create transactions in a bond market, information on bond prices is needed to match demand and supply. Unlike equities, bonds are mostly traded in an over-the-counter market; thus, it is necessary to make the extra effort to collect pricing information. To ensure market transparency and increase market liquidity, the securities market regulator needs to consider setting trading rules and market practices, and identify other ways to improve pricing information.

11. Safe and efficient trade, payment, clearing, and settlement systems reduce systemic risk and foster transparency and financial stability. Robust financial market infrastructure has proven to be an important source of strength in financial markets, giving market participants the confidence to fulfill their obligations on time, even in periods of market stress. When discussing the development of bond markets, it is important to utilize information and network technologies. In addition, it is necessary to consider at the inception of a market's development the implementation of international standards—such as the International Securities Identification Number, Business Identifier Code, Legal Entity Identifier, and ISO 20022—in order to subsequently connect with global financial markets.

12. Smooth communication between the government and market participants is very important to the development of a bond market. The government wears many hats when communicating with market participants. It is a securities market regulator that needs to consider communication as a means to ensure the effectiveness of policies and market transparency. It is also an issuer of bonds that wants to raise funds cheaply and smoothly and, hence, needs to effectively communicate with the (targeted) investors and market intermediaries to achieve its objective. It is a tax authority with significant influence over market participants since taxation can change market behavior. In addition, the central bank is a public authority and plays an important role because bonds are key assets to be used by the central bank in its market operations.

13. Market liquidity is an important factor in measuring the success of market development. It can be defined as the ability to buy or sell assets when required and without unduly impacting the market. Market liquidity may be affected by various factors such as the size of the market; the frequency of issuance; the number of underwriters, market makers, brokers, and investors; the concentration of bondholders; the structure of bonds such as maturity and coupon payments; credit ratings; currency denomination; taxation; the availability of data; index eligibility; depository and custody systems; and payment and settlement infrastructure.

14. The taxation of financial transactions, instruments, interest, and capital gains has a major impact on market development. Ambiguous and inconsistent tax policies can create serious impediments to the proper functioning and healthy development of the bond and capital markets. They can also affect the savings, investment, and financial behavior of borrowers, savers, and investors.

15. Unlike in equities, bond investors are normally large professional institutional investors. Professional investors are institutions and/or individuals, as the case may be, with the expertise to assess the potential risks and benefits of an instrument, its issuer, and prevailing market conditions and, thus, the ability to make an informed investment decision under all circumstances. Professional investors need not be subject to the same investor protection mechanisms afforded to general and retail investors. The creation of a specialized market (or segment) for professional investors is very important for the sustainable development of a bond market. A professional market in which only professional investors can invest and trade can provide the flexibility needed for large issues by utilizing broader issuance and offering methods. It can also meet the varied needs and objectives of issuers and investors.

16. Markets at different stages of development face varying challenges at different times, within and across building blocks, in forming the necessary ecosystem for development. Challenges tend to arise from two angles. First, many reform measures are interdependent to varying degrees because a bond market is not a single institution but a place of interaction. The second challenge stems from the fact that these necessary reform measures require cooperation among stakeholders and market participants whose interests may sometimes conflict. To ensure coordination among stakeholders and market participants, economies that have successfully developed an LCY bond market have often adopted a high-level interagency bond market committee, led by the policy-making authorities, to guide and coordinate the implementation of interdependent tasks. The interagency committee should examine interdependence among the building blocks and necessary ecosystems, and develop a master plan and road map for a local currency bond market development.

17. Based on the individual experiences of ASEAN+3 member economies, there is no one-size-fits-all approach to the development of a bond market. As the level of market development varies across the region, it may not be practical to apply the same prescriptions to all. Therefore, careful diagnostics are necessary before applying possible policy measures.

18. Having said that, there are certain common elements in building a bond market. The necessary ingredients and steps for a government bond market are similar in most jurisdictions, while there may be a different approach when developing a corporate bond market. The United States had a unique experience due to its restrictions on interstate banking, which contributed to the development of a relatively large corporate bond market. Countries in which the private sector played an important role in developing railways and electric companies had a corporate bond market from the early stages of capital market development. But in many developing markets, the capital market started after the establishment of a government bond market and the equities market. In such cases, it is better to distinguish the key differences between the equities and corporate bond markets. In a bond market, the credit of the issuer is critical, while in an equities market, the future prospects of the issuer are a more important factor. In an equities market, investors need to be diversified if ownership concentration is to be avoided, while a bond market does not require the same investor diversification since it does not affect the ownership structure of the issuer. In an equities market, retail investor protections must be considered, while in a bond market, regulations can be relaxed as an issuance can be targeted to professional institutional investors who possess sufficient market knowledge and the means to protect themselves. In an equities market, an issuer normally issues one kind of equity, while in a bond market, an issuer issues bonds that vary in terms of maturity and the timing of issuance. Because of such differences, the simple introduction of a corporate bond market into an equities market framework is often unsuccessful. Therefore, it is important to understand such differences and create the building blocks and ecosystem necessary for corporate bond market development.

19. Based on such an understanding, ASEAN+3 agreed to focus on the development of professional bond market segments for corporate bonds. By focusing on professional investors, regulations can be lighter. For example, the regulators can assume that professional investors understand international accounting rules and the differences between these and local rules. Professional investors have a deeper

knowledge of finance and may be able to understand the risks associated with various financial products and bonds. Professional investors may be able to negotiate with an issuer and receive appropriate information for investment. Professional investors have greater capacity than retail investors to follow changes in market circumstances and take measures to hedge. By creating a professional investor market segment, ASEAN+3 member economies can standardize and harmonize their individual markets for greater efficiency. Since regulations and investor protections for professional investors are relatively similar across jurisdictions, the establishment of such markets would lead to further bond market integration across ASEAN+3. The level of investor protection can be reduced so that professional investors and issuers can enjoy easier and timelier issuances. In addition, regulators can assume that professional investors understand English as well as a common language of finance; thus, disclosure in English is acceptable in a professional investor market, which supports the creation of a regional bond market, a key objective of the ASEAN+3 Multi-Currency Bond Issuance Framework.

20. Regional cooperation can help alleviate development challenges by dealing with problems collectively. Developing an LCY bond market is basically a national agenda. But regional arrangements can support and often complement these efforts. Regional cooperation under ASEAN+3 aims to enhance financial stability in the region. This cooperation has two aspects: (i) to prevent contagion of financial market failure in the short term, and (ii) to facilitate the development of a more stable financial environment in the long term. The Chiang Mai Initiative Multilateralization mainly addresses the former, while ABMI addresses the latter.

21. Highlighting LCY bond market developments under ABMI can help support various stakeholders and establish better coordination within and among ASEAN+3 member economies. In addition, regional arrangements can reinforce the commitments of the governments involved, which can also strengthen the commitments of market participants. In other words, regional cooperation and arrangements can reduce the uncertainty associated with the development of bond markets. Joint efforts and collective action under regional arrangements can attract more attention and increase recognition of the efforts needed to develop bond markets. This level of support and commitment would not be possible through actions taken in a single emerging market.

22. To develop a bond market, policy makers, regulators, and market participants also need to understand the importance of market integrity. A capital market is not just a place to match the demand for and supply of securities. Developed markets have evolved through many failures and crises. Measures to mitigate market deficiencies are necessary so that market participants can trade with trust and confidence. The market needs to be fair and sound, and it should not allow any manipulation, misleading information, or insider trading. All transactions have to be executed safely and the transfer of title through the market must be protected. When there is a failure, it must be solved fairly and swiftly. If there is wrongdoing in the market, it has to be detected, identified, properly prosecuted, and penalized. Prevention measures must be implemented to avoid a recurrence and these measures have to be institutionalized and deeply imbedded in the market. The cost of building and maintaining the integrity of the market is not low, but a well-functioning market can mobilize and allocate resources efficiently and support further economic development.

23. A bond market is one of the fundamental institutions required to support economic activity. Market practices are in need of constant maintenance to ensure sound performance as the market evolves. As such, the necessary building blocks and ecosystem must be continuously reviewed and reassessed.

I. Introduction

Objective and Structure of the Paper

1. The 1997/98 Asian financial crisis revealed that the lack of a domestic bond market could create major financial risks. The Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China (PRC), Japan, and the Republic of Korea—collectively known as ASEAN+3—responded to the challenge of developing domestic bond markets by establishing the Asian Bond Markets Initiative (ABMI). Development of a local currency (LCY) bond market is necessary to provide an alternative source of funding to foreign-currency-denominated bank loans in order to minimize the currency and maturity mismatches that had made the region vulnerable to the sudden reversal of capital flows.
2. Since the crisis, the five original members of ASEAN, namely Indonesia, Malaysia, the Philippines, Singapore, and Thailand, plus the PRC, the Republic of Korea, and Viet Nam have achieved remarkable progress in developing their respective domestic bond markets. Total market capitalization in the region has surpassed USD12.7 trillion in September 2018, which is coming closer to the amount of EUR-denominated bonds issued by the residents of the euro area.
3. The global financial crisis further demonstrated to the global financial community the importance of LCY bond markets. ASEAN+3 member economies exhibited relative resilience during the crisis and experienced a faster recovery in its aftermath. The Group of Twenty (G20) recognized that LCY bond markets could play an important role in diversifying financial intermediary channels and mitigating the impacts of a financial crisis on the real economy.
4. This study seeks to share the good practices of ASEAN+3 in developing LCY bond markets. The development of a bond market is difficult and requires enormous efforts. All relevant parties must understand what they need to do and why, and fulfill their respective tasks in a coordinated manner. In addition, they must establish a consensus on how to develop the market. Coordination requires vision and a strategic plan. Commitments from the securities market regulator alone cannot create a successful market. It must be built together with other public authorities and the central bank, as well as with the full support of market participants and financial institutions. Stakeholders must also understand that a market cannot be built overnight. Patient efforts need to be made over a number of years.
5. Based on the experiences of ASEAN+3, there is no one-size-fits-all approach to the development of an LCY bond market. As the level of market development varies across the region, it may not be practical to apply the same prescriptions to all. Therefore, careful diagnostics are needed before applying policy measures. Having said that, there are certain common elements to building a bond market. This study aims to show what are the necessary conditions to create and further develop a bond market, and how these factors interact with one another based on the experiences of ASEAN+3 member economies. There may not be a single simple answer to such difficult problems, but it is encouraging to know that many ASEAN+3 member economies have overcome similar challenges in successfully developing an LCY bond market.
6. The study takes a block-building approach by highlighting the components needed for the development of a bond market. It also discusses the enabling environment and ecosystem required to

support market development. The study emphasizes the role of regional cooperation, which can play a significant role as the collective actions of governments can sometimes lead to a breakthrough amid a challenging situation. Mutual learning and peer support can be the impetus needed to push the development of a bond market.

7. This paper is structured as follows. It first explains the need for an LCY bond market in Chapter II. In Chapter III, it provides a history of local currency bond market developments in ASEAN+3 since the 1997/98 Asian financial crisis. Chapter IV discusses the functions of a bond market. Chapter V describes the roles of relevant stakeholders and the necessary building blocks for bond market development. Chapter VI explains the necessary ecosystem for the development of a bond market, and Chapter VII discusses how to sequence and map these elements and institutionalize them. Chapter VIII focuses on the role of regional cooperation. This paper can be read either in sequential order or by referencing sections of specific interest. Furthermore, some sections and contents of the paper can be cross-referenced to gain a deeper understanding of the development of an LCY bond market.

II. Need for a Local Currency Bond Market and G20 Recommendation

A. Local Currency Bond Market and Financial Stability

8. At the Cannes Summit in 2011, the Group of Twenty (G20) launched an initiative to develop local currency (LCY) bond markets through an action plan. The G20 recognized that a well-developed LCY bond market (i) increases an economy's ability to withstand the negative impacts of global capital flows; (ii) reduces its reliance on foreign currency borrowing and lessens exchange rate risks; (iii) contributes to the reduction of current account imbalances; (iv) lowers the need for large precautionary reserve holdings; and (v) allows bank and corporate balance sheets to adjust more smoothly, thereby improving the capacity of macroeconomic policies to respond to external shocks.

9. The G20 recognized that LCY bond markets play an important role in diversifying financial intermediary channels and mitigating the impacts of financial crises on the real economy. During the global financial crisis, a number of economies showed resilience and rebounded faster by having undertaken earlier efforts to develop their bond markets to reduce currency and maturity mismatches on sovereign and corporate balance sheets. Domestic government bond issuance helped finance countercyclical public spending and corporate bond issuance supported the real economy by supplementing the banking sector, which was under financial duress. In Asia, local bond markets served as a "spare tire" when other financing channels were impaired at the onset of the global financial crisis, thus mitigating its impacts. Similarly, economies in Latin America such as Mexico were able to manage the impacts of the crisis and the volatility of large portfolio flows through well-functioning bond markets.¹ By expanding the opportunities to mobilize domestic savings and complementing bank financing, a domestic bond market can reduce negative spillovers from weaknesses in the banking sector and the transmission of global financial stress. LCY bond markets with a high share of domestic investors and reasonable macroeconomic stability have been proven to be more immune to volatile capital flows.²

10. Efficient LCY bond markets in emerging markets can broadly facilitate the resolution of global imbalances and absorption of capital flows, thereby contributing to financial stability. They can also facilitate the absorption of large and volatile capital flows. LCY bond market development and deepening contributes to global rebalancing by providing channels to deploy large emerging market savings domestically, thus reducing the concentration of investments in advanced market assets.³ Policies to support the development of a domestic investor base and attract foreign investors are important, though they may require some preemptive measures to control risks and market volatility in the event of potential reversals of capital flows.

¹ International Monetary Fund (IMF), World Bank, European Bank for Reconstruction and Development (EBRD), and Organisation for Economic Co-operation and Development (OECD). 2013. *Local Currency Bond Markets-Diagnostic Framework*. Washington, DC.

² IMF and World Bank. 2016. *Development of Local Currency Bond Markets Overview of Recent Developments and Key Themes. Staff Note for the G20 IFAWG*. Seoul.

³ Footnote 1.

B. Local Currency Bond Market and Infrastructure Finance

11. Another benefit of developing an LCY bond market is the increased capacity to finance infrastructure investments. The G20 recognizes the importance of infrastructure for growth and development, and understands the need to tackle investment shortfalls as a way of lifting growth, job creation, and productivity. Despite the importance of infrastructure, a persistent financing gap remains in the ASEAN+3 region. While public financing of infrastructure is essential, mobilizing additional private capital is also needed to meet global infrastructure needs. To achieve this, the G20 has agreed to promote the necessary conditions to help develop infrastructure as an asset class.

12. Emerging markets need to access new sources of long-term funds by tapping the growing pool of investable funds managed by their institutional investors. Infrastructure assets are considered ideal for pension funds and insurance companies that need to match investments with their long-term liabilities. In addition, the emergence of a large domestic institutional investor base makes infrastructure investments more attractive to foreign investors by acting as a potential stabilizer in times of capital outflows. Infrastructure has traditionally been financed by governments and commercial banks, but since the global financial crisis, these sources of infrastructure finance have not been as dependable. Some governments have tightened their fiscal policies, while banks are facing more prudential regulations to manage maturity and liquidity risks. Therefore, developing LCY bond markets as an alternative source of infrastructure financing is critical for emerging markets.

C. Global Efforts

13. Developing LCY bond markets is a complex task. Based on a request from the G20, the International Monetary Fund (IMF), the World Bank, the European Bank for Reconstruction and Development (EBRD), and the Organisation for Economic Co-operation and Development (OECD) shared their experiences to identify general preconditions, key components, and constraints for successful LCY bond market development as a diagnostic framework. The diagnostic framework provided an approach to analyze interactions among various markets such as the money market, government and corporate bond markets, and the derivatives market. It also highlighted the importance of macroeconomic stability as a precondition to fostering LCY bond markets. Some of the key factors of LCY bond market development include (i) commitment and ownership of the reform process at a high level; (ii) credibility to anchor market expectations; (iii) interaction with monetary policy, debt management, and sound financial stability; (iv) a liquid interbank market; and (v) a sound and reliable clearing and settlement market infrastructure.⁴

14. Other regions are also making commitments for the development of LCY bond markets. For example, the African Development Bank (AfDB), in conjunction with the African Financial Markets Initiative (AFMI), launched its AfDB/AFMI Bloomberg African Bond Index in February 2015. The composite index currently comprises Bloomberg local currency sovereign indexes for South Africa, Egypt, Nigeria, Kenya, Namibia, Botswana, Ghana, and Zambia. The AfDB approved the creation of the African Domestic Bond Fund, the second pillar of its AFMI. The fund will be the first exchange-traded fund offering exposure to several African fixed-income markets. The AFMI aims to stimulate the development of African domestic bond markets by providing a source of funding for local borrowers while also creating a new asset class of African fixed-income securities.⁵

⁴ Footnote 2.

⁵ IMF and World Bank. 2018. Recent Developments on Local Currency Bond Markets in Emerging Economies. *Staff Note for the G20 IFAWG*. Seoul.

III. Development of the Local Currency Bond Markets in ASEAN+3

A. 1997/98 Asian Financial Crisis and Asian Bond Markets Initiative

15. The Asian Bond Markets Initiative (ABMI) was launched in December 2002 and adopted in August 2003 by the Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea (ASEAN+3) to develop local currency (LCY) bond markets as an alternative source of funding to foreign-currency-denominated bank loans in order to minimize the currency and maturity mismatches that had left the region vulnerable to the sudden reversal of capital inflows. Since ABMI's launch, ADB has been working with ASEAN+3 and serving as Secretariat to provide technical support for the implementation of the initiative.

16. In the 1990s, there was a sense of euphoria that the “Asian miracle” could continue.⁶ The fast-growing private sector actively took advantage of low-cost short-term funds that were readily available from foreign commercial sources. Private businesses came to rely on bank loans to finance their investments.

17. Beginning in 1997, Asia suffered a dramatic financial crisis. Thailand was first hit, followed by Indonesia and the Republic of Korea. The root cause, which created risks and eventually led to the crisis, was the so-called “double mismatch problem.” That is, businesses had borrowed short-term bank loans in a foreign currency to finance long-term investments that generated returns in a domestic currency. This problem was structural and differed from a more traditional debt crisis caused by overborrowing, such as those in Latin America in the early 1980s. Experts inside and outside the region identified the need to develop domestic bond markets to address the root causes of the 1997/98 Asian financial crisis.

18. This contagion of financial crises made policy makers in the ASEAN+3 region aware of the importance of regional cooperation efforts. In 2000, the ASEAN+3 member economies agreed to establish a network of bilateral swap and repurchase agreements among members, called the Chiang Mai Initiative, to supplement existing international financial arrangements for balance-of-payments and short-term liquidity difficulties. In addition, they started developing bond markets under ABMI with longer-term commitments. ABMI was based on the recognition that more developed and integrated LCY bond markets would enable economies in the region to mobilize domestic savings to finance their long-term investment needs and reduce their vulnerability to the reversal of capital flows.

19. During the initial phase of ABMI (2002–2007), policy makers focused on providing the foundation and infrastructure for LCY bond markets.⁷ They aimed to create a supply of LCY-denominated bonds by

⁶ N. M. Birdsall, J. E. Campos, C-S. Kim, W. M. Corden, L. MacDonald, H. Pack, J. Page, R. Sabor, and J. E. Stiglitz. 1993. *The East Asian Miracle: Economic Growth and Public Policy*. New York: Oxford University Press and World Bank. The report examines the public policies of eight high-performing Asian economies (Hong Kong, China; Indonesia; Japan; Malaysia; Republic of Korea; Singapore; Taipei, China; and Thailand) from 1965 to 1990. It seeks to uncover the role that governments and policies played in the dramatic economic growth, improved human welfare, and more equitable income distribution.

⁷ In addition to ABMI, the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP)—comprising the Reserve Bank of Australia, People's Bank of China, Hong Kong Monetary Authority, Bank Indonesia, Bank of Japan, Bank of Korea, Bank Negara Malaysia, Reserve Bank of New Zealand, Bangko Sentral ng Pilipinas, Monetary Authority of Singapore, Bank of Thailand—launched

improving access to bond markets for a wide variety of potential issuers; develop bond market infrastructure, including settlement systems, rules, and regulations concerning transactions; and strengthen the capacity of domestic credit rating agencies. To promote demand for LCY bonds, a website (www.AsianBondsOnline.adb.org) was established to disseminate information on market developments and guide purchases of LCY bonds. Studies were prepared to assess impediments to cross-border bond transactions, including foreign exchange transactions and settlements, and technical assistance was provided to member economies to develop their domestic LCY bond markets based on their individual requirements.

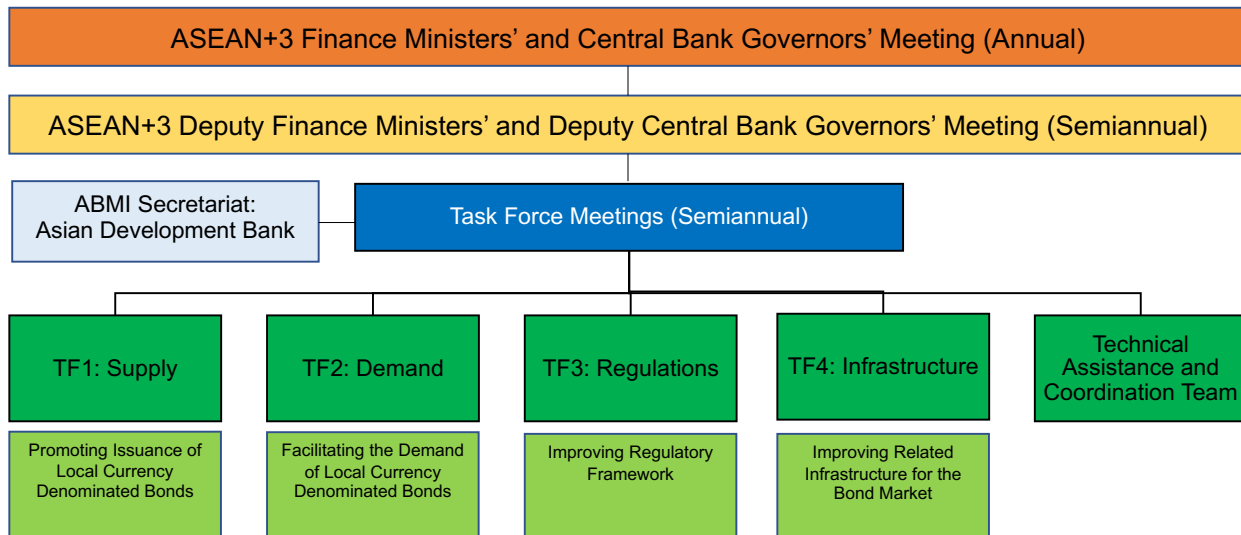
20. In determining policies and activities to promote the development of the region's bond markets, ASEAN+3 policy makers met regularly and conducted policy dialogues and discussions among themselves. They also held seminars and conferences to solicit views from academics, think tanks, and market participants. Once consensus was reached on policies for ABMI to support over the medium-term, a road map outlining policy actions was prepared for members to implement over a 3-year period. As ASEAN+3 does not specify numerical targets for members to achieve within a certain time frame under ABMI, member economies are encouraged, but not required, to implement the recommended measures provided in areas specified under a road map. To ensure relevance and effectiveness, policy makers undertake a periodic review of the progress made under a road map every 3–4 years. Based on their assessment of the progress made, policy makers determine whether to include new activities to address challenges in line with market developments and policy priorities, or to end assistance for activities that no longer require support.

21. In 2008, to demonstrate their renewed commitment to ABMI, ASEAN+3 officials prepared a new medium-term road map to focus on activities in four areas: (i) promote the issuance (supply) of LCY-denominated bonds, (ii) facilitate demand for LCY-denominated bonds, (iii) strengthen the regulatory framework, and (iv) improve bond market infrastructure. To implement the road map, four separate task forces were established (Figure 2). Activities supported under Task Force 1 are co-chaired by the PRC and Thailand, activities under Task Force 2 by Japan and Singapore, activities under Task Force 3 by Japan and Malaysia, and activities under Task Force 4 by the Republic of Korea and the Philippines. In addition, a technical assistance and coordination team—co-chaired by Brunei Darussalam, the Lao People's Democratic Republic (Lao PDR), and Viet Nam—was established to provide support to ASEAN member economies on their individual needs to promote bond market development. The activities under the task forces are reported to the ASEAN+3 Finance Ministries and Central Bank Deputies Meeting, then elevated to the ASEAN+3 Finance Ministers and Central Bank Governors' Meeting for their endorsement and support. Though ASEAN+3 does not have a permanent secretariat, such an institutionalized regional cooperation arrangement is one of the successful aspects of ABMI.

22. A subsequent Road Map+ prepared in 2012 targeted the same four objectives. With bond markets developing rapidly in some member economies, policy makers also shifted their attention to activities that produce more tangible results. These include (i) launching guarantee operations under the Credit Guarantee and Investment Facility (CGIF) to support corporate bond issuance; (ii) developing infrastructure-financing schemes; (iii) creating a platform to bring the public and private sector experts in the region under the ASEAN+3 Bond Market Forum (ABMF) to introduce a common bond issuance program and foster harmonization and standardization; and (iv) establishing the Cross-Border Settlement Infrastructure Forum (CSIF), composed of the central banks and central securities depositories (CSDs) in the region, to establish a regional settlement intermediary to promote cross-border bond transactions and settlement.

the Asian Bond Fund Initiative (ABF). In June 2003, EMEAP launched the first stage (ABF1), which invested in a basket of USD-denominated bonds issued by Asian sovereign and quasi-sovereign issuers in EMEAP economies (excluding Australia, Japan, and New Zealand). Building on the success of ABF1, EMEAP worked to extend the ABF concept to LCY bonds and announced the launch of the second stage of ABF (ABF2) in December 2004 with the objective of fostering increased demand for LCY bonds.

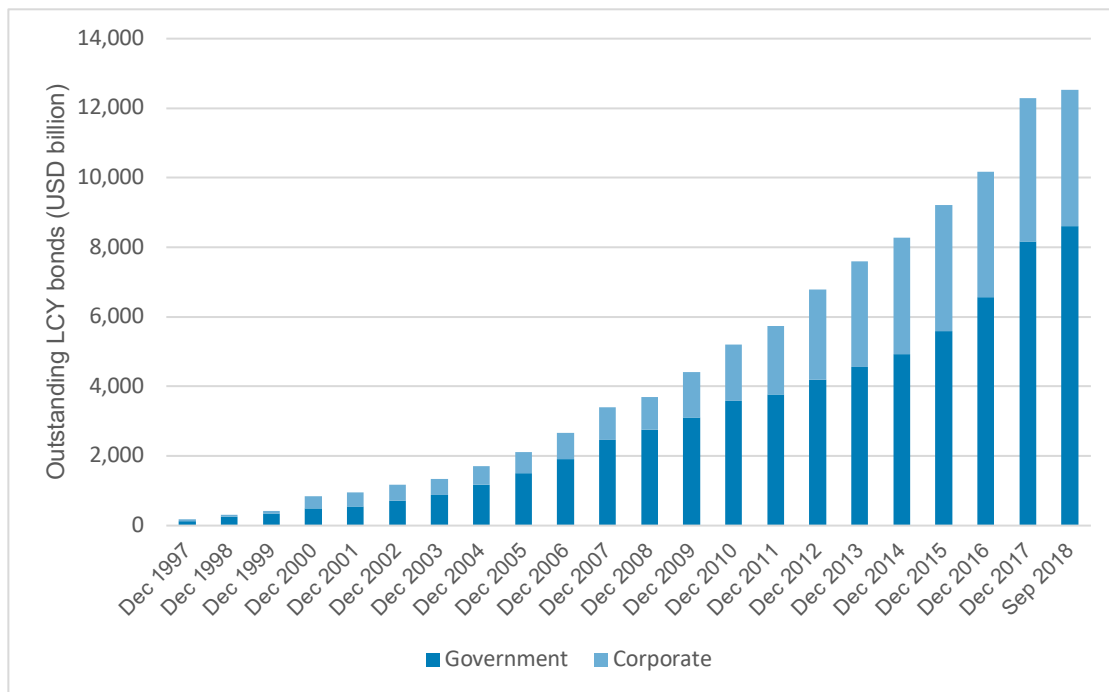
Figure 2: Asian Bond Markets Initiative Organizational Chart



ABMI = Asian Bond Markets Initiative; ASEAN+3 + Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea; TF = Task Force.
 Source: Asian Development Bank.

23. Thanks to these efforts, the five original members of ASEAN, plus the PRC; Hong Kong, China; the Republic of Korea; and Viet Nam, have achieved remarkable progress in developing their respective domestic bond markets (Figure 3). Total market capitalization among these economies has surpassed USD12.7 trillion, which is coming closer to the amount of EUR-denominated bonds issued by the residents of the euro area (Figure 1).

Figure 3: Growth of Emerging East Asian Local Currency Bond Markets

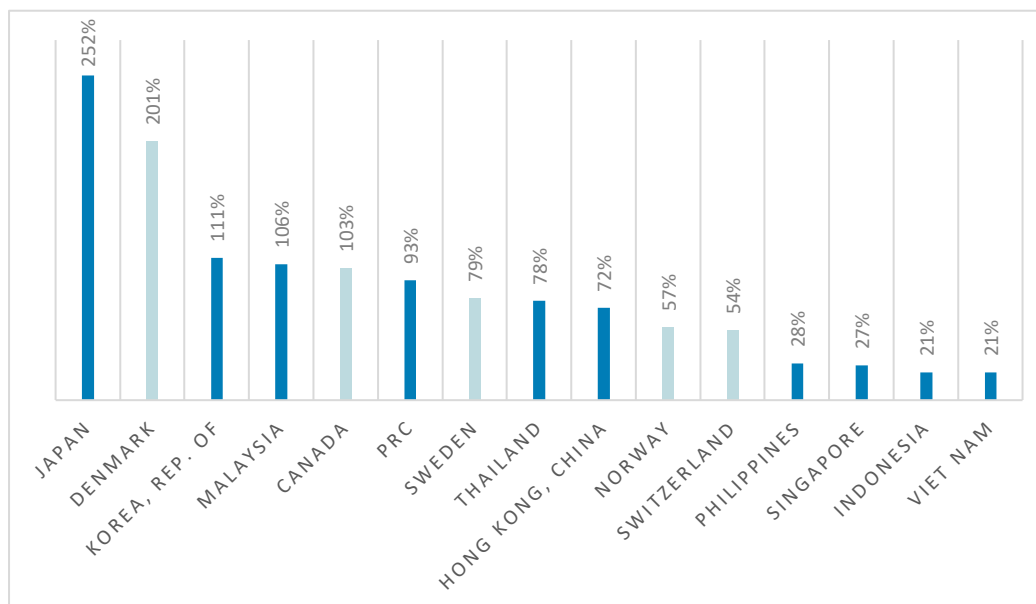


LCY = local currency, USD = United States dollar.

Note: This figure contains bond market data for the five original members of ASEAN (Indonesia, Malaysia, Singapore, Thailand, and the Philippines) plus the People's Republic of China; Hong Kong, China; the Republic of Korea; and Viet Nam.
 Source: AsianBondsOnline.

24. Indonesia and Thailand made concerted efforts to develop their LCY bond markets, including building strong public debt management capacity. The Republic of Korea and Malaysia have developed bond markets that are well balanced between the government and corporate segments, with significant depth in both. The PRC is home to the region’s dominant bond market in terms of size. Many governments in the region have put in place sound market infrastructure in line with the level of development of their respective bond markets.

Figure 4: Size of Domestic Bonds Outstanding as a Share of GDP for ASEAN+3, Canada, and Selected European Economies



ASEAN+3 = Association of Southeast Asian Nations plus the People’s Republic of China, Japan, and the Republic of Korea; ; PRC = People’s Republic of China; GDP = gross domestic product.
Data as of end-2017.

Sources: Bank for International Settlements, *AsianBondsOnline*, CEIC, World Bank.

B. The Global Financial Crisis and the Success of ASEAN+3 Local Currency Bond Markets

25. Between 2003 and 2008, capital surged out of advanced economies and into emerging markets, particularly emerging East Asia given the region’s strong growth prospects. These flows ended abruptly with the onset of the global financial crisis. Economic growth in emerging East Asia dropped sharply in the first quarter of 2009 due to the collapse in external demand that hurt economic growth across the region.

26. However, thanks to timely policy stimulus measures, ASEAN+3 economies weathered the crisis and experienced a V-shaped recovery from the sharp downturn in late 2008 and early 2009. The PRC implemented a sizable fiscal stimulus package, which was first announced in November 2008, and ASEAN members introduced a variety of fiscal measures to stimulate their economies in 2009. Fiscal stimuli created budgetary deficits across the region, but most of them remained manageable and did not overburden debt service schedules. Such policy packages were possible because prudent budget management in response to the 1997/98 Asian financial crisis had left ample fiscal space. Thanks to the efforts of ASEAN+3 governments to develop their LCY bond markets, they could finance fiscal expansion without causing much stress.

27. Since the 1997/98 Asian financial crisis, ASEAN+3 economies have made significant efforts to improve the resilience and soundness of the region’s financial system. Having said that, the global financial

crisis inevitably affected the banking sector in the region, with credit growth ultimately contracting. However, unlike the 1997/98 Asian financial crisis, bond markets could supplement financial intermediation, thus supporting a V-shaped recovery in the region.

28. Over the past decade, LCY bond markets have become the key source of funding for authorities in Indonesia, Malaysia, the Philippines, and Thailand seeking to finance expenditure programs. LCY bond markets in ASEAN+3, with the exception of the Republic of Korea, are dominated by government bonds. Nevertheless, corporate bond markets are also developing across the region.

29. Yield curves have not only become more reliable, but they have also been gradually lengthened and there is now a wider range of benchmark issues (Figure 5), which has also allowed the creation of benchmark indexes across many regional markets.

Figure 5: Local Currency Government Securities Maturity Profile



HKG = Hong Kong, China; INO = Indonesia; JPN = Japan; KOR = Republic of Korea; LCY = local currency, MAL = Malaysia; PHI = Philippines; PRC = People's Republic of China; SIN = Singapore; THA = Thailand; VIE = Viet Nam.
Source: *AsianBondsOnline*.

30. There is a wider range of bonds now issued in the region, including inflation-linked bonds, green bonds, asset-backed securities, and *sukuk* (Islamic bonds). Liquidity has also markedly improved as LCY debt markets have developed over the past several years. In conducting its annual bond market liquidity survey, *AsianBondsOnline* uses two quantitative indicators to measure bond market liquidity in addition to a qualitative assessment of survey participants: (i) government bond market turnover ratios and (ii) bid-ask spreads for on-the-run government bonds.

31. Based on the outcomes of the surveys, the bid-ask spread for on-the-run government bonds, which provides an indication of the costs incurred by market participants, narrowed considerably in most economies in ASEAN+3 between 2004 and 2018 (Table 1). The spread dropped from 21.4 basis points to 5.3 basis points in Indonesia, from 25.0 basis points to 6.9 basis points in the Philippines, and from 7.3 basis points to 2.5 basis points in Thailand.

Table 1: Government Bond Bid–Ask Spreads

Bid–Ask Spread (basis points)										
Market	2004	2010	2011	2012	2013	2014	2015	2016	2017	2018
People’s Republic of China	32.5	2.2	4.0	2.7	4.1	3.4	5.3	1.0	1.0	1.9
Indonesia	21.4	4.8	5.0	5.9	7.6	6.0	9.2	5.2	3.3	5.3
Republic of Korea	4.8	1.1	0.7	0.6	0.7	0.7	0.5	0.5	0.5	0.5
Malaysia	3.5	2.6	3.3	2.7	3.8	1.7	2.4	2.1	1.9	2.3
Philippines	25.0	3.1	5.3	2.1	5.4	3.3	3.4	4.6	3.7	6.9
Singapore	5.5	3.0	3.8	3.1	2.6	2.3	2.0	3.0	3.0	2.1
Thailand	7.3	3.1	3.3	3.2	2.4	1.9	1.5	2.3	1.8	2.5
Viet Nam	n.a.	13.2	33.5	30.5	21.7	11.7	15.0	7.2	5.0	8.3

n.a. = not applicable.

Source: *AsianBondsOnline* LCY Bond Market Liquidity Survey.

32. Bond market development across ASEAN+3 has not been even. Brunei Darussalam, Cambodia, the Lao PDR, and Myanmar have only recently begun meeting the challenges of starting a bond market. ABMI will support the development and improved functioning of such markets, particularly in the face of increasingly tighter prudential frameworks for banking systems.

IV. Functions of a Bond Market

33. When considering a bond market, it can largely be divided into two segments: (i) government and (ii) corporate. A government bond market enables the government to raise funds, while a corporate bond market helps a company raise funds.

A. Functions of a Government Bond Market

1. Public Finance

34. A government bond market enables the government to raise funds from the market. The government may need to finance a public deficit in order to meet a shortfall in revenue. A government deficit is sometimes regarded as a source of instability even though a government should be able to use fiscal policy to maintain economic stability. The government needs to expand spending countercyclically during periods when the economy is facing a downturn. By financing a revenue shortfall and the expansion of spending through bond sales, the government can avoid the economy heading into a recession.

35. The government can also consider issuing a bond to finance public infrastructure so that the cost of infrastructure can be shared across generations. If it is assumed that the average lifespan of infrastructures is 50 years, debts to finance the infrastructure should be repaid over 50 years. The repayment burdens and benefits from infrastructure can be shared across generations from the viewpoint of intergenerational equity. If the cost of infrastructure has to be shouldered entirely by the current generation, infrastructure needs may go unmet. Therefore, to ensure intergenerational equity and avoid underserving infrastructure investments, the government needs to consider financing by issuing long-term bonds.

36. According to the Asian Development Bank (ADB), infrastructure needs in developing Asia will exceed USD26 trillion from 2017 to 2030, or USD1.7 trillion per year, if the region is to maintain its growth momentum.⁸ To meet such large infrastructure demand, bond markets must play an important role in financing. Public infrastructure has large economic externalities but they are not always bankable. In such cases, the government needs to build infrastructure through government bond financing. It is imperative for the government in the region to consider creating a well-functioning government bond market to maintain its growth momentum, eradicate poverty, and respond to climate change.

37. The government may consider tapping the international bond market. However, in doing so the government will be exposed to foreign exchange risk because its revenue will be in domestic currency while the repayment of debt is normally in foreign currency. Prior to the 1997/98 Asian financial crisis, this basic role of a government bond market was barely exploited in developing Asia. Most developing economies in the region practiced conservative fiscal management while enjoying high growth rates. Public sector borrowing was largely dependent on loans from multilateral institutions and aid agencies under concessional terms. Although the overall risk is lower than with commercial loans, such concessional loans involve foreign exchange risk. Unfortunately, Asian governments' avoidance of borrowing from domestic markets in the 1990s prevented the development of their local currency (LCY) government bond markets. Among the bond market challenges for developing economies are the costs of building market

⁸ Developing Asia comprises ADB's 45 regional developing members. ADB. 2017. *Meeting Asia's Infrastructure Needs*. Manila.

infrastructure, as well as its operation and supervision. However, thanks to advanced information technology, the threshold to build a market has been lowered.

38. To ensure the healthy and sustainable growth of a government bond market, the government should introduce a prudent framework and sound capacity for public debt management. The government must carefully control deficits but be allowed to borrow to finance investments in economically viable public projects that generate returns to ensure debt repayment. The government should also be allowed to flexibly manage its short-term cash balances and refinance or reprofile existing debt for optimal management. Public debt management objectives should expressly include government bond market development.

2. Benchmark and Risk-Free Rate to Develop a Market

39. To develop a capital market, the government may need to consider issuing government bonds. While continuing to pursue a balanced budget policy, the Government of Singapore issues bonds to promote a liquid and efficient government bond market. Singapore Government Securities, which comprise Treasury bills and bonds, are issued primarily to stimulate market activity and provide a benchmark for corporate issues.

40. An LCY government bond market forms the foundation of an economy's financial and capital markets because these debt instruments are issued by the single largest and most creditworthy issuer in the economy, the government. Government debt bears the "full faith and credit of the government" and is backed by the taxing power provided by the legislative branch. Government bonds are instruments for institutional investment and retail savings, and function as pricing benchmarks for other debt instruments in the development of wider financial and capital markets.

41. Financial intermediaries and investors learn about fixed-income instruments by investing and trading in government bonds. Government bond dealers can build a dedicated fixed-income trading desk and fixed-income research capacity. Without a government bond market, such businesses would be difficult to develop. A government bond market can attract a wide range of investors; hence, it can create bond trading. A high level of market liquidity commercially justifies the development of a trading platform and a large-value settlement system. The establishment of such capital market infrastructure would be difficult without a developed government bond market.

3. Creation of High-Quality Liquid Assets to Meet Regulatory Demand

a. Bank Regulation and High-Quality Liquid Assets

42. Government bonds are the highest-quality credit assets available locally. Government bonds are used as LCY collateral or margin assets to facilitate banks' management of liquidity and counterparty risks. To meet regulation requirements implemented after the global financial crisis, banks must now manage liquidity more prudently. The liquidity coverage ratio (LCR) under Basel III establishes a minimum level of liquidity for internationally active banks and requires them to hold high-quality liquid assets (HQLA).⁹ To qualify as HQLA, the assets should be liquid in markets during a time of stress and, desirably, be eligible for the central bank's monetary operations. Since many emerging market regulators would like to follow this Basel III regulation, there will be increased demand among banks for LCY government bonds.

43. Another regulatory response to the global financial crisis is the mandated central clearing of standardized over-the-counter (OTC) derivatives and margin requirements for noncleared derivatives, which also increases demand for HQLA like government bonds as collateral. Though banks in emerging markets are currently engaging in OTC derivative transactions in a very limited manner, they will need HQLA in the future as they expand their transactions.

⁹ The LCR requires banks to hold sufficient high-quality liquid assets (HQLA) to cover total net cash outflows over 30 days. BIS. 2013. *Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools*. Basel.

b. *Insurance Regulation on Investment*

44. Similarly, insurance and pension funds need to consider regulatory requirements. Normally, insurance and pension funds need to follow investment regulations to limit risk taking. The objective of investment regulations is to ensure prepayment of the obligations of insurers and pension funds to their policyholders and beneficiaries. They are asked to manage investments in a prudent manner and in the best interests of policyholders and/or beneficiaries. In many economies, there are quantitative limits on investments including, for example, limits on certain assets such as equities and foreign-currency-denominated assets. Also, it is common to restrict non-investment-grade assets.

45. In such a regulatory framework, government bonds are the most preferred assets to invest in. Often there is no limit on or less stringent restrictions to investing in the government bond market.¹⁰ As insurance and pension fund regulations move toward more risk-based capital frameworks, long-term government bonds are the most preferred asset to meet their appropriate asset–liability management (ALM) and investment strategy in line with the long-term duration of pension and insurance liabilities. Invested assets must be secure even if the market is facing adverse impacts; an increase in the liability value, for example, through premiums or mandatory contributions, will need to lead to a corresponding increase of assets of similar duration and attributable value. Such regulatory-driven demand for government bonds continues to increase as more emerging markets establish insurance and pension funds in order to provide appropriate social protection measures.

B. **Functions of a Corporate Bond Market**

46. A corporate bond market links private sector borrowers and lenders directly. Corporate bonds can supplement and substitute for bank loans, thus creating another financial intermediary channel. The importance of the corporate bond market was recognized in the wake of the 1997/98 Asian financial crisis and the global financial crisis. A well-functioning bond market can support economic growth, financial stability, and economic recovery. In addition, the bond market can support financial stability when the banking system malfunctions.

1. **Market-Based Financial Intermediation**

47. Basically, both banks and bond markets function to mitigate information asymmetries on the creditworthiness of borrowers and reduce transaction costs for financial intermediation such as the cost of acquiring information, monitoring borrowers, and enforcing contracts. Normally, lenders are in an inferior position in terms of knowing the true financial condition of borrowers; borrowers may hide negative information or provide false information. In addition, lenders need to monitor borrowers to detect any changes in financial conditions. Therefore, a lending business must overcome such information asymmetries to avoid losses. A bank loan is negotiated with a bank privately and information can be collected privately. On the other hand, bonds can be offered to multiple investors, and traded in the secondary market. Therefore, the market must employ a mechanism to enforce the proper and continuous disclosure of information publicly.

a. *Bonds as a Standardized Market Product*

48. Because of information asymmetries between borrowers and lenders, a bond market needs to institutionalize how to enforce proper and continuous public disclosure of bond issuer information. Bonds can be offered to multiple investors and traded in the secondary market. Thus, the financial information of issuers needs to be shared among investors and market participants equally and fairly. As bonds can be tradable, their ownership needs to be secured for investors. To warrant the continuous and proper disclosure and entitlement, an organized market needs to establish certain rules for issuance, trade, entitlement, and safekeeping. The market also needs to be supported by an enabling ecosystem such as a robust legal framework, enforceable accounting rules and standards, trustworthy credit information,

¹⁰ OECD. 2017. *Annual Survey of Investment Regulation of Pension Funds*. Paris.

accessible and reliable trading information, and a reliable settlement system to ensure and safeguard bond ownership among investors. This differs from bank loans, which are privately agreed and have conditions that can be customized. On the other hand, bonds need to follow market rules, which makes bonds standardized securities.

b. Bond Market as a Complement to and Substitute for Bank Loans

49. A well-functioning bond market can attract a large number of investors so that risks can be distributed. The market can diffuse stress on the banking system through diversification. The market may be able to supply long-term funding for long-term investments if long-term investors are developed simultaneously with the bond market. The market also provides an additional funding source for banks. Banks' liabilities are normally short-term because a large portion of deposits are current and demand deposits. Besides, time deposits can be liquidated if requested. Therefore, banks' ability to extend long-term loans is limited because of possible maturity mismatches. But, if banks can raise long-term liability through the bond market, they may be able to extend long-term loans.

50. Bonds can be a substitute for bank loans; therefore, a well-functioning bond market can put competitive pressure on banks. Such pressure helps reduce the inefficiencies and provide alternative source of finance to borrowers. Pricing through a bond market could improve the pricing of bank loans because loans are negotiated bilaterally with a bank while bonds are priced through a market that blends the various opinions of investors (i.e., pricing by collective knowledge). Yet, it is very difficult to develop a corporate bond market without a banking system. Banking systems are the basis of financial intermediation and banks can be bond investors. The development of a banking system also requires the evolution of a legal and institutional framework, as well as an ecosystem to support financial transactions. This also helps pave the way for bond market development. The development of a government bond market necessitates a well-functioning banking system because banks are the prime investors in government bonds. The development of the government bond market supports development of the corporate bond market by providing risk-free benchmark yields, which serve as a basis for appropriate and efficient corporate bond pricing in accordance with the credit risk of issuers.

c. Bond Market and Equities Market

51. Bonds and equities are standardized market products that provide a long-term funding source for companies. They are offered and traded in organized markets. Equity investors comprise both individuals and institutional investors, while bond investors are generally large institutional investors. The concentration of equity holdings among a few investors may create a problem of ownership and corporate governance; thus, equity issuers (i.e., the owners of companies) want to distribute equities widely. Equity investors can be institutional investors, but issuers want to expand the investor base to include small individual investors in order to avoid the concentration of ownership. On the other hand, bond issuance does not dilute the ownership of companies; moreover, it is easier to sell to a limited number of investors, making institutional investors preferable. In addition, the equity of a company is standardized, in the form of shares, to facilitate trading on an exchange. Normally, each share of a company represents the same and equal right and entitlement; the value of a share is the same for the same company and thus, equities can be efficiently traded on an exchange with centralized matching of buyers and sellers. On the other hand, bonds can be heterogeneous, even if they are issued by the same company, due to differences in the timing of issuances and their maturities. Therefore, matching buyers and sellers of bonds is not easy because there are so many different kinds of bonds, which is why bonds are normally traded OTC to match demand and supply.

2. Institutional Evolution and Corporate Bond Market Development

52. To understand the development of bond markets, it is worth looking back at the history of corporate bond markets. For example, the corporate bond market in the United States (US) is larger than in any other economy because, historically, interstate banking was prohibited or restricted. Many states favored localized unit banking; thus, the business of commercial banks was confined within a single state. As a result, the lending capacity of each bank was limited and could not meet the funding needs of large companies such as railways. They had to finance by issuing corporate bonds and equities to raise enough

capital from across the economy as well as from abroad, which fostered a well-functioning capital market in the US. In economies with a large banking system such as Japan, the corporate bond market is smaller since large banks have played a core function in supplying funds to the private sector. In markets other than the US, it is common for financial institutions to comprise a larger share of issuance than nonfinancial institutions. It is worth taking such economy-specific backgrounds into account when developing a bond market.

53. Emerging markets face challenges because they must jumpstart a bond market and simultaneously develop an institutional framework and ecosystem, as well as a banking system, to support this market. Without a well-functioning banking system, it is not easy to develop a corporate bond market since banks can also be bond investors. Besides, the banking system can support the development of the ecosystem and enabling financial environment needed to develop a corporate bond market. A corporate bond market can be developed without a government bond market, but it would require the thorough designing of such a market.

V. Roles of Relevant Stakeholders and Building Blocks for Bond Market Development

54. To develop a bond market, it is better to consider who are the relevant stakeholders and what are the building blocks to develop the market. This chapter explains the necessary building blocks for bond market development.

A. Ministry of Finance

1. Public Finance and Debt Management

55. Public debt management is the process of establishing and executing a strategy for managing the government's debt to raise the required amount of funding, achieve its risk and cost objectives, and meet any other sovereign debt management goals the government may have set, such as developing and maintaining an efficient market for government securities. The main objective of public debt management is to ensure that the government's financing needs and its payment obligations are met at the lowest possible cost over the medium- to long-term, consistent with a prudent degree of risk.¹¹

56. Sound public debt management is a critical foundation of developing a government debt market, which is normally under the responsibility of the ministry of finance.¹² It includes proper budget planning and execution, fiscal management with effective monitoring and analysis, and control of revenues and expenditures. Sound debt management can play a catalytic role for broader financial market development and financial deepening. As ASEAN+3's experience shows, developed domestic debt markets can substitute for bank financing, helping economies to weather financial shocks.

57. The legal and regulatory framework for public debt management should clarify the responsibilities of debt management policy, primary debt issues, secondary market arrangements, depository facilities, and clearing and settlement arrangements for trading in government bonds. Sound debt management includes clear recognition of objectives for debt management; weighing risks against cost considerations; the separation and coordination of debt and monetary management objectives and accountabilities; a limit on debt expansion; the need to carefully manage refinancing and market risks, and the interest costs of debt burdens; and the necessity of developing a sound institutional structure and policies for reducing operational risk.¹³ The principle of fiscal discipline and a balanced budget is very important but should not preclude the possibility of borrowing to finance economically viable public infrastructure investments. Coordination and the division of labor between monetary and fiscal authorities also need to be clearly defined.

¹¹ IMF. 2001. Guidelines for Public Debt Management. Washington, DC.

¹² In some countries, public debt management is under autonomous or specialized unit or agency. In such case, good coordination with the treasury and budget systems is necessary. In 1999, Thailand established the Public Debt Management Office to borrow and manage public debt in a more swift and efficient manner.

¹³ Footnote 11.

58. Sound risk management is an important part of public debt management. Risks inherent in the structure of the government debt—currency, term, floating rate—should be monitored, evaluated, and mitigated. Debt managers should regularly conduct stress tests of the debt portfolio, taking into account possible economic and financial shocks to the government and the economy as a whole. Debt managers should also carefully consider exposure to contingent liabilities, including those arising from public–private partnerships (PPPs), and their potential impact on the government’s financial position. The government should have a policy to price guarantees and limit or deter the proliferation of contingent liabilities and develop a mechanism and the capacity to finance such liabilities if and when they are realized.

59. In relation to debt management, sound government cash management should stabilize and minimize the government’s cash balance, thus enabling the government to reduce the volume of debt and associated costs.¹⁴ Government cash managers should be able to accurately project the volume and timing of the government’s future cash inflows through tax, customs, and other revenues, as well as the volume and timing of outflows through salary payments, public expenditures, and the redemption of outstanding debt, thus identifying future cash balances and profiles, including any seasonality. To optimally manage the government’s cash balance, funds should be kept in a single account, typically at the central bank in the form of a Treasury Single Account (TSA). A TSA not only facilitates fiscal and financial planning, but also allows the relevant finance ministry to minimize the volume of idle cash with consequent cost savings. The TSA needs to be replenished in a timely manner to meet future cash shortfalls, typically by issuing short-term instruments such as Treasury bills or financing bills.¹⁵ The government can benefit from such operations of the central bank because a stable and predictable money market is helpful for the smooth conduct of its borrowing operations. Thus, the government and the central bank need to frequently communicate and systematically coordinate their actions, including exchanging cash flow forecasts, without compromising the independence of their respective monetary and fiscal policies.

60. Information on past, current, and projected budgetary activities, including financing, and the consolidated financial position of the government, including short-term cash balances, should be publicly available in a timely manner. Effective communication and information sharing with the investor community is indispensable to developing a government bond market. A primary dealer (PD) system should also be considered to ensure effective communication and to safeguard the government’s cash management abilities.

61. Debt and cash management activities should be supported by an accurate and comprehensive management information system with proper safeguards. Sound business recovery procedures should be in place to mitigate the risk of business interruptions, including from natural disasters, power cuts, social unrest, and terrorism.

62. To finance public debt, there are several types of bonds that can be considered. The most common bond are fixed-coupon bonds based on a coupon rate derived through an auction. To develop a government bond market, it is better to start from a simple structure. Fixed-coupon bonds are relatively easy to manage from the issuer’s point of view because repayment costs are predictable. However, floating rate bonds may attract investors who are sensitive to inflation risk. They are increasingly issued in economies where pension funds are growing. However, they require a reliable 6-month money market rate to price the floating rate, which is not commonly available in emerging markets. Besides, secondary transactions in floating rate instruments are often limited. Floating rate instruments have been popular in Latin American economies that have historically suffered from high inflation and weak savings. On the other hand, Asian economies tend to issue fixed-coupon bonds as they have been managing inflation relatively successfully.

¹⁴ Central banks carry out the cash management function in many economies because changes in the government’s cash balance in the TSA directly impact the current account balance and level of required reserve of the banking sector at the central bank. The central bank therefore has to sterilize the impact with day-to-day open market operations and stabilize the liquidity position of the banking system to maintain the level of policy rate within the target. In order to control the policy rate, the government and the central bank must share the government’s cash management information.

¹⁵ Under some exceptional cases with clear limitation and approval process, the central bank may be able to underwrite the short-term instruments directly from the government to avoid unnecessary market volatility.

2. Auction

63. The ministry of finance (or public debt management office) needs to develop the capacity to employ several issuance methods such as competitive auction, syndicated underwriting, private placement, and tap issuance. The ministry of finance should select its issuance methods and instruments depending on the market conditions and demand sources. Competitive auction is most useful for benchmark bonds regularly issued in large quantities to experienced market participants. Syndicated underwriting is useful for distributing widely and creating a wide investor base including small financial institutions, and accessing new sources of demand or for the introduction of new instruments for which demand is uncertain. Private placement can be negotiated to place very long-term bonds to a small number of expected investors such as pension funds and life insurance companies. Tap issuance allows the government to issue bonds further at a later date on the same terms as before, but at the current market price. Tap issuance is often used for short-term instruments because of its quicker process of issuance. Also, it can be followed by the auction.

64. Nevertheless, a competitive auction system should be developed to enhance the reliability of market-determined yield or price. Emerging markets can begin with a single-price auction and then consider adopting a multiple price auction for market participants to gain experience in bidding. A mixed auction is another option, which has been adopted in the People's Republic of China (PRC), and is useful in promoting price discovery in the primary market by institutions with stronger pricing ability while at the same time allowing more institutions with less pricing ability to participate. As institutional investors expand, and primary market participants gain experience, auctions should move to competitive bidding. The government needs to be a price taker when issuing bonds. At an early stage of market development, the resulting yield from an auction can be considered unacceptably high. In such cases, it is necessary to identify conditions to refuse the result prior to the auction to avoid unnecessary confusion and negative reactions from the market. However, refusing auction results and forcing the market to accept a yield lower than the market rate would prevent the creation of a secondary market, which in the long run will increase issuance costs.

65. As the government bond market develops and deepens, more advanced issuance techniques—such as buyback programs, exchange offers, and switch auctions—can be used to refinance existing bonds to promote their liquidity in the secondary market, or to achieve the ability to lengthen or diversify maturities.

66. In addition, effective coordination between the fiscal and monetary authorities is essential for avoiding auction failures, especially when the central bank issues its own securities or bills in maturity segments in which government securities are also issued.

3. Scheduled Debt Issuance Program to Create a Benchmark

67. The ministry of finance (or public debt management office) needs to periodically update and announce its issuance calendar to help primary market participants in preparing to bid at auctions (Table 2). The ministry of finance should also disclose its debt management strategy, which may include debt structure details, a description of outstanding securities, funding requirements, amortization schedule, schedule for reopening and buyback operations, and the Treasury's cash balance. In formulating debt management strategies, the ministry of finance should consult key market participants systematically to improve market functionality. Understanding the investor base, level of market access, sources of demand, and maturity preferences will help lead to a successful auction.

68. The scheduled periodical issuance of the preferred maturity will create a benchmark issue that can help create the secondary market. It will increase market liquidity and improve market efficiency, thereby reducing the cost of issuance eventually. As the market develops, the ministry of finance may need to develop a methodology to reopen and refinance existing bonds to consolidate into a limited number of large benchmark issues to enhance their tradability and market liquidity.

Table 2: ASEAN+3 Economies with Scheduled Auctions

Economy	Auction
Brunei Darussalam	Yes
People's Republic of China	Yes
Hong Kong, China	Yes
Indonesia	Yes
Japan	Yes
Republic of Korea	Yes
Malaysia	Yes
Myanmar	Yes
Philippines	Yes
Singapore	Yes
Thailand	Yes
Viet Nam	Yes

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan and the Republic of Korea.
 Sources: National authorities' websites; *ASEAN+3 Bond Market Guides*.

B. Central Bank

1. Issuing Agent and Registrar of the Government

69. In many ASEAN+3 economies, the central bank acts as a central securities depository (CSD), particularly for government bonds because they need to carry out monetary policy through open market operations with government securities (Table 3). According to the World Bank Global Payment Systems Survey, of all CSDs worldwide, 33% are operated by central banks and 67% by the private sector.¹⁶ Central banks often function as CSDs for government bonds because they need to carry out monetary policy through open market operations with government securities. Disruptions in CSD operations directly affect monetary operations. In addition, it is operationally easier to manage delivery-versus-payment (DVP) of cash and securities in a real-time gross settlement system (RTGS) under the central bank. Having both the securities (CSD) and cash (RTGS) legs under one platform facilitates settlement automation and operational risk management. CSD functions are essential for the timely posting or delivery of collateral for payments, development of the capital market, and other liquidity management. The central bank's intraday credit, either for monetary policy or payment systems purposes, depends heavily on the timely availability of collateral, for which government bonds are deemed the most preferable assets. Because the government bonds are often considered as almost equivalent to cash, central banks may prefer to function as a CSD of government securities.

¹⁶ F. Wendt, P. Katz, and A. Zanza. 2018. Organizing Central Securities Depositories in Developing Markets—7 Considerations. *IMF Working Paper WP/18/66*. Washington, DC.

Table 3: Central Securities Depositories for Government and Corporate Bonds in ASEAN+3

Economy	CSD for Government Bonds (Name Commonly Known)	CSD for Corporate Bonds
Brunei Darussalam	Autoriti Monetari Brunei Darussalam (Central Securities Depository)	-
Cambodia	-	Cambodia Securities Exchange
People's Republic of China	China Central Depository & Clearing Co., Ltd.	
	China Securities Depository and Clearing Co., Ltd.	
	-	Shanghai Clearing House
Hong Kong, China	Hong Kong Monetary Authority—Central Moneymarkets Unit	
Indonesia	Bank Indonesia (Scripless Securities Settlement System)	PT Kustodian Sentral Efek Indonesia
Japan	Bank of Japan (Bank of Japan Financial Network System)	-
	Japan Securities Depository Center, Inc.	
Republic of Korea	Korea Securities Depository	
Lao PDR	Bank of Lao PDR or Ministry of Finance	Lao Securities Exchange
Malaysia	Bank Negara Malaysia (RENTAS)	
Myanmar	Central Bank of Myanmar (CBM-NET Central Securities Depository)	-
Philippines	Bureau of Treasury (New Registry of Scripless Securities)	Philippine Depository and Trust Corporation
Singapore	Monetary Authority of Singapore	Central Depository (Pte) Ltd.
Thailand	Thailand Securities Depository Co., Ltd.	
Viet Nam	Vietnam Securities Depository	

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea; CSD = central securities depository, Lao PDR = Lao People's Democratic Republic.

Sources: National authorities' websites; *ASEAN+3 Bond Market Guides*.

2. Monetary Operations and the Bond Market

70. Central banks implement monetary policy by setting a policy target such as an interest rate, foreign exchange rate, or monetary aggregate as a nominal and visible anchor. Normally, they set a short-term money market rate as a policy target, but as the target, they may set deposit and lending rates, foreign exchange rate or a quantitative target. A change in the policy target will lead to changes in other interest rates and broad financial conditions; those changes will then affect the decisions of financial institutions, households and businesses, which will have an impact on economic activities. As financial markets develop, central banks can conduct monetary operations through the market such as purchases and sales of financial assets to influence the availability and cost of money and credit in an economy. More precisely, central banks conduct monetary operations by changing the current account balances and required reserve level of financial institutions through transactions on the central bank's balance sheet.

71. The government bond market is very important to conducting monetary operations because a well-functioning government bond market can support open market operations efficiently.¹⁷ For example, to increase the availability of funds in the current account balances of financial institutions in order to reduce

¹⁷ If the government bond market is neither developed nor sufficient to conduct open market operations, central banks can conduct monetary operations through the purchase or sale of other assets, such as commercial bills, and foreign exchange swap transactions.

upward pressure on the policy rate, a central bank provides liquidity via repurchase agreements (repo) for government bonds. Conversely, to mop up excess liquidity in the current account balances to reduce downward pressure on the policy rate, the central bank can sell government bonds via repurchase agreements (reverse repo). By purchasing the most creditworthy asset in an economy (government bonds) through open market operations, central banks can accumulate high-quality assets to uphold the value of bank notes.¹⁸ Since players in the government bond market are varied—including banks, securities firms, insurance and pension funds, and money market funds and investment trusts—the price in the market can be considered a reflection of various stakeholders. Adversely, monetary operations through the market can have a large impact on the decision making of participants and, hence, on economic activities.

3. Government Cash Management and Monetary Operations

72. The day-to-day fluctuation of banks' current account balances at the central bank can be volatile. Banks may face large withdrawals or the accumulation of the balances due to various factors such as demand for cash, foreign capital inflows and outflows, government bond issuance, and government expenditure such as monthly salary and pension payments. An unexpected decline in banks' required reserves might force them to find liquidity at any cost, while unexpected excess reserve might lead them to seek any earning opportunity in the market. Therefore, central banks need to smoothen such volatility and avoid the spread of any misinformation with regard to their policies.¹⁹

73. To avoid market volatility, central banks need to closely coordinate with the government's cash manager because volatility in the government's cash balance directly impacts the current account balances of banks at the central bank. When the government receives taxes and other revenues, commercial banks' reserve accounts at the central bank are debited to make payments to the government. An opposite impact on the banks' current account balance is caused when the government makes payments to banks. Some of the government's cash flows are seasonal as tax collection dates may be fixed monthly or quarterly, and paydays of government officials are also fixed; thus, such seasonality is predictable. The government cash manager should predict such seasonality and may counteract its impacts by prefunding anticipated shortages with Treasury bills and redeeming those against anticipated surpluses. Likewise, central banks need to understand and forecast such absorption and payment schedules so that they can sterilize the impact on the banks' reserve balance through day-to-day monetary operations.

74. A key tool in managing the government's cash balance is the TSA, which consolidates the cash holdings of different line authorities into one account while maintaining notional subaccounts for the line authorities. The central bank and the government cash manager need to closely communicate and coordinate their daily operations. If the TSA is held at the central bank as a fiscal agent, the central bank can observe the TSA balance as well as outgoing and incoming payments on a day-to-day basis. In addition, the government can outsource cash management to the central bank if desired.

C. Securities Market Regulators

75. Securities market regulators are the guardians of market integrity by fulfilling the following objectives: they promote the development of the capital market; support economic development by assuring efficient financial intermediation through the market; ensure fair, efficient, and transparent market transactions for all investors and market players; and prevent systemic risk in which a single failure would spread to the market as whole. A capital market can directly connect parties in shortage and in excess of funds. However, due to the possibility of information asymmetry, the market must have rules for market activities to safeguard

¹⁸ It is necessary to distinguish direct underwriting of government bonds by a central bank and purchases through open market operations. Through open market operations, central banks can purchase bonds at market price while the underwriting price is based on negotiations with the government. Experience shows that continuous underwriting will lead to a lack of discipline in debt financing, thereby creating inflation.

¹⁹ Central banks may set both the floor and ceiling policy rates to keep a market rate within the target range. However, this can be potentially harmful in the long-term because it can create a moral hazard among banks relying on the central bank. Overreliance on a central bank's stand-by facilities reduces inter-bank transactions and, hence, price discovery through the market.

market participants. Over the long-term, this will establish confidence and trust in, and the credibility of, the market.

76. Given the differences in legal and regulatory frameworks, the institutional setup of a securities market regulator can take various forms (Table 4). In the Lao PDR, the Lao Securities Commission Office is embedded in the structure and budget of the Bank of Lao PDR.²⁰ The State Securities Commission of Viet Nam is one of the professional and specialized ministerial units under the Ministry of Finance; in addition, the ministry regulates a market for privately placed corporate bonds. In Singapore and Brunei Darussalam, the central banks, and the Monetary Authority of Singapore and the Autoriti Monetari Brunei Darussalam, respectively, act as capital market regulators. The Japan Financial Services Agency, the Korea Financial Services Commission (with the Financial Supervisory Service [FSS] as its executing agency), and the Indonesia Financial Services Authority are independent government institutions that regulate, supervise, and investigate all sectors of financial services, including the capital market.²¹ In other economies, securities market regulators are established as an independent entity that solely performs the role of capital market regulator; these include the China Securities Regulatory Commission; Securities Commission Malaysia; the Securities and Exchange Commission of Cambodia; the Securities and Exchange Commission of Myanmar, as well as the Securities and Exchange Commission in the Philippines and in Thailand, respectively.²²

77. Irrespective of the institutional setup, securities market regulators should (i) be accountable under a jurisdiction's legal and governing structure, (ii) have a stable source of funding sufficient to exercise its powers and responsibilities, and (iii) be operationally independent from external political or commercial interference.²³

Table 4: Securities Market Regulators in ASEAN+3

Jurisdiction	Securities Market Regulator
Brunei Darussalam	Autoriti Monetari Brunei Darussalam
Cambodia	Securities and Exchange Commission of Cambodia
People's Republic of China	China Securities Regulatory Commission
Hong Kong, China	Securities and Futures Commission
Indonesia	Otoritas Jasa Keuangan (Indonesia Financial Services Authority)
Japan	Japan Financial Services Agency
Republic of Korea	Korea Financial Services Commission
Lao PDR	Lao Securities Commission Office
Malaysia	Securities Commission Malaysia
Myanmar	Securities and Exchange Commission of Myanmar
Philippines	Securities and Exchange Commission
Singapore	Monetary Authority of Singapore
Thailand	Securities and Exchange Commission
Viet Nam	State Securities Commission and Ministry of Finance

Lao PDR = Lao People's Democratic Republic.

Sources: National authorities' websites; ASEAN+3 Bond Market Guides.

²⁰ ADB. 2018. *Lao PDR Bond Market Guide*. Manila. The Lao Securities Commission Office is expected to become an autonomous government agency and the sole regulatory authority of the securities market in the course of the implementation of the Eighth National Socioeconomic Development Plan.

²¹ In the Republic of Korea, the FSS, with guidance from the Financial Services Commission, is responsible for the inspection and supervision of financial institutions.

²² In the PRC, the China Securities Regulatory Commission is responsible for the exchange bond market as the main regulator and supervisor. In the Inter-Bank Bond Market, the People's Bank of China is the main regulator and supervisor.

²³ IOSCO. 2017. *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*. Madrid.

1. Functions of Securities Market Regulators

78. The overriding objectives of securities market regulators around the world are to develop and, at the same time, regulate the local capital market in a fair, efficient, and transparent manner. It is the common challenge for most securities market regulators to differentiate and find the right balance between the two roles. As the circumstances and the market environment differ from economy to economy, there is no standard, one-size-fits-all approach to guide securities market regulators in designing regulations that can balance the two functions.

79. According to the International Organization of Securities Commissions (IOSCO), the core objectives of securities regulation are (i) protecting investors; (ii) ensuring that markets are fair, efficient, and transparent; and (iii) reducing systemic risk. These objectives are closely related, and in some respects, overlap. For example, a market that is fair, efficient, and transparent can minimize front running, market manipulation, and improper trading practices, thus ensuring that all investors are treated fairly and equally.

80. Furthermore, having a regulatory framework in place to allow intermediaries to effectively manage risk that may arise as a result of market volatility (e.g. settlement failure, forced sale of securities, stock market glitch, and cyberattacks) would also increase protections for investors and financial systems in general. The reduction of systemic risk is not limited to one jurisdiction, but can go beyond national borders given the increasing intraregional investment across different markets in the region. Thus, the role of securities market regulators is not just limited to the domestic market; international collaboration is equally important.

81. An overregulated market can create unnecessary frictions and increase transaction costs for both issuers and investors, and for other market participants, making the market less efficient and less competitive among its peers. On the other hand, an underregulated market can increase systemic risk, market manipulation, and fraudulent activities, and generate inefficient investor protection mechanisms.

2. Roles of Securities Market Regulators in Developing Corporate Bond Markets

82. Securities market regulators, together with relevant institutions such as the ministry of finance, central bank, and bond market association, play instrumental roles in developing an LCY bond market. Particularly, securities market regulators play a primary role in the development of a corporate bond market. Regulations related with the corporate bond market include not only securities law but also commercial law, corporate law, bankruptcy law, and financial accounting regulations. Regulators need to apply consistency among all relevant laws and regulations. In addition, regulators need to ensure efficient and robust securities settlement, where cooperation and collaboration with the central banks are indispensable.

83. Securities market regulators regulate the issuance of and secondary transactions for corporate bonds. These regulations generally specify qualifications of the issuer, disclosure requirements, issuance approval and registration criteria, and continuing obligations. In many cases, these regulations are tailored to different type of investors—such as institutional investors, high-net-worth individuals (HNWIs), and retail investors—based on the different levels of technical expertise that require different levels of protection.

84. As the most convenient practice, a bond can be issued bilaterally or to a small number of investors as a private placement. Private placements are often unregulated or less regulated (light touch regime) because they are not traded in a market. A private placement can be flexible like a bank loan based on a contractual agreement. This can be legally recognized as a bond or note under a securities law or a promissory note under commercial law, depending on the jurisdiction. Flexibility can be considered a merit, but private placement may not be able to mobilize a significant number of investors; hence, it would not be suitable for large infrastructure funding.

85. To balance the merits and demerits of private placement, some ASEAN+3 markets have introduced a private placement regime with lighter regulation by limiting investment opportunities to sophisticated or accredited investors. These sophisticated or accredited investors include institutional investors such as banks, insurance companies, pension funds, mutual funds, and HNWIs or corporates that have income or

assets exceeding thresholds set by the regulators. This group of professional investors does not require the same level of protection as retail investors, given their technical expertise and risk tolerance. They understand and accept the risks associated with the investment in search of higher returns.

86. On the other hand, retail investors require a higher level of protection and proper investment advice provided by licensed intermediaries. If bonds are offered to the public, including retail investors, it is necessary to have proper and stricter investor protection regulations. The offering process and disclosure documents need to be reviewed by the regulator; thus, the process may take time.

87. To balance the merits and demerits of a public offering, some ASEAN+3 markets have introduced an exempt market regime for professional institutional investors. Unlike equities, bond investors are mostly institutional investors. Therefore, the market can create exemption from regulations for public offering. A regulated private placement for professional investors and an exempt public offering market for professional investors are similar in practice. The regulators need to safeguard or ring-fence retail investors by segregating the professional investors from retail investors. How to constitute the professional investors market depends on each jurisdiction and its framework for securities regulation. It also can be considered as a wholesale or separate professional market to create a conducive regulatory environment that balances between market development and investor protection.

D. Self-Regulatory Organizations

88. Self-regulatory organizations (SROs) are nongovernmental organizations that have the power to create and enforce certain rules, standards, and guidelines for participating members. All SROs are subject to governmental regulatory oversight and gain their status from regulators. Government oversight, with no exceptions, is an essential element in the self-regulatory structure. Depending on the statutory delegation, authorization, and recognition by the regulators, the roles and responsibilities of SROs in ASEAN+3 differ from economy to economy.²⁴ Even among bond market or securities dealer associations, delegated powers and functions can differ.

89. Securities market SROs can (i) establish eligible self-regulatory rules that must be satisfied by participating members in any significant securities market activity; (ii) establish and enforce binding rules of trading, business conduct, and qualification for institutions engaging in certain securities activities; and (iii) establish disciplinary rules and/or conduct disciplinary proceedings, which would enable the SRO to impose appropriate sanctions for noncompliance of its rules. In addition, SROs can and are expected to facilitate communication between their members, nonmember market participants, and regulators to develop and improve the market.

90. SRO rules can encompass the authority to create, amend, implement, and enforce rules of listing, trading, and business conduct and/or qualification regimes with respect to the persons (i.e., legal and natural persons) subject to the SRO's jurisdiction. Some SROs resolve disputes through mediation, arbitration, or other appropriate dispute resolution mechanisms. This authority may be derived from a statutory delegation of power to an SRO or through a contract between an SRO and its members as authorized or recognized by the regulator.²⁵

91. For instance, the National Association of Financial Market Institutional Investors (NAFMII) in the PRC acts as an SRO in regulating the China Inter-Bank Bond Market. The Korea Financial Investment Association (KOFIA) manages and administer the OTC bond market in the Republic of Korea. The Thai Bond Market Association (ThaiBMA) and the Japan Securities Dealers Association set and implement standards and conventions for bond trading in their respective jurisdictions. The Financial Market Association of Malaysia is not recognized as an SRO but it has developed and maintains a code of conduct

²⁴ The ASEAN+3 SRO Working Group conducted detailed research and analysis. See chapter 3, section 2 in the *Report of ASEAN+3 SRO Working Group Regarding SROs Roles and Functions under AMBIF*.

²⁵ IOSCO. 2017. *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*. Madrid.

and defines trading conventions for the industry, which are also recognized by the Securities Commission Malaysia.

92. Since bonds can be listed on securities exchanges, many of the exchanges in ASEAN+3 have the status of an SRO for bond markets as well (Table 5). An exchange's role as the listing authority is important for bond and other securities markets because its function is essential for maintaining market confidence in the listed securities and the quality of available disclosure information. A regulation may require a listing on the exchange to offer bonds to the public. Also, some CSDs play the role of an SRO (or quasi-SRO) to administer or govern participation and activities in depository and settlement infrastructure.

Table 5: Self-Regulatory Organizations in ASEAN+3

Economy	Self-Regulatory Organization
People's Republic of China	China Central Depository & Clearing Co., Ltd.
	China Securities Depository and Clearing Corporation Limited
	National Association of Financial Market Institutional Investors
	Securities Association of China
	Shanghai Stock Exchange
	Shenzhen Stock Exchange
Hong Kong, China	Hong Kong Exchanges and Clearing Limited
Indonesia	Indonesia Central Securities Depository
	Indonesia Clearing and Guarantee Corporation
	Indonesia Stock Exchange
Japan	Japan Exchange Regulation
	Japan Securities Dealers Association
	Tokyo Stock Exchange ^a
Republic of Korea	Korea Exchange
	Korea Financial Investment Association
	Korea Securities Depository
Malaysia	Bursa Malaysia
Myanmar	Yangon Stock Exchange
Philippines	Philippine Dealing & Exchange Corp.
Singapore	Singapore Exchange Ltd.
Thailand	Stock Exchange of Thailand
	Thai Bond Market Association
Viet Nam	Hanoi Stock Exchange

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea.

^a for the TOKYO PRO-BOND Market.

Source: Asian Development Bank.

E. Issuers

1. Corporate Finance and Asset-Liability Management

93. Companies issue bonds as part of corporate financing in which they identify sources of funding and their capital structure to increase their corporate value. Bonds are issued to finance various corporate activities and support ongoing operations as well as future business. As a corporate finance strategy, a company will plan, manage, and control cash and liquidity as well as long-term funding. A company can choose to raise funds by borrowing from a bank, issuing short-term debts like commercial paper, or issuing equities or long-term debts in the capital market.

94. Through strategic corporate financing, companies can manage financial risks such as liquidity risk, interest rate risk, and currency risk. They manage the risks through the asset–liability management (ALM) of their balance sheet and corporate bond issuance is an important tool to be considered.

95. ALM is particularly important for financial institutions. Banks can be active bond issuers in support of their ALM. Following the failure of banks during the global financial crisis, the Basel Committee on Banking Supervision introduced two liquidity standards as part of the Basel III post-crisis reforms. The first standard is the LCR, which enhances banks' short-term resilience.²⁶ Another standard is the net stable funding ratio, which promotes resilience over a longer time horizon by creating incentives for banks to fund their activities with more stable sources of funding on an ongoing basis.²⁷

2. Infrastructure Finance

96. According to the Asian Development Bank (ADB), developing Asia will need to invest USD26 trillion from 2016 to 2030, or USD1.7 trillion per year, if the region is to maintain its growth momentum, eradicate poverty, and respond to climate change.²⁸ Deepening bond markets is critical to support infrastructure finance. While bank loans continue to be an important financing source, tightening banking regulations, such as single borrower limits and maturity mismatch provisions, implies that bond financing must assume a greater role to complement bank loans. As the portfolios of institutional investors expand, demand for high-quality LCY bonds is also growing. As revenues generated from infrastructure projects are increasingly denominated in local currencies, funding needs are also shifting to local currencies. Given the growing demand for corporate bonds and the need for infrastructure investments in the region, there is great potential for expanding the use of LCY bonds for infrastructure finance.

97. However, challenges remain. The lack of a legal and institutional framework (e.g., uncertainty regarding bankruptcy law), an inappropriate legal framework for PPPs, unsecured concessions and offtake agreements, unclear licensing and permitting processes, and difficulties with land and right-of-way acquisition would make the risk premium of a project higher and, thus, less bankable. The lack of experience and expertise among investors can make them less willing to take risks. And the limited size of LCY bond markets can act as a constraint on large project finance.

98. Within ASEAN, Malaysia is seen as a successful model. In addition to meeting the basic preconditions of having a necessary legal and institutional framework, Malaysia has structured various projects with the involvement of state-owned or well-established Malaysian companies as project sponsors. It uses an additional credit enhancement facility and long-term concession agreements, and the catalytic role of the Employees Provident Fund (EPF) and the national public sector pension fund in bringing domestic institutional investors to project bonds.²⁹

99. While project bonds are not as common in other ASEAN markets, infrastructure-related companies, often state-owned entities, have issued significant LCY corporate bonds. Although these issues do not have explicit government guarantees, and repayment is dependent on the business revenues of the entities, investors and rating agencies often draw comfort from the government relationship. Development (or policy) banks also play a major role in infrastructure finance across the ASEAN+3 region and are often among the largest issuers of LCY bonds.³⁰

100. The common challenge in a number of economies across the region is the relatively small size of the institutional investor base and its risk appetite relative to the needed infrastructure investments. In other words, there is a mismatch between the amount and risk. To mitigate the gap, one option is to provide

²⁶ The LCR is designed to ensure that banks hold a sufficient reserve of high-quality liquid assets (HQLA) to allow them to survive a period of significant liquidity stress lasting 30 calendar days.

²⁷ BIS. 2018. *Net Stable Funding Ratio—Executive Summary*. Basel.

²⁸ ADB. 2017. *Meeting Asia's Infrastructure Needs*. Manila.

²⁹ ADB. 2015. *Local Currency Bonds and Infrastructure Finance in ASEAN+3*. Manila.

³⁰ ADB. 2015. *Local Currency Bonds and Infrastructure Finance in ASEAN+3*. Manila.

credit enhancement mechanisms (Table 6). In addition, to fully address the problem, it is also necessary to make continued efforts to reduce uncertainty in the legal and institutional framework and to deepen bond markets by expanding the investor base.

Table 6: Credit Guarantee Facilities in ASEAN+3

Economy	Entity
Indonesia	Indonesian Infrastructure Guarantee Facility
Republic of Korea	Korea Infrastructure Credit Guarantee Fund
Malaysia	Danajamin Nasional Berhad
ASEAN+3	Credit Guarantee and Investment Facility

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea.
Source: Asian Development Bank. 2015. *Local Currency Bonds and Infrastructure Finance in ASEAN+3*. Manila.

F. Underwriters

101. Underwriting is the process by which financial institutions raise funds in the debt capital market from investors on behalf of the issuer. Underwriters are financial institutions that acquire the new issue from the issuer to distribute the bonds, notes, and other debt instruments (except banking products) to investors.

102. These financial institutions are mostly securities firms and banks that are allowed to engage in underwriting business either under a license from the regulator or registration with the regulator and meeting the requirements under law or regulations for investor protection.

103. The terms used for those institutions that engage in underwriting business varies. They are called an “underwriter” in many economies, but they are also known as a “dealer” or “financial advisor” in some economies.

1. Type of Underwriting

104. There are, in principle, two types of underwriting contracts, namely (i) the purchase agreement, and (ii) the subscription agreement.

a. Purchase Agreement

105. Underwriters purchase the entire issuance amount at new issue prices under a purchase agreement. During the offering period, underwriters resell to investors at the new issue price. If there are unsold positions at the end of the offering period, underwriters will either keep them in their inventory or sell them at the then-prevailing market price in the secondary market.

b. Subscription Agreement

106. Underwriters arrange for investors to subscribe to new bond issues at the new issue price by the end of the offering period. At the end of the offering period, underwriters will subscribe to the portion unsubscribed by the investors at the new issue price and will either keep this portion in their inventory or sell it at the then-prevailing market price in the secondary market.

107. Both ways of underwriting guarantee an issuer accomplishment of an issuance because the underwriter buys up either all of the issue (by purchase agreement) or subscribes to the unsubscribed

portion (by subscription agreement). At the same time, the underwriter will face market risk by holding inventories if the issue is mispriced.³¹

2. Types of New Issue Transactions

a. *Government Bonds*

108. New issues of government bonds may be placed in the primary market through either (i) an auction method or (ii) the use of a syndicate of market participants.

(i) *Auction*

109. An auction is a variation of competitive bidding that is specialized for highly liquid government bond new issues. There is no lead manager or a single fixed price for the whole amount of the offering because the government accepts bids from the highest bidder until the entire new issue amount has been placed. In practice, the (i) conventional auction and (ii) Dutch auction methods are widely used.

110. Direct participants in the auction of a government bond issue are called primary dealers (PDs). A PD is a financial institution (banks and securities companies in most cases) that buys new issues directly from the government with the aim of re-selling them to non-PDs (mainly investors), thereby acting as a market maker of government issues. The government may regulate the behavior (e.g., amount of minimum lot of bidding and minimum amount of successful bid) and number of PDs, and impose conditions on their participation (e.g., capital resources, human resources, sales networks, trading performance). Some governments sell their issues only to PDs; some sell them to other market participants as well even though the vast portion of an issue is resold by PDs.

111. PDs enjoy privileges in the primary market, including exclusive underwriting rights for government bonds and a standing cash borrowing arrangement. At the same time, PDs are obliged to fulfill specified duties in the market. PDs also act as counterparties in the central bank's open market operations in some ASEAN+3 economies (Table 7).

³¹ In contrast to hard underwriting (or firm commitments such as a bought deal and competitive bidding, see also the relevant sections), market participants sometimes favor a practice referred to as "soft underwriting," if so permitted by market authorities, which carries no obligation to purchase the unsubscribed portion of a targeted issue amount. Solicitation and negotiation by an arranger are conducted on a best-effort basis, in an agent capacity only, and the arranger may still decide to underwrite part of the issue amount at a later stage, depending on investor demand or risk factors. In the case of soft underwriting, the issue amount may not be guaranteed or it may be cutoff at the level of investor subscriptions; the issue may even be canceled or withdrawn if demand is weak. Soft underwriting, if practiced, is typically limited to institutional placements and not practiced in offers to the general public.

Table 7: ASEAN+3 Economies with Primary Dealer System

Economy	Number of Primary Dealers	Designation	Source
People's Republic of China	45	Primary Dealer	State Street Global Advisors
Hong Kong, China	10	Primary Dealer	Hong Kong Monetary Authority
Indonesia	19	Primary Dealer	Ministry of Finance
Japan	21	JGB Market Special Participant	Ministry of Finance
Republic of Korea	19	Primary Dealer	Ministry of Economy and Finance
Malaysia	12	Principal Dealer	Bank Negara Malaysia
Philippines	34	Government Securities Eligible Dealer	Department of Finance
Singapore	13	Primary Dealer	Monetary Authority of Singapore
Thailand	14	Primary Dealer	Thai Bond Market Association

JGB = Japanese government bonds.

Sources: National authorities' websites; ASEAN+3 Bond Market Guides, State Street Global Advisors.

112. **Conventional auction.** A bidder places the amount and purchase price based on their preferences. The issuer accepts multiple bids from the highest bid to the lowest bid until the aggregated bid amount reaches the issue amount. A conventional auction is often described as the multi-price auction method because of multiple new issue prices or as a perfect auction system due to it most directly reflecting free competition.

113. **Dutch auction.** A method for pricing a new issue at the lowest bid in the auction that allows for the aggregated bids to reach the total new issue amount. Unlike a conventional auction, a new issue allocation price for all PDs is set at the same as the lowest price regardless of their bidding price in the auction.

(ii) Syndicate

114. While a new domestic government bond issue is normally auctioned to PDs, a syndicate system may be adopted instead of an auction when:

- (i) the government is issuing in foreign currency. The issue is underwritten by the international syndicate members in order to resell them to foreign investors;
- (ii) the government faces a shortfall in the issuing amount due to a lack of bids from PDs;
- (iii) the government wants to distribute bonds to various financial institutions widely.

115. A syndicate might be formed in order to cover the shortfall. A syndication system may also be considered if the issue size is inappropriate for conducting an auction.

b. Corporate Bonds

116. Corporate bonds are issued in one of three ways: (i) competitive bidding, (ii) negotiated transaction, and (iii) bought deal. The new issue transaction type is defined in conjunction with the appointment of a leading financial institution that has primary responsibility for managing new issue transactions and pricing methods. The lead financial institutions are called lead manager, book runner, lead underwriter, or lead financial advisor.³² Often more than two lead managers are appointed. A lead manager is appointed by the issuer to manage and execute the new issue transactions under its leadership, including due diligence, requesting a comfort letter and management certificate, raising issuance documentation and filing documents with regulators or an exchange, initiating price discovery, handling price talks, pricing, forming a syndicate, allocating a new issue position to syndicate members, and closing the new issue.

³² For instance, in Viet Nam, the term "financial advisor" is used for the entity performing underwriting functions.

(i) Competitive Bidding

117. Under competitive bidding, an issuer appoints the lead manager who commits to the tightest pricing for a new issue. The issuer generally does not allow financial institutions to make an inquiry to investors by disclosing the issuer name before bidding.

118. **Merits.** An issuer is guaranteed to accomplish a successful new issue because of a firm commitment to buy up the whole issue by the lead manager. The lead manager and underwriters can improve the relationship between the issuer and investors, raising the underwriting league table position and enjoying underwriting fee revenue.

119. **Risks.** The winning bid price may not be the result of fair pricing because neither book-building nor price discovery was done before bidding. It is not certain if there is true demand from investors. If the issue turns out to be mispriced, it will lose credibility of pricing information in the primary and secondary markets. There would be a discount sale immediately after the launch in order to adjust the mispricing to a fair level, which may cause the issuer's credibility to suffer due to a loss of trust from the market and investors. Such phenomena have been observed in several markets and such issuers often are labeled as hit-and-run issuers. The main reasons for such behavior are as follows: a financial institution quotes an intentionally tighter bid price than others in order to improve its underwriting league table position or to prevent other financial institutions from penetrating their prime client issuer, and vice versa. In addition, the underwriter may also want to take inventory at a level even tighter than the current market level based on an assumption of a declining interest rate (bond price increase) in the near future.

(ii) Negotiated Transaction

120. An issuer appoints the lead manager to find out appropriate new issue terms and conditions (e.g., maturity, price, and amount) to be sold out or fully subscribed by investors without a price discount in the primary market.

121. The meaning of "negotiated transaction" derives from the process that the issuer instructs the lead manager(s) to conduct price discovery by negotiating directly with investors on behalf of the issuer to find out the tightest fair pricing level to accomplish the planned new issue amount. Negotiated transaction refers to the book-building process involving underwriters or syndicate members. The issuer selects the lead manager from the viewpoint of capability in fair price discovery by making investors compete, managing the credit and distribution strategy for the purpose of creating momentum among investors to the extent a "blow-out deal" (immediate spread tightening after launch) is doable. The lead manager is not required to indicate pricing levels throughout the new issue process until price discovery is completed.

122. Book-building is a typical price discovery process under a negotiated transaction. The lead manager(s) will sound out investor interest (i.e., build a book of potential orders), then negotiate with the issuer on the final pricing and issue amount based upon the results of the price discovery. In some ASEAN+3 member economies, book-building is defined or even mandated by the SRO governing the OTC market as part of the market's underwriting practices; the SRO will issue corresponding book-building rules or publish agreed practices, and underwriters are bound by these rules and practices.

123. **Merits.** Accurate fair pricing is achievable and the process is transparent. Issuers are given a choice of making an "OK deal" or a blow-out deal. The latter can be a good long-term strategy for those issuers who require a series of fund-raising through new issue transactions in the capital market because investors tend to remember the momentum created in the previous issue.

124. **Risks.** If the issuer has a specific target cost and amount there is risk that the outcome of the price discovery process will be higher than the target cost or smaller than the target amount.

(iii) Bought Deal

125. A bought deal is a new issue transaction in which a financial institution commits to purchase the entire amount of a new issue. A reverse inquiry, i.e. the approach of the issuer by an investor to check whether the issuer may be willing to issue specific debt, would be a typical bought deal transaction.

126. **Merits.** A bought deal eliminates the issuer's financing risk.

127. **Risks.** The timing of an investor's investment appetite may not be agreeable with the timing of the issuer's funding appetite. The size of a bought deal, especially a reverse inquiry, might be limited, since it only involves a single investor.

3. Key Practices in New Issue Underwriting Process

128. As for key steps in the new issue regulatory process, refer to the respective *ASEAN+3 Bond Market Guide* (2016–2018) for each economy in the region³³.

4. Due Diligence

129. Due diligence is an investigation usually conducted by the underwriters and carried out through the new issue process for the purpose of confirming the completeness and accuracy of information in disclosure documents (information memorandum or prospectus or selling memorandum or their preliminary versions that are presented or handed over or distributed to prospective investors) in relation to soliciting the new issue offering.

130. Due diligence is conducted for corporate bond issues. As far as the government issue in the domestic bond market is concerned, market practice may not require due diligence because the government is defined as a “disclosure exempt entity” and “risk free.” For government issues in a foreign currency in a foreign market, the international syndicate members may require due diligence.

131. As for nongovernment issues such as corporate bonds, due diligence is a mandatory business practice for a public offering and is also required in a nonpublic offering or placement to professional investors as long as disclosure documents, information memorandum, and any other materials are presented in the course of soliciting prospective investors.

132. From the issuer's and the underwriters' viewpoints, it reduces the chances of being sued by investors for providing untrue information, and by underwriters for using inappropriate information material in soliciting investors, respectively.

a. Participants in the Due Diligence Process

133. Normally, the following parties participate in the due diligence process: (i) lead manager or underwriter(s), (ii) underwriter's legal counsel, (iii) issuer, (iv) the auditor for the issuer, and (v) issuer's legal counsel.

134. Either the lead manager or the underwriters' legal counsel chairs the due diligence meeting (or call) based on the standard business practice of a particular market.

b. Form of Due Diligence

135. There are mainly two forms of due diligence.

³³ ADB. *ASEAN+3 Bond Market Guide*. <https://www.adb.org/publications/series/bond-market-guides>.

(i) Required Disclosure Item Due Diligence

136. This form of due diligence is conducted to investigate only the items that are required by laws, regulations, and other rules, such as SRO rules.

(ii) Quality and Contents Due Diligence

137. This form of due diligence is conducted to investigate a much wider range of items than those required by laws, regulations, and rules.

c. Coverage of Due Diligence

138. Due diligence covers the issuer, management, auditor for the issuer, and legal documents. The form of due diligence needed depends on the business practice of each market.

(i) Issuer Due Diligence

139. Underwriters, through materials submitted by the issuer, investigate the issuer's business operation, performance, and business environment to check if there are any material omissions, misleading statements, or untrue expressions in the disclosure documents.

(ii) Management Due Diligence

140. Underwriters conduct a management interview to investigate management policy and management account figures to check if statements in the management discussion and analysis part of the disclosure documents are described correctly without any material omissions, misleading expressions, or untrue information.

(iii) Auditor Due Diligence

141. Underwriters conduct due diligence on the auditor for the company to investigate audit policy and material fact-finding by the auditors.

(iv) Legal Due Diligence

142. The underwriters' legal counsel conducts legal due diligence on the issuer to investigate material legal documents—such as supply contracts, alliance contracts, merger and acquisition-related contracts—in order to check if there are unfavorable contracts from an investor protection viewpoint. Legal due diligence is mainly conducted by the underwriters' legal counsel without the attendance of underwriters because of the sensitivity of the due diligence.

d. Timing of Due Diligence to Conduct in the New Issue Process

(i) Initial Due Diligence or First Due Diligence (Full Scope of Due Diligence)

143. Underwriters conduct the full scope of due diligence on the issuer, management, and auditor prior to filing, registration, listing, or making preliminary disclosure documents available to prospective investors.

144. The underwriter's legal counsel conducts legal due diligence prior to filing, registration, listing, or making preliminary disclosure documents available to prospective investors.

(ii) Bring-Down Due Diligence or Second or Third Due Diligence

145. Bring-down due diligence is a series of follow-up due diligence on the issuer and is conducted immediately prior to launching, pricing, and closing. It is conducted to confirm that no material change has

occurred and/or additional disclosure is required. If there will be a preclosing meeting to confirm the closing process and state of the issuer, then bring-down due diligence prior to the closing may be skipped.

146. Due diligence is conducted as a business practice independent from authorities' checks related to issuance, registration, or listing approvals.

5. Comfort Letter

a. *First Comfort Letter*

147. A comfort letter is a document issued by an accounting firm to confirm or assure that financial figures are correctly calculated, referred, and described from accurate accounting sources in the offering documents available to prospective investors such as a prospectus, information memorandum, sales memorandum, or selling memorandum.

148. Normally, the lead manager requests the issuer to instruct the accounting firm (auditor) to issue a comfort letter at the issuer's cost. Underwriters do not bear the cost for a comfort letter to avoid a conflict of interest.

149. Underwriters also ask the accounting firm to investigate subsequent changes in major balance sheet or profit-loss items (line items) from the previous annual audit date until the cutoff date, which is on average set 5 business days before filing, registration, listing, or making disclosure documents available to prospective investors and reporting the results in the comfort letter.

b. *Bring-Down Comfort Letter or Second (or Third) Comfort Letter*

150. Bring-down due diligence is conducted in the new issue process. Likewise, a bring-down comfort letter, or a second comfort letter, is issued by the accounting firm prior to pricing and closing. It confirms that no event requiring amendment of audited financial figures has arisen since the previous cutoff date. It also reports any changes in line items since the last audit date or the dates of the last financial statement and previous cutoff date.

c. *Comfort Letter Format*

151. Practices and formats in relation to comfort letters differ across economies and markets.

152. For example, in the European bond market, the International Capital Market Association (ICMA) format is commonly used, while the Statements on Auditing Standards (SAS) 72 or SAS 133 formats are used in the US. In Japan, a letter from the auditor to the book runner based on a template prepared by the Japan Securities Dealers Association (a domestic SRO) is the common format of comfort letter, but the SAS 72 format and ICMA format are also accepted provided the issuer is a nonresident.³⁴

153. While several comfort letter formats exist, a typical one includes the following:

- (i) statement of the accountant's independence from the issuer;
- (ii) audit of the issuer's financials, compliant with laws concerning audit;
- (iii) statements regarding the accountant's review of quarterly or semiannual unaudited financial statements (semiannual audit standards are different from annual audit standards);
- (iv) any changes in selected key line items during the period after the date of the latest audit date or financial statement;

³⁴ Details of the ICMA and SAS can be found at: <https://www.icmagroup.org> and [https://uk.practicallaw.thomsonreuters.com/4-501-7654?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&comp=pluk&bhcp=1](https://uk.practicallaw.thomsonreuters.com/4-501-7654?transitionType=Default&contextData=(sc.Default)&firstPage=true&comp=pluk&bhcp=1).

- (v) comments on the results of confirmation procedures performed on financial information items in the disclosure materials to solicit prospective investors reviewed by the underwriters; and;
- (vi) depending on the business practice of each market, negative assurance statements relating to the unaudited comparative stub period financial statements included in the disclosure documents, such as a registration statement or prospectus, or an information memorandum or other disclosure material to solicit prospective investors.³⁵

6. Management Certificate

154. There are many nonfinancial figures and ratios described in offering materials that can have a significant impact on the decision making of prospective investors. For example, an issuer's annual budget on sales and revenue and its past history of achieving ratios relative to the yearly budget would be of interest to investors. These are defined as management account figures.

155. Monitoring management accounting is very critical for the running of the company. Management figures—such as budget, achievement ratios, number of employees, and number of branches—are outside the scope of the comfort letter because they are not financial accounting figures that can be audited.

156. Underwriters may require the chief executive officer (CEO) or chief financial officer (CFO) to issue a management certificate and a bring-down management certificate immediately prior to a major milestone in the new issue process confirming that the management account figures described in the disclosure documents for investors are accurate. This management certificate is often called a CEO certificate if it is signed by the CEO, or a CFO certificate if it is signed by the CFO.

7. Market Making and Matching

157. Market making is an action of trying to match sell orders and buy orders for the purpose of executing transactions by a market intermediary such as an exchange, interdealer broker, or market makers.

158. There are two types of matching buy and sell transactions in the market: (i) order-driven and (ii) quote-driven.

a. Order-Driven Market Making

159. Order-driven market making involves executing a transaction by matching buy and sell orders in accordance with the principle of price priority and time priority. This method is mainly used for the exchange market for listed products and the interdealer broker market for government securities where plenty of buy and sell orders are placed. The exchange or interdealer broker simply executes transactions by matching orders in accordance with the principle of price priority and time priority.

160. Normally, a financial institution acting as an intermediary and working as an agent for investors receives orders from investors and puts them through to the trade matching system of the exchange or an interdealer broker. Execution is systematically done in accordance with the principle of price priority and time priority, i.e., orders are prioritized first by the price stated, then by the time at which they have been

³⁵ Negative assurance is a comment by the auditor that nothing of an adverse nature or character regarding the financial data reviewed has come to the auditor's attention. Negative assurance statements are made on unaudited financial statements and subsequent changes to indicate that nothing came to the auditor's attention that suggest the statements do not comply with applicable accounting requirements; are not fairly presented in conformity with Generally Accepted Accounting Principles applied on a consistent basis; or do not fairly present information shown. The underwriter may ask an auditor to interview the CFO or treasurer to confirm that there are no material changes if the auditor has not given negative assurance. Negative assurance is provided in the comfort letter in international markets and some domestic markets, but there are some economies in the ASEAN+3 region where accounting firms will not provide negative assurance.

received. If no offsetting order can be found in the matching system, no trade is executed and the intermediary does not need to take a position.

161. An order-driven market, however, may not work well if orders are one-sided or if the bond is illiquid.

b. Quote-Driven Market Making

162. Prices are determined from the bids and offers quoted by a financial institution such as a securities firm acting as market maker. The quote-driven method is also known as the dealer-driven method because dealers fill orders from their own inventory or by matching them with other orders. Generally, a market maker takes a position in the inventory until they find an offsetting order from another investor. This method is commonly observed in the OTC market for nongovernment bonds, especially corporate bonds with limited liquidity.

163. There are three types of quote-driven methods: (i) two-way firm quote, (ii) bid only, and (iii) indication only.

(i) Two-Way Firm Quote

164. Dealers have an obligation to state a firm bid price and offer a price to a trading counterparty (other dealers and investors). Once dealers state a firm bid and offers a price, they have to transact the minimum trading amount at the firm price when the price is hit by another dealer or investor. Even though dealers have no position in the inventory, they have to fulfill the bidding (by taking on inventory) or offer (by going short in the inventory).

(ii) Bid Only

165. Dealers who want to avoid a short position for illiquid paper may quote a bid price only. They quote an offer price for a certain amount provided they get a long position. The bid only market is used for small-sized corporate bonds.

(iii) Indication Only

166. If dealers do not like to trade a bond for any reason, they may quote as an indication only. By declaring an indication only, dealers can give an investor the prevailing price level without any obligation to transact. Indication only quotations by dealers are used for bonds that are sought by buy-and-hold investors for the purpose of holding the bond to maturity.

167. The two-way firm quote method is desirable, but it depends on each market convention or business practice.

G. Credit Rating Agencies

1. Functions of a Credit Rating Agency

168. Credit rating agencies (CRAs) issue a credit rating, which is an “assessment regarding the creditworthiness of an entity or obligation, expressed using an established and defined ranking system.”³⁶ The assessment includes the creditworthiness of entities (e.g., companies, organizations, and governments), or of securities and obligations, which shows how likely an entity is to make timely payments on a financial obligation. CRAs analyze information available on an entity, its market, and its economic circumstances to provide a better understanding of the risks it faces. The credit rating may change if additional information becomes available. In this regard, a rating is given on an ongoing basis or, typically, is at least reviewed on an annual basis. The assessments of CRAs can reduce the asymmetry of information

³⁶ IOSCO. 2015. *Code of Conduct Fundamentals for Credit Rating Agencies*. Madrid.

and help develop the capital market. These assessments are utilized by debt issuers, investors, lenders, and other market players. Credit ratings help investors understand the risks and uncertainties when making an investment decision; hence, they contribute to lowering the risk premium and cost of raising capital for issuers.³⁷ Often, ratings are imbedded in an application of regulations such as listing requirements, Basel II, and the investment guidelines of insurance and pension funds (Table 8).³⁸ As a result, CRAs can influence capital markets and financial transactions in various ways. Credit ratings may affect issuers' access to capital and their decisions, and influence the structure of financial transactions.

Table 8: Rating Requirements in ASEAN+3

Economy	Public Offers	Private Placements
Cambodia	Required	Not applicable
People's Republic of China	Required	Not required
Hong Kong, China	Not required	Not required
Indonesia	Required	Not required
Japan	Not required	Not required
Republic of Korea	Required	Not required
Malaysia	Required	Not required
Philippines	Required	Not required
Singapore	Not required	Not required
Thailand	Required	Not required

Source: Association of Credit Rating Agencies in Asia. 2016. *Asia Credit Rating Guidebook: Regulatory Rating Requirements and Credit Rating Agencies in Asia*. Manila.

169. Given the influence of CRAs in capital markets, IOSCO has established the Principles Regarding the Activities of Credit Rating Agencies to improve rating activities and usage. These principles are as follows:

- (i) CRAs should endeavor to issue opinions that help reduce the asymmetry of information among borrowers, lenders, and other market participants;
- (ii) ratings decisions should be independent and free from political or economic pressures, and from conflicts of interest arising due to the CRA's ownership structure, business or financial activities, or the financial interests of the CRA's employees, while CRAs should also, as far as possible, avoid activities, procedures, or relationships that may compromise or appear to compromise the independence and objectivity of their credit rating operations;
- (iii) CRAs should make disclosure and transparency an objective in their ratings activities; and
- (iv) CRAs should maintain in confidence all nonpublic information communicated to them by any issuer, or its agents, under the terms of a confidentiality agreement or otherwise under a mutual understanding that the information is shared confidentially.³⁹

170. CRAs vary in size and the focus of their business. Some CRAs specialize in particular industries or firms, or in their domestic markets. There are 18 domestic CRAs across all ASEAN+3 markets (Table 9). Rating practices and methodologies may be different, but they include both quantitative analysis based on financial statements and the previous default data of companies and qualitative analysis by CRA analysts.

³⁷ IOSCO. 2003. *Report on the Activities of Credit Rating Agencies*. Madrid.

³⁸ Credit rating may be required when a bond is issued to the public. Basel II recognizes the use of ratings by external credit rating agencies as the standardized approach to measure credit risk. Institutional investors may not be able to invest in lower-rated bonds.

³⁹ IOSCO. 2003. *IOSCO Statement of Principles Regarding the Activities of Credit Rating Agencies*. Madrid.

It is necessary that the rating methodologies are consistently applied and objectively validatable. CRAs should publicly disclose information about the sensitivity to changes in the assumptions underlying their applicable credit rating methodologies. Business models can vary among CRAs: some use an issuer-pay model in which CRAs charge issuers a fee for providing a rating opinion. The others use a subscription model in which CRAs charge investors and other market participants a fee for access to the agency's ratings.⁴⁰ However, a CRA must avoid any conflict of interest and have a clear separation between a sales team dealing with customers and the analysts who conduct the credit analysis and provide the ratings.

Table 9: Domestic Credit Rating Agencies in ASEAN+3

Economy	Credit Rating Agency
People's Republic of China	China Cheng Xin International Credit Rating Co., Ltd.
	China Lianhe Credit Rating Co., Ltd.
	Golden Credit Rating International Co., Ltd.
	Shanghai Brilliance Credit Rating and Investors Service Co., Ltd.
	Shanghai Far East Credit Rating Co., Ltd. (SFECR)
Indonesia	PEFINDO Credit Rating Indonesia (PEFINDO)
	PT. Fitch Rating Indonesia
Japan	Japan Credit Rating Agency Limited (JCR)
	Rating and Investment Information, Inc. (R&I)
Republic of Korea	Korea Investors Service, Inc. (KIS)
	Korea Ratings Corporation (Korea Ratings)
	NICE Investors Service Co., Ltd. (NICE)
	Seoul Credit Rating & Information, Inc. (SCRI)
Malaysia	Malaysian Rating Corporation Bhd. (MARC)
	RAM Rating Services Bhd.
Philippines	Credit Rating and Investors Services Philippines, Inc.
	Philippine Rating Services Corporation (PhilRatings)
Thailand	TRIS Rating Co. Limited (TRIS)

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea.
Sources: companies' websites; Association of Credit Rating Agencies in Asia. 2016. *Asia Credit Rating Guidebook: Regulatory Rating Requirements and Credit Rating Agencies in Asia*. Manila.

2. Limitations and Reservations to Credit Rating

171. Although credit ratings are useful information for decision making, users must understand their limitations and reservations. First, a high credit rating is neither a guarantee for repayment of debt or for no default to occur. The categories AAA through BBB are generally considered investment grade, while the categories BB to D are considered speculative grade. However, these concepts are just market practices. Investors should make their own assessment of credit quality on entities, obligations, and transaction arrangements. While rating changes may affect market players' perceptions, credit ratings should be seen as just one of many factors that constitute the creditworthiness of entities and their obligations.

172. Second, it is necessary to understand the true meaning of credit quality represented by credit rating symbols and scales. Credit rating symbols such as AAA and BBB are simple and an easy way to communicate creditworthiness. Because of the simplicity, ratings can attract many users. The same or similar symbols may be used for different rating products or by different CRAs; however, they do not necessarily represent the same credit quality. For example, credit ratings under a national scale for local currency are applicable and comparable only within the economy issued by the same CRA. An international

⁴⁰ S&P Global Ratings. 2018. *Guide to Credit Rating Essentials*. New York.

foreign currency rating of AAA and a domestic local currency rating of AAA are different due to different methodologies.⁴¹ There may be a rating practice to relate the domestic ratings to the international rating scales, but it is necessary to bear in mind that there is no precise translation between the scales. Likewise, an AAA rating for a debt obligation under a particular scheme is not comparable to an AAA international foreign currency rating. The comparability of credit ratings is a challenge due to various factors. In many economies, the government rating is the highest, AAA, which is followed by the lower credit symbols such as AA and A. However, factors leading to default differ from one economy to another due to the level of economic development, macroeconomic stability, support by the government and banks, bankruptcy framework, and social tolerance for support to a company. Therefore, the distance to default represented by cumulative default rates, which is translated into ratings scales, may differ across jurisdictions.

173. Finally, there is a risk of misuse of ratings, whether intentional or unintentional, particularly when the ratings are imbedded in regulations. Many investors in Asia are reluctant to invest in securities with a rating below A. However, this practice could distort a rational investment decision. An investor active in a lower-rated economy (e.g., a BBB-rated economy) may not make an investment in a well-performing company in an A-rated economy due to the economy ceiling, a rating practice used to cap foreign currency ratings of nonsovereign entities by taking transfer and convertibility risk into account. Thus, the assessment of the company will be lower than A (i.e., BBB or below), which is not considered investable under the Asian investors' common practice. However, creditworthiness of an A-rated company in a BBB-rated economy could be lower than the well-performing company in an A-rated economy. Of course, investors may need to think about other risk factors such as economy risk and foreign exchange risk, but naive rating requirements in an investment guideline can lead to an adverse decision. It is necessary that credit ratings are referenced only as one piece of useful information when making a decision. The ratings should not dictate investment decisions.

Box 1: Brief History of Credit Rating Agencies

Since their inception, credit rating agencies (CRAs) have been performing important functions in bond markets. The origin of the modern credit rating industry dates to the mid-19th century in the United States (US) where mercantile CRAs first assessed the ability of merchants to pay their debts. Unlike other economies where business was mostly done between merchants in proximity, the geographical extensiveness of the US necessitated the creation of such rating services. Today's credit rating agencies still use the letter-based rating system originally used by the merchant CRAs. Investors sought a third-party opinion on the creditworthiness of borrowers, which led to the expansion of CRAs.

When the US started construction of its extensive railroad systems in the early 1900s, it used the bond market to finance them. This led to the creation of a large railroad bond market for which investors needed independent analyses of these bonds' creditworthiness. Moody's Investors Service was launched in 1909 and initially focused solely on railroad bonds before expanding its coverage in 1913 to include industrial firms and utilities. Soon after, the remaining two of today's "Big Three" credit rating agencies, Standard & Poor's and Fitch Ratings, started their businesses in the US.

The Great Depression led to calls for increased transparency and trust in the US capital market, resulting in the enactment of the Glass–Steagall Act, 1933; Securities Act, 1933; and Securities Exchange Act, 1934; as well as the creation of the Securities and Exchange Commission in 1934. In 1936, regulation was introduced to prohibit banks from investing in bonds that were judged as "speculative" by CRAs. This was the first time that ratings assigned by CRAs were used in market regulations. In 1975, the Securities and Exchange Commission started explicitly referencing CRAs in its regulations and introduced the concept of "nationally recognized statistical ratings organizations" to give special status to CRAs, particularly the Big Three, whose credit ratings are used to distinguish between grades of creditworthiness in various regulations.

⁴¹ The domestic ratings for government bonds are often AAA because of the sovereign's ability to tax and appropriate domestic currency assets. In addition, the sovereign can theoretically print money to meet its domestic currency obligations. However, the sovereign must have foreign currency to repay foreign currency debts; thus, the international ratings for sovereigns vary.

The practice of using credit ratings assigned by qualified or licensed CRAs for regulatory purposes has expanded globally and financial regulations in many economies have extensive references to credit ratings. Examples include minimum capital standards and minimum liquidity ratios under the Basel Accords for bank supervision. Also, credit ratings are often used to prohibit financial institutions from investing in securities rated below a certain level. For example, in the US, pension funds are prohibited from investing in asset-backed securities rated below A, and savings and loans associations are prohibited from investing in securities rated below BBB.

H. Investor Base

174. A liquid and efficient bond market needs a broad and diverse investor base, with different investment time horizons, risk appetites, and trading motives. A heterogeneous investor base is critical for enabling both the government and the corporate sector to execute their funding strategies under a wide range of market conditions. At the same time, a diverse investor base with different investment motives and time horizons stabilizes demand for bonds across various maturities. Hence, it is important that the bond market and various types of debt securities be accessible to many different groups of investors, including foreign investors.

175. Unlike for equities, bond market investors are mostly institutions. Banks tend to form a core group of investors in the government securities market in addition to their role as intermediaries and custodians of these instruments. Pension funds, provident funds, and insurance companies—often grouped under the label contractual savings institutions—require the safe investment quality of government securities to fit their mandates, while adding corporate debt securities for diversification and to meet other investment objectives. Collective investment schemes give retail and HNWIs, among others, access in smaller denominations to the debt securities they typically buy and to a variety of instruments that may be difficult to buy and hold for a single investor. In addition, government bonds, as highly creditworthy and liquid securities, are also suitable for direct sale to retail investors. The next few sections review some of these investor types, and their nature and objectives, in greater detail.

1. Institutional Investors

176. Institutional investors refer to investors in the form of a company or a legal entity whose primary business includes investment in the capital market, either for their own purposes or on behalf of other asset owners. Institutional investors include banks; securities companies; insurance companies; pension, provident, and social security funds; mutual funds and collective investment schemes; fund and fund managers; foreign investors; deposit insurance corporation or equivalent institution.

a. Banks

177. Banks are key bond investors, particularly in government securities. In many jurisdictions, banks may hold government securities as a part of their capital requirements or minimum reserve requirements. Through repurchase (repo) transactions with the central bank, they can obtain or offload liquidity. In addition, government securities are eligible as collateral for various types of market transactions. This encourages the purchase and holding of debt securities for banks.

178. Banks may also facilitate investments in debt securities for their clients and hold the resulting assets on behalf of these clients as a custodian (see also the section on custodians in this document). Depending on the nature of the legal system in a given jurisdiction, banks may carry out the buying and selling of debt securities for the clients as part of their banking license or may require a separate license, registration, or accreditation—as the case may be—as a capital market intermediary with the respective securities market regulatory authority. The provision of custody services may also be subject to separate licensing, registration, or accreditation, depending on each jurisdiction.

179. Banks are typical market participants in the OTC markets but may also be admitted as nonmember participants in bond markets on an exchange or other organized market. This participation may not be

limited to markets with a universal banking concept. Admission eligibility and criteria follow the membership rules of the respective exchange and prescriptions by its supervisory authority.

b. Securities Companies

180. Securities companies or securities firms, often also typically referred to simply as brokers, are an important category of participants in the securities market. Where debt securities are traded on an exchange, securities companies are the primary intermediaries for the execution of investor orders. Securities companies need to be licensed for the business of trading securities, including debt securities, as well as for underwriting services if the laws and regulations in their jurisdiction so prescribe.

181. While securities companies mostly buy and sell debt securities on behalf of their clients, they also trade and maintain proprietary positions in debt securities (e.g., for the purpose of capital requirements or the need to provide acceptable noncash collateral to support their trading and clearing obligations). In their capacity as underwriter, securities firms may continue to hold positions in debt securities that they have helped underwrite after issuance, to ensure liquidity or resulting from a need to take over committed amounts that remained unsubscribed (see also the section on underwriting in this document).

c. Insurance Companies

182. Given the prudential nature of their business, insurance companies are major bond investors in debt securities, particularly government securities. Insurance companies are established under specific laws and are typically subject to licensing and supervision by a dedicated regulatory authority, while their participation in the capital or securities market may require a separate registration or accreditation with or at a trading place.

183. Underlying insurance regulations require insurance companies, in particular life insurance companies, to match investment assets to the tenor and characteristics of the products they offer. In addition, life insurance companies can offer annuities, where permitted. This results in insurance companies actively looking for longer-term assets with a regular return in which to invest the premiums received. Capital preservation is crucial for insurance companies, hence the usual limitation of their investment universe to government debt securities and high-quality corporate bonds. Life insurance companies are one investor type that seeks debt securities with a maturity of 10–30 years. Issuers, in particular, governments, have been issuing up to 50-year debt securities to meet investment demands from insurance companies and pension funds. Infrastructure bonds, owing to their long-term nature, are also a typical investment target for insurance companies, particularly if they are managed or guaranteed by the government.

184. Due to their size and focus on investment in debt securities, among other long-term asset classes, as a matter of course, insurance companies are also often direct market participants in the OTC market or, potentially, nonmember participants in debt securities trading segments on exchanges or organized markets, if so permitted by law or in regulations. This may allow eligible insurance companies to also participate in primary market auctions or tender processes to obtain debt securities in large denominations.

d. Pension, Provident, or Social Security Funds

185. Pension and provident funds are investment vehicles established for the public good by acts or statutes, or under specific regulations. Pension and provident or social security funds are typical investors in debt securities, particularly government securities. The nature of these institutions requires them to pay out continuously to eligible members, necessitating a corresponding continuous income stream from the investments made with member contributions.

186. Owing to their prudential nature, pension and provident funds are subject to a number of restrictions when investing in securities; these may refer to the amount of a single investment or a ratio to the total fund size or asset class, the financial or rating quality of issuer and/or instrument, the currency of denomination,

as well as other factors.⁴² One key limitation is the ability to only invest in listed debt securities in order to ensure the continuous disclosure of relevant information. Typically, policy bodies and regulatory authorities are intent to ensure that a ready supply of such investable assets exists in the capital market.

187. Since pension and provident funds are institutions established for the public good, they attract particular attention for the protection of the contributors or insured, and thus often require a trustee or bondholder representative—depending on the market’s legal system—to be appointed to invest in a particular debt security. Pension and provident funds also tend to invest in mid- to longer-term debt securities to ensure a steady return and match the maturity profile of their offerings to members. Depending on the investment prescriptions, pension and provident funds may or may not be able to invest in high-quality corporate bonds.

e. Mutual Funds and Collective Investment Schemes

188. Collective investment schemes (CIS) are prime investors in debt securities. They can be either mutual funds or unit trusts, depending on the underlying legal framework in a given market. While individual investors are often not investing directly in debt securities due to a lack of information, access to, or expertise of such instruments, they often use professionally managed CIS to access the bond market and obtain steady returns on their investment. CIS may also be part of the so-called tertiary market, defined as the segment where underlying existing securities bought in the secondary market are pooled together into other instruments.

189. CIS are typically subject to restrictive prescriptions in law, regulations, or their own mandates for investment in debt securities, given their typically larger denominations or transaction sizes. Among the most prominent is the “10/10 rule,” which denotes a limitation on an investment of 10% of a CIS’s net asset value in a single debt instrument and a maximum investment of 10% of the total issue size of a debt instrument. Other percentages are possible. This rule is part of the prudential framework for CIS, often aimed at the protection of retail investors, and intended to ensure risk diversification and the avoidance of crowding out effects in specific debt issues.

190. CIS invest in debt securities as part of dedicated fixed-income strategies or for balanced investment strategies to generate fixed returns. In contrast to pension and provident funds, CIS often also invest in specific quality corporate bonds or money market instruments. In case of the latter, such CIS are also referred to as money market funds, regardless of their legal form.

f. Fund and Investment Managers

191. Fund or investment managers are specialized institutions investing the assets of third parties according to prevailing regulations and mandates given by the investors. Fund or investment managers may manage mutual funds or unit trusts (see previous section) or the discretionary portfolios of large asset owners. The investment appetite of fund or investment managers depends on the prescriptions for the portfolios they manage. Their interest in the bond and money markets of a given jurisdiction may range from short-term to medium-term and long-term assets.

192. Fund or investment managers, as entities and often as individual fund managers, need to be licensed as a capital market intermediary by the respective securities market regulatory authority.

g. Foreign Investors

193. Foreign or nonresident investors in a bond market are typically institutional investors, central banks, and multilateral organizations, from major jurisdictions in search of asset and risk diversification, as well as higher returns than in their home or usual markets of investment. Foreign institutional investors include many or all of the investor types described above and also include sovereign wealth funds.

⁴² These restrictions should be reviewed and eased along with the development of risk-taking capability.

194. Professional investor concepts in regional bond markets typically explicitly include foreign investors—given their institutional nature—or permit foreign institutional investors to participate in the professional market segments if their investor type (e.g., bank, fund manager, or pension fund) is eligible under the professional investor concept. Specific requirements for market access for foreign investors remain in a few markets, while some markets categorize foreign investors as nonresidents as part of their market or trading identification.

195. Foreign institutional investors are likely to bring with them experience and expectations from international bond markets, including on documentation and disclosure items, as well as market conventions and practices. They may also be sensitive to the costs of investing in a given market, other than the foreign exchange risk, such as to the costs for establishing and maintaining their credentials under anti-money laundering rules, know-your-customer (KYC) regulations, and tax processing (i.e., the [periodical] provision of proof of domicile and tax status), simply because of their exposure to international markets where practices may differ and have been found to be effective or efficient.

h. Deposit Insurance Corporation or Equivalent Institution

196. A deposit insurance corporation or equivalent institution (such as an exchange reserve fund or market guarantee fund), if existing in a particular jurisdiction, tends to be a significant investor in government securities given its typical mandate, which can be to provide stability to the banking sector in case of bank failures or to ensure the continuous functioning of securities trading, clearing, and settlement activities in a market. Such an institution invests the premiums or contributions paid by banks on their deposit balances or other market participants on their trading, clearing, or settlement volume in quality assets according to its mandate. The institution often is also able to participate directly in government securities auctions to buy government securities, for example, via noncompetitive bids, while being able to save on brokerage and trading fees to maximize the use of funds.

2. Retail Investors

197. Retail investors or general investors, also known in some markets as public investors, refer to individual persons active in the capital market. Retail investors are not always present in the bond market and may only buy debt securities or shorter-term money market instruments as an alternative to other products offering steady returns, such as fixed deposits. But, as a part of policy efforts aimed at financial inclusion and to support an expanding investor base, government bonds may be offered to retail investors. This can be facilitated with investor education programs.

198. Retail investors need to receive particular attention from regulatory authorities for their protection in the capital market. This investor protection mandate from the authorities extends to the requirement to list publicly issued debt securities on an exchange or other listing place to ensure initial and continuous disclosure information for investors (see also the section on listing in this document). This protection often includes restrictions on the sale of complex or speculative products. The regulatory authorities may establish and use professional investor concepts (see also the section on professional investor concepts in this document) to actively manage investor protection for retail investors. Some jurisdictions feature an official definition of retail, general, or public investors in their securities market laws or regulations. If no specific definition exists, the existence of a definition for institutional or professional investors is used to ring-fence investor protection for retail and general investors.

199. **High-Net-Worth Individual Investors.** Among retail investors, high-net-worth individual investors (HNWIs) may be treated differently and exempted from retail investor protections because they are capable of taking more risks. To be recognized as an HNWI, they need to prove their status as prescribed in a law or regulations. Where a formal definition of HNWI exists, it is often subsumed as a separate category of professional investors with distinct eligibility criteria.

3. Importance of Professional Investors

200. Professional investors refer to a category of investors that is defined in law or regulations as market participants that are licensed or otherwise eligible to make their own investment decisions to buy any type of securities issuance, including debt securities. The label professional investor, or a similar designation, as may exist in individual economies, encompasses the expertise to assess the potential risks and benefits of an instrument, its issuer, and prevailing market conditions and, thus, to make an informed investment decision under all circumstances. Professional investors are able to make such decisions on the basis of limited, specific information aimed only at them, and need not be subject to the same investor protection mechanisms afforded to the retail or general investors.

201. Professional investors are institutions or individuals, as the case may be. Most of them are the investors which have been reviewed in sections above, such as banks, insurance companies, or asset managers, but also high-net-worth individuals. Professional investors typically also include the central bank or monetary authority of an economy, government agencies, or statutory bodies with a mandate to manage state funds. Professional investors also include foreign investors that fit into one of the defined professional investor types.

202. Professional investors play a significant role in the capital market, particularly in the bond market. Professional investors represent the breadth and depth of demand for specific instruments, instrument characteristics, or tenors. In turn, the existence of professional investors allows issuers the flexibility to tap the debt capital market through a number of different issuance methods or instrument types to support their funding or financing needs. At the same time, an issuer is able to reduce cost through the issuance targeted at only professional investors in a professional market or market segment through defined or limited disclosure, which contains sufficient information for professional investors to assess the instrument and make their decision, but less information than would ordinarily be required for retail or general investors. Such kind of defined or limited disclosure to only professional investors is also referred to as an exempt regime.

203. The existence, or absence, of professional investors often signals the state of development of a bond market. Without a professional investor universe, issuers may not be able to take advantage of specific issuance types and methods, such as note issuance programs and reverse inquiries, to suit their funding needs. The lack of recognized professional investors adversely affects issuance activity and liquidity in a bond market. At the same time, a nascent market with limited issuances may only need a limited institutional investor universe at first, without a formal professional investor concept. However, for the market to achieve greater depth and breadth, and to attract both issuers and investors, a professional investor universe, and its definition in law or regulations, is highly desirable and even critical for the sustained development of a bond market.

204. Table 10 gives an overview of the professional investor concepts that existed in ASEAN+3 bond markets as of February 2019. In addition to the possibility of there being more than one term for professional investors in each market, the market term used might also differ from the legal term, possibly due to either the translation process or established market practice.

Table 10: List of Professional Investor Concepts in ASEAN+3

ASEAN+3 Jurisdiction	Professional Investor Concept	
	Existence	Legal Basis or Comments
Brunei Darussalam	●	Not yet implemented.
Cambodia	○	“Qualified investor” concept introduced as separate SECC regulation; defines “institutional investors” and HNWI. To be further implemented in relation to securities issuance.
People’s Republic of China	○	China Inter-Bank Bond Market: PBOC, NAFMII introduced concept of targeted investors across two categories: “specified institutional investors” and “specialized institutional investors”.
	○	Exchange bond market: CSRC introduced the “qualified investors” system.
Hong Kong, China	○	“Professional investor” is defined in section 1 of Part 1 of Schedule 1 to the Securities and Futures Ordinance.
Indonesia	○	OJK introduced the “qualified buyer” concept and regulations, including for institutions and HNWI; eligibility criteria apply.
Japan	○	The Financial Instruments and Exchange Act stipulates “professional investor” and “qualified institutional investor”.
Republic of Korea	○	The Financial Service and Capital Market Act classifies “professional investors”. “Qualified institutional buyer” launched from May 2012 as an exempt regime, and further enhanced in 2015–2016 under the Regulation on Issuance, Public Disclosure, etc. of Securities and related KOFIA regulations.
Lao People’s Democratic Republic	●	Not yet implemented.
Malaysia	○	“Sophisticated investor” is not explicitly defined in the Capital Market and Services Act (CMSA). However, the CMSA exempts offers to sophisticated or professional investors from prospectus requirements.
Myanmar	●	Not yet implemented.
Philippines	○	The Securities Regulation Code (SRC), SRC Rules, OTC Rules, and PDEX Rules clearly define “qualified buyer (QB)”, “qualified individual buyer”, and “qualified institutional buyer”. The QB concept includes foreign institutional investors.
Singapore	○	The Securities and Futures Act defines “accredited investor” and “institutional investor”.
Thailand	○	An SEC Notification defines “institutional investors” and HNWI.
Viet Nam	○	The Law on Securities defines “professional securities investor”. A strategic investor definition is not clear yet.

Note: Information as at 8 February 2019.

CSRC = China Securities Regulatory Commission, HNWI = high-net-worth individual investors, KOFIA = Korea Financial Investment Association, NAFMII = National Association of Financial Market Institutional Investors, OJK = Financial Services Agency Indonesia, OTC = over-the-counter, PBOC = People’s Bank of China, PDEX = Philippine Dealing and Exchange Corp., SEC = Securities and Exchange Commission of Thailand, SECC = Securities and Exchange Commission of Cambodia.

Source: ASEAN+3 Bond Market Forum Sub-Forum 1 Report.

I. Intermediaries in Secondary Markets

205. Different groups of market participants—such as brokers, dealers, and interdealer brokers—play different roles in the bond market and service the different business interests of investors. PDs or market makers and interdealer brokers that facilitate trading among dealers often contribute to greater market liquidity.

1. Brokers

206. Brokers are intermediaries between markets and investors, both retail or institutional, that are members of an exchange bond market or participants in an OTC bond market in a given jurisdiction. Brokers act on the instructions of their retail or institutional clients only, and execute the client orders in the trading market. Brokers may also act as selling agents for the distribution of debt securities being issued.

207. The term “brokers” is usually considered synonymous with securities firms, stemming from traditional exchange-based markets in which securities firms were the only members. However, depending on the licensing requirements in a given capital market, banks may also act as a broker for their clients in the OTC market as part of their general banking license, or they may also be direct participants in a bond market on exchange or in the OTC market, under a separate license to act as a capital market intermediary (or equivalent function depending on the market) or as admitted under the membership rules of the exchange or the SRO for the OTC market, respectively.

2. Dealers

208. In contrast to brokers, dealers are capital market participants with a specific license to carry out trading activities for their own account or for clients and to hold net positions in debt securities as part of market making or price discovery functions. Brokers may also be dealers if the licensing requirements in a given market so permit. The term broker–dealer is used in some markets, where the combination of these functions is possible by law or regulations.

209. Dealers are often securities firms but may also be commercial banks if the licensing requirements in the market so permit, or if a separate license for dealing in debt securities may be obtained from the regulatory authority for the securities market. The most visible part of a dealer function is in the case of PDs that are appointed to participate in government debt securities auctions and then onward sell the debt instruments to secondary market participants at their discretion.

210. See also the section on PDs in this document for information on this dealer function in the context of the primary market for government securities.

3. Interdealer Brokers

211. Interdealer brokers act as brokers between dealers or other institutional market participants by bringing both counterparties together or arranging trades that suit both parties. Interdealer brokers are typically not securities firm or banks, but instead are highly specialized institutions with a broker license. Interdealer brokers offer the ability for market participants to not reveal their identity when executing trades, since interdealer brokers act as buyer to the seller and as seller to the buyer. Interdealer brokers typically use voice broking or their own proprietary platforms to engage in trading activities with their clients, and route confirmed trades to the respective OTC trading and settlement platforms, as prescribed in a given market. Market authorities, including the central bank, may need to have access to the information of interdealer brokers to monitor market activities. It is advisable to include such function when designing a market.

212. The transparency of and accessibility to market information are key components of robust bond markets. In principle, the pricing of bonds should be accessible and open to the public. Market transparency

is generally regarded as central to both the fairness and efficiency of a market.⁴³ Particularly, the quality of bond pricing information affects its liquidity, and fair valuation can promote market integrity and investor protection. Information on bond pricing should be reliable and executable to bring investors to the market by allowing them to make appropriate investment decisions in a timely manner. To ensure market integrity, regulators should be able to access information on both pre- and post-trading information.⁴⁴ Information collection through a trading venue such as an exchange is one approach, but unlike equities, bonds are normally traded OTC; thus, a market association may be able to mandate that members submit traded prices as well as tradable market quotations.

213. In most developing markets, due to limited trading, data collection may not always be easy. This creates a chicken-and-egg situation as the lack of trading increases uncertainty in pricing and uncertainty in pricing reduces trading, thus resulting in a vicious cycle. In developing markets, investors tend to buy and hold because they have no incentive to sell; due to asset-liability management or regulatory requirements, they want to hold a certain level of good securities like government bonds. To create a liquid secondary market, the market size and investor base need to grow. But developing economies often cannot wait until the market becomes larger. When market quotations are not readily available, third-party pricing services are often used by financial institutions to estimate the fair value of their invested securities. The services provide model-based independent valuation and evaluated prices to complement the lack of transactions. In ASEAN+3, it is prevalent to set up a bond pricing agency that is recognized or designated by a regulator officially (Table 11). These bond pricing agencies not only supplement data for fair valuation but also stop the vicious cycle described above, thus helping to develop the bond market.

Table 11: Sources of Bond Pricing Information in ASEAN+3

Jurisdiction	Source
People's Republic of China	ChinaBond Pricing Center (China Central Depository & Clearing Co., Ltd.)
Indonesia	PT Penilai Harga Efek Indonesia (Indonesia Securities Pricing Corporation)
Japan	Japan Securities Dealers Association
Republic of Korea	FN Pricing
	KIS Pricing
	Korea Asset Pricing
	Korea Exchange
	Korea Financial Investment Association
	NICE Pricing & Information
Malaysia	Bond Pricing Agency Malaysia
Thailand	Thai Bond Market Association

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea.
Source: ASEAN+3 Bond Market Guides.

4. Paying Agents and Fiscal Agents

214. A paying agent is responsible for distributing interest and redemption payments on debt securities on behalf of the issuer of the debt securities. The paying agent is typically also responsible for the cash flow resulting from a bond or note issuance, specifically for receiving the proceeds from the issuance on behalf of the issuer and remitting the proceeds to the issuer or the trustee, as the case may be. The function may include the withholding of taxes and duties, as may be applicable. In the event that tax withholding is part of the role, the term "fiscal agent" is often used to describe the function, even though said term may not be

⁴³ IOSCO. 2017. *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*. Madrid.

⁴⁴ IOSCO. 2017. *Regulatory Reporting and Public Transparency in the Secondary Corporate Bond Markets*. CR06/2017. Madrid.

defined as such in law or regulations. A paying or fiscal agent is a service provider to the issuer, and is contracted by and acts in the interest of the issuer, not the bondholders. If no trustee or bondholder representative is appointed (see also the section on bondholder representative in this document), the issuer would generally execute a deed of covenant, under which bond- or noteholders are given direct rights of enforcement against the issuer for default in payment or delivery of definitive bonds or notes. The debt instruments may be listed and traded on an exchange or registered and traded in an organized market or OTC. Settlement of the debt securities may be at the CSD or OTC.

215. Fiscal or paying agents tend to be banks due to the practical requirement of ready access to a market's payment systems and the need to be able to process a certain payments volume through any of the prevalent payment channels, including high-value payments (for institutional investors with large bond holdings), an RTGS payment system for most common payments, and the ability to issue checks for retail or general investors. An underwriter may also perform the paying agent role. In addition, a CSD may also offer to perform the role of paying agent, in particular if the CSD is connected to a market's payment infrastructure.

216. For a paying agent service provision, a paying agency agreement is executed between the issuer and the paying agent, under which the paying agent collects and remits issuance proceeds to the issuer and the issuer provides funding in a lump sum per event to a designated distribution account with or under the control of the paying agent, and the paying agent distributes the entitlements (interest or principal) to the bondholders according to their chosen payment method. In cases when the CSD acts as paying agent, the related services are often included in the debt securities deposit or service agreement between the CSD and the issuer, and no separate legal document may need to be executed.

217. The role and functions of a fiscal agent are similar to a paying agent but may also differ depending on the regulatory framework and market practice in a jurisdiction. In some markets, the term fiscal agent is used instead of paying agent. The term fiscal agent may also be used if the issuer uses multiple paying agents, in cases of a large bond issuance with differentiated investor types, or payment channels. One more common use of a fiscal agent, in name and function, is as the registrar--paying agent for government debt securities issued in the international bond market. Here, an international commercial or investment bank—for the same reasons as stated above—will be appointed to record ownership of the government bonds and pay out the entitlements to bondholders on behalf of the sovereign issuer to the international investors holding the bonds. Such functions may also be carried out by an international central securities depository (ICSD) as part of their issuer service provisions.

218. Typically, even if a paying or fiscal agent is appointed, the issuer of the debt securities retains the responsibility toward the tax authority of applying the appropriate tax rate(s), recognizing eligible concessions, and withholding the appropriate amount of tax.

219. In the case of a fiscal agent service provision, a fiscal agency agreement is executed between the issuer and the fiscal agent, typically as the principal paying agent of the issuer if multiple paying agents are appointed by the issuer. In such a scenario, the fiscal agent will have the responsibility to calculate and withhold the applicable taxes prior to distribution. The issuer funds the interest or redemption payments in a lump sum to the fiscal agent and the fiscal agent instructs other paying agents to pay the entitlement amounts to certain groups of bondholders, based on the bondholder data and tax status information provided. The fiscal agent then reimburses the paying agents for the amounts paid out.

220. The fiscal agent may also have other functions, such as keeping records of payments on the bonds or notes, calling, organizing, and holding bondholder meetings when necessary, sending notices or information updates to bondholders, and issuing replacements for lost or destroyed bonds or notes (applicable only in an environment with physical securities certificates).

5. Facility Agents

221. The term facility agent may only be used in selected markets. The function combines a number of the service provisions discussed in the neighboring sections. The facility agent is a third-party service provider with fiduciary obligations to manage a debt capital market transaction until maturity and, as such, is the

principal service provider after the underwriter(s). Where a fiscal agent function is evident, no additional paying or fiscal agent is typically required.

222. The roles usually performed by a facility agent include (i) making sure all terms and conditions in relation to a debt issuance are complied with by the issuer, (ii) computing interest and redemption payments to be paid by the issuer and monitoring the disbursements of funds, (iii) monitoring the compliance of the issuer with representations made and warranties and covenants given. The facility agent also must inform all relevant parties of any event of default and convene a meeting of bondholders or noteholders in case decisions have to be made. As such, the facility agent fulfills a number of roles that in other markets are inhabited by a fiscal or paying agent, and a bond trustee or bondholder representative.

223. A facility agent enters into an agreement with the issuer as the principal paying agent. It is not uncommon for an underwriter to also perform the role of the facility agent. A facility agent may also act as a transfer agent (see below). The facility agent typically charges a monthly or annual retainer fee for their services.

6. Transfer Agents

224. A transfer agent, also referred to as a registrar, is appointed by the issuer to keep the register of the debt securities and record the transfer of ownership of the debt securities among the bondholders. The transfer agent function dates back to the existence of physical securities certificates that needed to be issued in the name of the bondholder (registered bonds) and had to be endorsed to ensure transferability, or needed to be assigned from seller to the buyer via a transfer deed (bearer bonds). Transfer agents used to be specialist service providers that had neither a banking nor brokerage license.

225. Today, the function of a transfer agent is typically performed by the CSD where the debt securities are deposited and transferred using electronic records in a book-entry system. If the debt securities are not deposited with a CSD, such as in the case of small private placements or other OTC securities, the transfer agent function will have to be performed by a party appointed by the issuer. In such cases, the transfer agent may likely be the underwriter or a commercial bank, which may also act as paying agent (see above section).

7. Conversion Agents

226. In the case of the issuance of convertible bonds, the issuer will engage a conversion agent who is responsible for (i) handling on behalf of the issuer the conversion announcement(s), (ii) processing conversion notices sent by the bondholders, (iii) receiving payments from bondholders and the issuer in respect of the conversion, and (iv) canceling of the original bonds upon conversion.

227. The conversion agent would also be responsible for calculating the number and aggregate principal amount of new shares to which the bondholders exercising the conversion rights would be entitled. The conversion agent is normally a bank but may also be a securities firm.

8. Trustees or Bondholder Representatives Concept(s)

228. Prudential regulations in a given market often provide for an added asset safety mechanism through the function of a trustee (in common law jurisdictions) or bondholder representative concept(s) (in civil law jurisdictions). A number of variations of either function and their official designation exist in ASEAN+3 markets, including equivalent roles inhabited by fiscal or facility agents and custodians, although the basic functions and roles and responsibilities remain largely the same. The function is intended to act as representation of the bondholders vis-à-vis the issuer of debt securities, with a mandate focused on ensuring the repayment of the debt securities and receipt of any benefits from the debt securities during their tenor.

229. The bond trustee or bondholder representative is appointed and paid by the issuer but represents the interests of the bond, note, or *sukuk* holders, including versus the issuer if so required. A trustee or

bondholder representative concept(s) is subject to rules prohibiting conflicts of interests and may not be a party related to the issuer or have more than a maximum prescribed capital or business affiliation. Management and staff will have to qualify under fit and proper rules. Bond trustees or bondholder representatives aiming to perform said function for *sukuk* and other such instruments following Islamic principles will need to obtain further consent from the appropriate authority vetting Islamic banking and investment practices in a given jurisdiction.

230. Depending on the legal and regulatory framework of a market, the appointment of a bond trustee or bondholder representative may be mandatory, typically at least for the issuance of debt securities via a public offering, to afford the intended additional safeguards to general or retail investors. While the appointment of a bond trustee or bondholders representative may not be mandatory for private placements or the issuance of debt securities to professional investors, the issuer may still opt to make the appointment, depending on the type of investor universe the issuer targets. For example, institutional investors subject to prudential regulations (e.g., pension or provident funds, insurance companies, mutual funds) may require the appointment of a bond trustee or bondholders representative to be able to invest in such instruments.

231. The bond trustee or bondholder representative executes a trust agreement, indenture agreement, or bondholders representative agreement—or similarly termed contract—with the issuer according to the provisions stipulated in the law or in regulations; most markets have regulatory prescriptions for the minimum content of such an agreement. If the regulations so permit, the agreement will also describe the actual extent of the discretionary services provided by the bond trustee or bondholders representative, including specific provisions on the process for bondholder meetings and reporting.

232. A bond trustee or bondholder representative may be a bank, a trust department of a bank (in selected markets), or a dedicated trustee company, depending on the underlying legal framework. Bond trustees or bondholder representatives will need to be licensed, authorized, or accredited by the securities market regulator, as the case may be in each market, and fulfill eligibility criteria stipulated in the relevant law(s) or regulations for such function. In any case, bond trustees or bondholder representatives will have an underlying operating license for a financial market business, such as a banking license, trust, or trust company license.

233. An overview of the bond trustee or bondholder representative concept in each ASEAN+3 jurisdiction is shown in Table 12.

Table 12: Overview of Bond Trustee, Bondholders Representative, or Equivalent Concept in ASEAN+3

Jurisdiction	Technical Term	Law Concept	Remarks
Brunei Darussalam	N/A	Common and Islamic	
Cambodia	Bondholders Representative	Civil	
People's Republic of China	Bond Trustee	Chinese law with civil tradition	Concept applies to both CIBM and exchange bond market issuances
Hong Kong, China	Bond Trustee	Common	About 90% of issuances use the fiscal agent structure
	Fiscal Agent		
Indonesia	Trust Agent	Civil and Islamic	Function applies to both Islamic and conventional debt securities
Japan	Commissioned Company or Person for Bondholders (Bond Managers)	Civil	For issuances of up to JPY100 million
	Fiscal Agent		For issuances of more than JPY100 million
Republic of Korea	Indenture Trustee	Civil	
Lao PDR	Custodian Bank	Civil	Custodian acting on behalf of bondholders, including in actions versus the issuer
Malaysia	Bond Trustee	Common and Islamic	Exemptions possible
Myanmar	N/A	Common	
Philippines	Trustee of the Bondholders	Civil	Mandatory for public offers
	Facility Agent		For other issuances
Singapore	Bond Trustee	Common	
Thailand	Bondholders Representative	Civil	Required for private placement, high-net-worth investors, public offers, and secured bonds
Viet Nam	Representative of Bondholders	Civil	Required for secured bonds or listed bonds

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea; CIBM = China Inter-Bank Bond Market; JPY = Japanese yen; Lao PDR = Lao People's Democratic Republic; N/A = not applicable.

Source: ASEAN+3 Bond Market Guides.

9. Sharia Capital Market Experts or Similar Authority (*Sukuk* Only)

234. The issuance of *sukuk* requires the appointment of and assessment by a Sharia capital market expert or equivalent authority. The relevant institution in a given market is expected to provide to the issuer of *sukuk* a statement of compliance of the proposed instrument with Sharia principles and the applicable regulations for Islamic finance instruments in said market.

235. Sharia capital market experts may be persons or institutions, and are typically licensed, authorized, or accredited with the national authority that decides on the interpretation of Islamic principles in the economy, or the financial or securities market regulator, or both.

236. Sharia capital market experts are appointed and paid by the issuer and will need to include their assessment in the applicable issuance documentation and disclosure statements for the *sukuk*.

J. Organized Markets

237. An organized market is a place or system in which buyers and sellers trade according to agreed rules and procedures, using common conventions and communication protocols. Exchanges and dealer markets are traditional organized markets, and an electronic trading platform can be considered as an organized market or organized trading facility, depending on the prevailing regulation in a given market. ASEAN+3 offers a variety of such organized markets, with specific information on each jurisdiction's organized markets detailed in the relevant *ASEAN+3 Bond Market Guide* for individual economies. Bonds and notes, as well as *sukuk*, can be traded either OTC or on an exchange.

1. Over-the-Counter

238. The OTC market is the traditional trading place for debt securities, owing to the many types of debt securities and their iterations as both conventional and Islamic instruments (*sukuk*). The traditional OTC market is less a trading platform than an organized market. Trades in bonds, notes, and *sukuk* are concluded directly between institutional counterparties via phone or using the services of a voice broker or interdealer broker (see also the section on intermediaries in secondary markets in this document for an explanation of each function). Individual participants may also use terminals such as Bloomberg, Reuters, TradeWeb, or similar global trading system providers, and/or an in-house trading system to carry out bond trading activities in the OTC market. The key to the OTC market is that participants adopt common conventions when contacting counterparties and when negotiating and concluding trades. These conventions include the manner in which debt instruments are described, quoted or priced, and settled. In 2016, the ASEAN+3 SRO Working Group, consisting of ABMF members that are SROs, compiled a comprehensive report that included a summary of trading conventions for participating markets.

239. OTC markets are often administered and/or supervised by an SRO that has been conferred certain powers by the relevant regulatory authorities to admit and manage OTC market participants and their activities. In some ASEAN+3 markets, the OTC market occurs on an electronic trading platform provided by an SRO that has been appointed to provide and operate such a platform by the respective regulatory authority (see also the section on self-regulatory organizations in this document) (Table 13).

Table 13: List of Over-the-Counter Markets and Self-Regulatory Bodies in ASEAN+3

Jurisdiction	Over-the-Counter Market	Self-Regulatory Body	Acronym (if any)
Brunei Darussalam	N/A	-	-
Cambodia	N/A	-	-
People's Republic of China	China Inter-Bank Bond Market	National Association of Financial Institutional Investors	NAFMII
Hong Kong, China	OTC market	None; use of international standards	-
Indonesia	OTC market	-	-
Japan	OTC market	Japan Securities Dealers Association	JSDA
Republic of Korea	K-Bond (platform)	Korea Financial Investment Association	KOFIA
Lao PDR	N/A	-	-
Malaysia	OTC market	Financial Market Association ^a	FMA
Myanmar	N/A	-	-
Philippines	Philippine Dealing & Exchange (platform)	Philippine Dealing & Exchange Corp.	PDEX
Singapore	OTC market	None; use of international standards	-
Thailand	OTC market	Thai Bond Market Association	ThaiBMA
Viet Nam	OTC market	-	-

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea; Lao PDR = Lao People's Democratic Republic; N/A = not applicable; OTC = over-the-counter.

Note: This list does not include interbank markets that are organized by an economy's central bank.

^a FMA is not an official self-regulatory organization, but is officially designated to admit and train market participants.

Source: ASEAN+3 Bond Market Guides.

240. The trading of unlisted debt securities is typically regulated by provisions in the relevant securities law or regulations and subject to licensing, authorization, or registration of market participants with the securities market regulator and the appointed SRO. Under its conferred powers, the SRO will issue eligibility and admission criteria and membership rules, as well as trading and, possibly, clearing and settlement rules. Membership may be divided into participant types, such as active participants, including traders and dealers, and associated institutions, such as bond pricing agencies or credit rating agencies. The traditional participants in an OTC (bond) market include commercial banks and investment banks; securities firms; and large institutional investors such as insurance companies, mutual or pension funds, and asset managers. The SRO rules will also include the conventions that will have been agreed by OTC market participants and are then published by the SRO.

241. In the absence of a prescribed electronic trading platform for the OTC market, as was traditionally the case, each trading counterparty may use their own system to record its trades. However, the trading conventions in an OTC market also include the need for each counterparty to be able to generate or receive a trade confirmation sent by the other party in a recognizable manner. If counterparties are familiar with each other, such trade confirmations or the related trade allocations across portfolios may be customized. In ASEAN+3 domestic bond markets, trades concluded in the OTC market typically settle in the CSDs of the respective market (see also the section on securities settlement and safekeeping infrastructure in this document).

242. In contrast to an exchange market, participants in a traditional OTC market need not execute a specific trading agreement with a central party. Instead, trading in the market signifies the acceptance of

market rules and conventions as published by the SRO overseeing each market. Since trading participants know their counterparties, they may execute bilateral agreements that include trading limits and other provisions pursuant to risk management practices. Where an SRO operates an OTC trading platform, the participants are likely to have to execute a participation agreement with the SRO, which will form the legal basis for the trading activities, and recognition of rules and conventions, on said platform. Trading participants may still execute additional bilateral agreements with counterparties to accommodate specific requirements under prevailing domestic and market regulations.

2. On Exchange

a. *Trading on Exchange*

243. Debt securities issued in a given market may be listed and traded on an exchange in the same jurisdiction or in another market, as may be preferred by the issuer or prescribed in law or regulations. However, the actual trading on exchange of listed bonds and notes is often negligible.

244. Debt securities traded on exchange have been found eligible to be listed. The issuer is required to observe listing rules, including the provisions on continuous disclosure, while market participants are bound by membership rules and the exchange trading rules (see also the next section). In order to trade debt securities on exchange, the issuer will have to deposit said debt securities with the market CSD in order to fulfill the settlement eligibility criteria set by the exchange.

245. Similar to equities, the trading on exchange of debt securities ensures the price finding, quoting, and securities pricing mechanisms inherent to electronic trading platforms. Trading is carried out continuously or through a number of sessions during the day. Trading mechanisms may vary but are often in the form of a continuous auction throughout any given session. Exchanges often use a dedicated trading platform for debt securities due to the nature and additional information required for these instruments. In addition, exchanges often offer a number of separate bond trading segments to, for example, accommodate the trading of benchmark issues or odd lots with specific types of instruments or transactions such as repurchase agreements (repos).

246. In contrast to the equities market on an exchange, which is limited to the participation or membership of securities firms (broker–dealers), the bond market segments on an exchange may also feature additional participants that are more traditional participants in any bond market. These institutions include commercial banks and investment banks, but may extend to large institutional investors such as insurance companies or asset managers. For that purpose, the exchange may have created an additional category of trading participants, as well as specific admission, trading, clearing, and membership rules for the bond market segment(s).

b. *Listing on Exchange*

247. Debt securities are listed on an exchange pursuant to law or regulations, or to fulfill specific objectives for the issuer. The listing of debt securities may require the use of a specific offering method for such debt securities; in a number of markets in ASEAN+3, only debt securities issued via a public offering may be listed on the exchange, or may even be required to be listed on the exchange. This follows the express intention of the securities market regulator—as part of its primary mandate to ensure investor protection—to achieve visibility, price finding or valuation, and the continuous availability of comprehensive disclosure information on the debt securities and the issuer. Where a listing of debt securities is optional, issuers may list their debt securities to achieve the widest-possible distribution of the debt securities or to ensure the visibility of their debt issuances across many investor universes. A listing of debt securities by issuers who are already listed companies is another typical observance, and since these issuers already must comply with the listing and disclosure rules of the exchange, the listing of their debt securities requires only limited extra efforts and costs.

248. In the event that a market features more than one exchange, the listing services of these exchanges often complement each other instead of directly competing for all possible listings. A typical distinction is the focus on the listing of issuances of major corporates and multilateral institutions on one exchange and

the listing of issuances from small and medium-sized enterprises (SMEs) or other institutions on another exchange. A distinction between government and corporate debt securities may also be observed.

249. The listing of debt securities is subject to the confirmation of eligibility of the issuer and the debt securities and the compliance of the issuer with rules and other provisions after the listing. These rules and provisions are defined, issued, and enforced by the exchange (if an SRO, see also the relevant section on SRO), and typically are referred to as listing rules or prescribed in law or regulations. If the exchange is not an SRO, the issuance and enforcement of listing rules is carried out under the powers of the responsible securities market regulator. Typical listing eligibility criteria consist of a minimum number of years of operation for the issuer, soundness of its financial standing, and its ability to commit to initial and continuous listing and disclosure obligations. Qualification criteria for the debt securities often include the need to have a credit rating of a certain quality, a minimum and/or maximum tenure, and other features commensurate with the listing objectives of the exchange.

250. The listing process involves an application to the exchange for a listing, which may be submitted by the issuer or service providers aiding in the offering of the debt securities, such as an underwriter or financial advisor. Supporting documentation will consist of issuance and disclosure information related to the debt securities, as well as constituent documents for the issuer. The exchange will review the listing application and respond to the issuer or service provider with an approval or a rejection. The exchange typically reserves the right to ask for additional information in the course of the review process. An approval may come with specific conditions, e.g. in case certain financial information may not be available at the time of application. In cases of rejection, the exchange will detail the reasons for such rejection.

251. The time frame for the review process of the listing application may differ from exchange to exchange and will depend on whether the initial application was complete and whether additional information may be sought by the exchange during its review. Exchanges in mature markets may be able to give a response within a few business days, in particular if the issuer is already listed on the same exchange. Other exchanges may take a few weeks to review, depending on the volume of supporting information to be submitted and reviewed.

252. Once a listing is approved, the issuer is often able to stipulate a desired listing date. The exchange will announce the admission of new debt securities to its trading participants and the respective regulatory authority, and publish the announcement on its website. A listing exercise may also be held to formally and publicly announce the admission for secondary trading on the exchange trading platform and to commence the trading of the debt securities. The listing exercise tends to be a brief ceremony held prior to the start of trading on the listing day (in some markets, the first business day following the official listing admission date), and is attended by senior representatives of the exchange and management of the issuer. The ceremony may differ by individual market or exchange.

253. In some markets, the regulatory process for the issuance of debt securities via a public offering requires an in-principle confirmation of listing eligibility. In such cases, the exchange will review a preliminary listing application and confirm or reject listing eligibility to the issuer before the actual listing application will be accepted. Prior to a listing, an issuer will have to execute a listing agreement provided by the exchange. The agreement in effect forms the legal basis for the listing eligibility, obligations by the issuer, and services provided by the exchange. A sample form of the listing agreement may be available for download from the website of the exchange.

254. The listing of debt securities on an exchange carries fees and potential additional charges for the issuer. Exchanges may levy a fee for the review of the listing application or eligibility confirmation, an initial listing fee, and a recurring annual listing fee. The terms used for such fee items may differ from market to market. Exchanges typically publish their fee schedules on their websites. In cases where the exchange is not an SRO, such fees are contained in dedicated circulars or official proclamations of the respective regulatory authority.

255. In addition, the listing of debt securities may result in charges from service providers supporting the listing, such as a listing sponsor, or institutions that are required to produce or validate disclosure

information required as supporting documentation for the listing application; these institutions include the underwriter or financial advisor, asset valuers or legal counsel, and accounting firms. At the same time, a number of markets also offer concessions to issuers who list their debt securities on an exchange. These concessions range from eligibility and disclosure concessions to tax concessions, or financial assistance in defraying the costs incurred in the listing exercise. The latter is also particularly evident in the promotion for the profile listing of debt securities across mature markets in ASEAN+3 (see also the next section).

c. Profile Listing

256. Profile listing is the listing of securities on an exchange without the intention to trade the securities on exchange. Profile listing is only applicable to debt securities. Debt securities that are profile listed are exclusively traded in the OTC market. Debt securities profile listed on an exchange may not need to be deposited with the market CSD that settles exchange trades, in particular if the debt securities are originally issued in another jurisdiction. The purpose of a profile listing tends to be to increase the visibility of debt securities issued via a private placement (see relevant section on methods of issuance in this document) in the same or another jurisdiction, or to provide to investors in the private placement a certain standard of disclosure information that is governed by the listing rules of the exchange (see information on listing rules in the previous section). A profile listing is often aimed specifically at attracting an investor universe with more restrictive mandates, such as life insurance, mutual funds or unit trusts, and provident or pension funds, which may be prohibited from or limited in the buying of unlisted debt securities. In general, the profile listing of debt securities is pursued for instruments aimed at the professional bond market segments in the listing market and other jurisdictions, or professional investors at large.

257. Not all securities exchanges are able to accommodate profile listing, often as a result of mandatory listing-cum-trading provisions for debt securities in underlying laws and regulations. Those exchanges that offer profile listing, which are often those in more mature markets in the region, typically offer a separate listing segment for the profile listing of debt securities (Table 14). These specific segments tend to be clearly labeled for professional investors only or are named as such. These segments may have their own listing provisions within the listing rules; distinct eligibility criteria; and, potentially, a separate fee schedule. Due to the fact that no trading will occur, the profile listing in these segments may be done for debt securities denominated in any number of currencies since the clearing and settlement facilities for such currencies will not be required.

Table 14: ASEAN+3 Exchanges with Profile Listing Function

Economy	Exchange	Profile Listing Segment
Hong Kong, China	Stock Exchange of Hong Kong Limited	Professional Bonds
Japan	Tokyo Stock Exchange	Tokyo Pro-Bond Market
Malaysia	Bursa Malaysia	Exempt Regime
Philippines	Philippine Dealing & Exchange Corp.	Qualified Board
Singapore	Singapore Exchange Limited	Wholesale Bonds

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea.
Source: ASEAN+3 Bond Market Guides.

258. At the same time, not all debt securities issued in a given market may be eligible to be profile listed, again pursuant to prevailing laws and regulations, or the provisions in the listing rules of the exchange. One typical example is that debt securities issued via a public offering in the market may not be profile listed on an exchange in the same market and instead have to undergo a normal listing process, since the profile listing would limit the disclosure information and tradability of said debt securities. However, debt securities issued in one market via a public offering may be profile listed on an exchange in another market for the purpose of extending their visibility or to fulfill other objectives of the issuer; this practice is also referred to as a secondary listing. Since these debt securities will be tradable in their home market, and price finding

and regular disclosure will be ensured, an additional profile listing of the debt securities in another market will not impede upon the investor protection principles in the home jurisdiction.

259. Similar to a full listing (see previous section), debt securities intended for profile listing, and their issuer, need to fulfill specific eligibility criteria to be listed. Typically, these eligibility criteria are less stringent than for a formal listing, since considerations for investor protection are less evident. At the same time, the profile listing itself will commit the issuer to providing initial and continuous disclosure information to the exchange in a similar manner as for a full listing with trading, albeit at a reduced scope. This is a key consideration for a profile listing in order to ensure that enough information on the debt securities is available to its targeted investors and interested parties, even if they may be professional investors. The profile listing or registration of a bond or note for the purpose of ensuring continuous disclosure is one of the key elements of AMBIF (see also the section on AMBIF Elements in this document).

260. As for any listing of securities, the issuer will need to execute a listing agreement with the exchange prior to the actual listing. The listing agreement may be available in sample format from the exchange's website. The listing agreement for a profile listing will stipulate the listing eligibility and detail the specific issuer obligations and services provided by the exchange—both adjusted in relation to a full listing. The review of an application for a profile listing tends to be shorter than for a full listing and can often be completed in a number of business days. The time frame is typically posted on the webpage for the professional bond market segment of the exchange, together with the supporting documentation required for the review. Upon approval, the actual listing can typically occur within days, or the issuer may ask for a specific listing date. The listing procedure and ceremony, if applicable, is likely to follow the established practices for a full listing (see previous section).

261. The profile listing of debt securities will incur fees for the issuer, although often at a reduced rate compared to a full listing, since the scope of the supporting documentation and resulting review time tend to be less. As mentioned previously, a number of markets in ASEAN+3 offer concessions for the profile listing of debt securities to the issuer, typically in the form of grants or reimbursement of part or all the costs incurred during the listing exercise.

K. Securities Settlement and Safekeeping Infrastructure

1. Clearing House

262. A clearing house is a concept originating in the exchange market that serves to organize the obligations of the various trading participants toward one another and the exchange. The purpose of a clearing house is to formally recognize the (clearing) obligations of the trading counterparties and to reduce counterparty risk by, for example, netting the obligations of counterparties with each other in order to manage exposure and credit risk and limit the eventuality of a counterparty failure.

263. A clearing house is a specialist institution established under law or regulations, and is typically owned by the exchange for which it clears trades; this is referred to as the vertical model in financial market infrastructure. Where regulations so require, the operator of a clearing house may have to be licensed for this function by the securities market regulatory authority. A clearing house does not need a banking or securities trading license to carry out its activities. On the other hand, in the absence of a dedicated clearing house, such as in the case of an OTC market, the function may also be assumed by the CSD servicing the debt instruments traded in such OTC market.

264. A clearing house may ultimately not be in use in an exchange bond market for a number of reasons, including (i) the traditional focus for debt securities trading in the OTC market tends to result in a very limited number of trades on exchange even if the debt securities are listed or profile listed on the exchange; and (ii) even in the event of regular trading of debt securities on exchange, the typically higher value of a trade but smaller number of transactions overall—compared to the equities market—may not make a clearing house function economically viable; the resulting high transaction costs may be prohibitive for participants. See also the next section for the logical extension of the clearing concept to a central counterparty (CCP).

2. Central Counterparty

265. A CCP interposes itself between counterparties to contracts traded in financial markets, becoming the buyer to every seller and the seller to every buyer.⁴⁵ It is a mechanism in an organized market that steps into the role of each trading participant's counterparty and assumes their obligations to pay for or deliver securities in order to guarantee the fulfillment of a trade. As such, the CCP becomes the buyer to the seller in a trade, and the seller to the buyer in the trade. The original obligation to pay that the buyer had to the selling counterparty is assumed by the CCP, and the seller's obligation to deliver securities to the buyer will be assumed by the CCP as well. A CCP is expected to reduce counterparty and systemic risks in the market, which becomes more significant in a market where the transaction volume is very large.

266. CCPs are often owned and managed by the operator of the organized market such as a securities exchange or a CSD. In emerging markets, due to limited volume and a small number of participants, the market may not warrant a dedicated CCP and, hence, the function is often embedded into the clearing house of the exchange whose function is to calculate and monitor counterparty obligations throughout their trading activities (see also previous section). In other words, regulators in emerging markets may need to balance the cost of a CCP function and its merit, and consider establishing it along with the pace of market development.

3. Central Securities Depository

267. A CSD is a key building block in the infrastructure of financial and capital markets. A CSD is part of the institutions typically referred to as financial market infrastructure (FMI) that attract particular attention from regulatory authorities and market participants as critical for the functioning of the financial and capital market in a given jurisdiction. CSDs fulfill the function as—principally—the single place of settlement for securities in a given market, including debt securities and their place of safekeeping, be it in physical form or as electronic or book-entry records only.

268. An institution acting as a CSD in a given market is typically empowered through law or regulations, or is licensed as a securities market operator or securities settlement operator to perform the CSD function, as the case may be. The Principles of Financial Market Infrastructures promulgated by IOSCO and the Committee on Payment and Settlement Systems set, as Principle 1: Legal Basis, that an “FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.”⁴⁶ The exact empowerment of the CSD or its operator will depend on the level of maturity of the regulatory framework of a given market and the type of regulatory authority governing the capital market. Said law or regulations will also spell out the basic operating principles and fit and proper requirements for the CSD operator and its management and senior staff.

269. Included in the requirements, in particular in recent years, will be the need to create and maintain a book-entry system to allow for the records of safekept securities in electronic form only. A CSD may also continue to keep physical securities that have not yet been dematerialized for any number of reasons. In such cases, the CSD will need to maintain a physical vault (see the section on immobilization and dematerialization in this document).⁴⁷

270. Embedded as a feature of the book-entry system is the manner in which account records at the CSD are kept, namely in the form of so-called omnibus or segregated accounts. The account structure in a given market may be defined in regulations, determined by system features or functionality constraints, or simply have evolved to cater to market practices (see the section on account structure in this document).

⁴⁵ Adopted from IOSCO and Committee on Payment and Settlement Systems. 2012. *Principles for Financial Market Infrastructures*. Basel.

⁴⁶ Footnote 44.

⁴⁷ The Principles of Financial Market Infrastructures recommend that a CSD should maintain securities in an immobilized or dematerialized form for their transfer by book entry.

271. A CSD typically follows one of two organizational models, either (i) the so-called vertical model, in which the CSD is owned and operated by the same entity or group that operates an exchange or organized market, its clearing house, and other downstream functions; or (ii) the so-called horizontal model, in which a CSD is owned by a party other than the securities market operator (e.g., the government or a number of market participants that primarily use its services, possibly with some ownership by other market infrastructure providers). No organizational model is better than the other by default; instead, in most markets, the organizational arrangements now evident have occurred as practical parts of the normal development of the market over time. Irrespective of the organizational nature of a CSD, its functions remain the same. At the same time, differences may be evident in the level of system and procedural integration between the exchange, clearing house, and CSD in a given market as a result of the application of the vertical or horizontal model. However, technological advances and a clear focus on operational and cost efficiency, such as straight-through processing (STP) principles, any such technological and procedural distinctions may eventually disappear (see also the relevant section on STP in this document).

272. A given market may feature more than one CSD (e.g., a dedicated CSD for government securities only in addition to a CSD for all other securities) (Table 15). Multiple CSDs in a given market typically indicate the development of the market infrastructure over time, often in response to market and product evolution. A separate CSD for government securities, if evident, is operated by the central bank or the Treasury and suggests active issuance of sovereign debt securities (see the relevant section on government bond markets in this document) and the use of such securities in open market operations with its constituents. At the same time, a government bond market is typically established before a corporate bond market and, hence, institutions servicing sovereign issuances may already exist from the beginning of a bond market. In other cases, multiple CSDs may exist simply to service specific market segments or products; a good example of the latter is the existence of three CSDs in the PRC where the sheer volume and vast number of products and participants require the use of multiple institutions to ensure focus and efficiency. While the existence of multiple CSDs is not an undesirable situation, it may add operational complexity to the processing of the settlement of transactions, particularly for debt securities and, specifically, on the side of the end investors.

Table 15: Central Securities Depositories for Government and Corporate Bonds in ASEAN+3

Economy	CSD for Government Bonds (Name Commonly Known)	CSD for Corporate Bonds
Brunei Darussalam	Autoriti Monetari Brunei Darussalam (Central Securities Depository)	-
Cambodia	-	Cambodia Securities Exchange
People's Republic of China	China Central Depository & Clearing Co., Ltd.	
	China Securities Depository and Clearing Co., Ltd.	
	-	Shanghai Clearing House
Hong Kong, China	Hong Kong Monetary Authority - Central Moneymarkets Unit	
Indonesia	Bank Indonesia (Scripless Securities Settlement System)	PT Kustodian Sentral Efek Indonesia
Japan	Bank of Japan (Bank of Japan Financial Network System)	-
	Japan Securities Depository Center, Incorporated	
Republic of Korea	Korea Securities Depository	
Lao PDR	Bank of Lao PDR or Ministry of Finance	Lao Securities Exchange
Malaysia	Bank Negara Malaysia (RENTAS)	
Myanmar	Central Bank of Myanmar (CBM-NET Central Securities Depository)	-
Philippines	Bureau of Treasury (New Registry of Scripless Securities)	Philippine Depository and Trust Corporation
Singapore	Monetary Authority of Singapore	Central Depository Pte Ltd.
Thailand	Thailand Securities Depository Co., Ltd.	
Viet Nam	Vietnam Securities Depository	

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea; CSD = central securities depository; Lao PDR = Lao People's Democratic Republic; RENTAS = real-time electronic transfer of funds and securities.

Sources: National authorities' website, *ASEAN+3 Bond Market Guides*.

273. Due to the nature of a CSD's functions as the central institution for the settlement and safekeeping of securities, most institutions acting as a CSD have been anointed as SROs. A CSD will have to admit, connect, manage, and potentially discipline its participants, which include custodians and securities firms (see the relevant sections for a complete descriptions of these intermediaries). For that purpose, a CSD will issue membership or participant rules, which will carry the eligibility criteria for membership, and operating rules that regulate the settlement activities of said participants. In addition, the CSD will need to define and prescribe account opening and maintenance procedures, and settlement and safekeeping processes. Being an SRO will allow the CSD to perform these functions by issuing and enforcing its own rules and regulations. The role of an SRO is conferred onto the CSD by order of the regulatory authority for the securities market or as stipulated in law or regulations, as the case may be. In markets where the CSD(s) may not be considered an SRO, the CSD will fulfill the same duties under the supervision of the relevant regulatory authority, which will use its own powers to issue and enforce the rules and regulations needed.

274. Institutions performing the role of a CSD focus on the settlement of the securities leg of a debt securities transaction. The cash leg is typically settled outside the CSD, most often through a payment system operated by the central bank. Instead, CSDs are typically participants of the payment system through which the cash settlement occurs, which allows them to monitor payment activities that support the

securities settlement. The exceptions are CSDs operated by central banks, which are able to settle both the securities leg and the cash leg of a transaction (see the relevant section on central bank functions in the securities market in this document).

4. Custodians

a. Roles of Custodians

275. Custodians are securities market intermediaries that provide services to investor clients to settle securities transactions, collect income and process corporate actions, safekeep the underlying assets, report on investor assets, and provide additional and value-added services based on agreed service levels. Custodians play an important role in the domestic and international securities markets, including for debt securities, particularly in ensuring asset safety and facilitating investor access to markets. Without a custodian, it is practically impossible to attract overseas institutional investors because market practices assume the existence of custodians in a market. The term custodian(s) and their functions are typically described in the securities law or securities market regulations of a given jurisdiction and may include duties of a fiduciary nature, up to the function as a quasi-trustee, if a market's legislative and regulatory framework so requires.

276. Custodians may act as global custodian, regional custodian, or domestic custodian. A global custodian services investors with investments in many or multiple markets, typically in the domicile of such investors, which may be mutual funds or unit trusts, large asset managers, international insurance companies, or similar large institutional investors with a global investment horizon. The global custodian develops its reach into many markets by appointing domestic custodians. Domestic custodians offer custody services for a specific market. Regional custodians are financial institutions offering custody services to their international investor clients across their network of markets in a given region; each branch or subsidiary may also act as a domestic custodian. If servicing a global custodian, the custodian in a given domestic market is also referred to as a subcustodian, or local custodian, to distinguish its role and function from its global custodian client. Global custodians, regional custodians, and domestic custodians form a chain of custodian services globally. Through the custodian service chain, overseas investors can conform with local regulations and taxation, and protect their investments. Therefore, they function as key market infrastructure.

277. In 2018, the three largest global custodians, measured by assets under custody, were The Bank of New York Mellon, State Street Bank and Trust Company, and JP Morgan. All three institutions are international expert members of ABMF. The ICSDs Clearstream and Euroclear also act as global custodians for their clients; both institutions participate in ABMF. Significant regional and domestic custodians in the ASEAN+3 region include Citibank, Deutsche Bank, and HSBC, all of which are also international expert members of ABMF.

278. Custodians may be commercial banks or securities companies. Depending on the legal and regulatory framework in a given market, commercial banks may be able to operate as custodian within the provisions of their banking license. If not, banks will need to obtain a license, authorization, or accreditation, as the case may be, from the securities market regulator to act as custodian. Securities companies may typically carry out custodian services as part of their primary license. In markets with Islamic finance products (here, *sukuk*), custodians may be specifically recommended by or accredited with the authority that interprets Islamic principles for the financial and capital market, to be able to settle and keep *sukuk* for their clients, in line with the specific requirements of these products.

279. Custodians execute with their clients a custody or custodian agreement that governs the basic roles and responsibilities of both parties. A core custody agreement may only define a general service provision, with specific markets and products detailed in a market or service addendum. In addition, large and complex portfolios, such as those maintained by global custodians on behalf of their many clients, may require the execution of a dedicated service level agreement across all markets and products serviced by a custodian. Additional or value-added products may include messaging and reporting, securities lending and repo,

foreign exchange and money market transactions, as well as reconciliation services for clients with a large number of subaccounts.

280. Custodians, whether banks or securities companies, act on instructions from their investor clients only and are required by domestic law or regulations to segregate the assets of their investor clients from their own. In addition, due to their typical focus on international (inbound) investors, domestic or subcustodians will need to incorporate international best practices for investor protection and anti-money laundering and KYC regulations in order to meet the requirements and expectations of global custodians (see also the section on understanding of international requirements in this document), in addition to the necessary compliance with regulations in their own jurisdiction.

281. Custodians, due to their function as settlement agents for their clients, are required to be members or participants of the CSD(s) and also must have access to a market's payment systems. As depository participants, the custodians match transactions, settle with, or follow up on pending transactions with other depository participants, receive interest and redemption payments on behalf of their clients, and facilitate the movements of client assets for securities lending, repo, or other collateral transactions across their accounts. Custodians expect client instructions to be sent by the Society for Worldwide Interbank Financial Telecommunications (SWIFT)—in MT format under ISO 15022, but increasingly also using XML formats under ISO 20022, depending on an institution's or a market's readiness for messaging according to the new ISO messaging standard.

b. Understanding of International Requirements

282. Certain types of institutional investors are often subject to additional prudential requirements prescribed in their home market laws and regulations. These investor types include pension or provident funds, mutual funds or unit trusts (depending on the underlying legal framework), and life insurance companies. Specific prudential prescriptions include the ability to identify an investor's assets at any time in the account structure of an intermediary, the use of a trustee or bondholders representative, as well as the basic eligibility and qualifications of any intermediary holding assets for these investors.

283. These prescriptions are intended as extra safeguards for the assets of these institutional investor types, such as protection in the event of bankruptcy or insolvency and, while mandated in the home market of the investor, in effect extend to any intermediary holding assets for the investor, including in markets other than the investor domicile.

284. It is recommended that domestic custodians and depositories that want to safekeep the assets of foreign institutional investors familiarize themselves with such requirements imposed by authorities in investors' home markets, in order to be able to comply and hold investor assets.

285. The following sections detail some of the most prolific such prudential requirements, as a matter of reference.

(i) Rule 17f5 and Equivalent

286. Securities and Exchange Commission Rule 17f5—typically referred to as Rule 17f5—originates from the Investment Company Act, promulgated in 1940 and revised from time to time, which regulates the services to be provided by and to mutual funds established in the US. Rule 17f5 is titled Custody of Investment Company Assets Outside the United States and it specifies that an intermediary acting as custodian for a mutual fund in an economy other than the US will have to be eligible for such service.

287. Under Rule 17f5, the global custodian for the mutual fund, typically based in the US, is required to carry out an assessment of all domestic custodians (subcustodians) it uses. If the global custodian is not domiciled in the US, it is also subject to the eligibility criteria under Rule 17f5.

288. In practical terms, the global custodian checks on Rule 17f5 criteria upon initial due diligence and selection of the subcustodians and will conduct an annual review of the subcustodians via a questionnaire.

When visiting the subcustodians, the global custodian may carry out specific checks on the eligibility and qualifications required under Rule 17f5.

289. Eligibility criteria under Rule 17f5 include the segregation of assets, periodical reviews by auditors, and supervision by regulatory authorities.

290. While Rule 17f5 is often cited as the typical eligibility assessment for domestic custodians wanting to safekeep the assets of foreign institutional investors, other investor domiciles have similar provisions within their prudential regulations. Typical examples include

- (i) United Kingdom Client Asset Sourcebook (CASS);
- (ii) Securities Deposit Act, Germany (German: Depotgesetz, or DepG);
- (iii) Alternative Investment Fund Managers Directive, European Union; and
- (iv) Undertakings for the Collective Investment in Transferable Securities, European Union.

291. The complete eligibility criteria and other related prescriptions are readily available from the website of the US Securities and Exchange Commission, the websites of major global custodians, and in the public domain.

(ii) Rule 17f7 and Equivalent

292. Correspondingly, Securities and Exchange Commission Rule 17f7, Custody of Investment Company Assets with a Foreign Securities Depository, refers to the safekeeping of assets of US mutual funds with eligible securities depositories outside the US.

293. A global custodian serving such a mutual fund will have to confirm the eligibility of a depository upon opening a market for access by its client. Likewise, the global custodian will carry out an annual review of the criteria, typically via a written questionnaire.

294. The eligibility criteria for a foreign depository includes the need to separate investor assets from its own assets, the ability to identify investor assets, and the supervision and examination of the depository by a regulatory authority in its home market.

295. The complete eligibility criteria and other related prescriptions are readily available from the website of the US Securities and Exchange Commission, the websites of major global custodians, and in the public domain. Similar regulations may exist in other jurisdictions.

(iii) Due Diligence Process

296. Sections above described the need for due diligence on the part of global, regional, and domestic custodians that is mandated in the prudential regulations of the investor's domicile. This due diligence is vital but also differs somewhat from the typical due diligence in the bond market aimed at debt securities issuance. Selecting a custodian is a detailed and drawn out process and, hence, needs to include checks and validations since a change of custodian at a later stage would represent a complex and expensive process for both global custodian and investor client(s).

297. Among the key components of the due diligence review are the current position in the market and commitment of the institution to continue to conduct custody business in future. Like all transaction-driven businesses, custody business benefits from scale and is aimed at efficiency of the processes employed. A custodian's infrastructure and technology will need to be scalable to take all its clients' volume while maintaining operating efficiency within clearly stipulated market and client deadlines. At the same time, a

client's volume information also determines the fees charged and, in turn, affects the ability of the custodian to operate at a certain cost.

298. The due diligence process functions as follows: A global custodian sends out a due diligence questionnaire—often referred to as the request for proposal—to the candidate subcustodian. The questionnaire may be a standard or proprietary version, and may be influenced by the specific requirements of the underlying investor(s).⁴⁸ Subcustodians need to answer the questions, showing their competence and compliance. The response, which is expected to include a proposed fee schedule, is reviewed and evaluated; follow-up questions and specific details may be required. This is typically followed by an on-site visit. For new markets or during a periodical review of significant markets, a market visit may include meetings with regulators and market institutions. Following an appointment as subcustodian, the global custodian will conduct annual reviews, as typically required by its own underlying regulations and procedures.

299. Key information requested and to be provided during the due diligence process, other than product capabilities and fees, include operational and risk management capabilities, sophistication of technology used by the custodian, and its contingency plans as well as those published by the market infrastructure providers. Account structure and account setup are central to the questionnaire since these influence the amount of effort and resulting cost of the relationship. Similarly, staffing levels at the custodian, not only in transaction processing but also in client services and tax services, are crucial indicators for both the commitment and operational capabilities of the custodian. While the need for a physical vault has diminished in recent years, a need for physical segregation of a custodian's operation from other parts of the same institutions, particularly advisory or investment banking functions, remains crucial.

⁴⁸ A number of consultancy or advisory companies specializing in service provisions to the securities market at large offer standardized templates for investors or asset aggregators (e.g., fund and investment managers) to conduct their due diligence, including the request for proposal, market or practice notes, and annual review exercises. In contrast, large global custodians have their own proprietary due diligence processes and formats, which the subcustodian has to follow to be eligible for selection. While a certain level of common questions and requirements should be expected, the domicile of the global custodian— typically the US and markets in the European Union, but also in Asia—will influence the breadth and depth of the due diligence.

VI. Necessary Ecosystem for the Development of a Bond Market

300. To create a market, it is necessary to consider interactions of these building blocks and enabling environment and ecosystem to support the functions and integrity of the market. This chapter explains the necessary ecosystem for the development of a bond market.

A. Robust Legal Framework

301. To build and maintain a well-functioning bond market, particularly a corporate bond market, it is necessary to have a comprehensive and robust legal framework in place. Generally, the legal framework of a bond market consists of a number of fundamental laws—including a company or enterprise law and bankruptcy and insolvency laws, including a clear definition of default—as well as key legislation specific for the bond market, such as a securities law (or its equivalent) and its implementing decrees or provisions, market regulations and rules, and circulars and guidelines issued by the securities market regulator(s).

302. Laws and regulations should be bond-market specific because equities and bond markets function differently and the enabling factors for each market are often different. For example, listed equities should be distributed widely while a bond can be issued to a few (or a targeted number of) investors because bond issuance does not affect the structure of company ownership.

303. The legal framework should include prescriptions for a company or enterprise to issue debt securities, and the framework should regulate the issuance process in principle. Definitions of debt securities should be wide to enable a variety of instruments, including those needed for the money market and operational needs for the implementation of central bank policy objectives. Market infrastructure provisions need to be included outlining their purpose and functions in the market at large, and their role in developing and maintaining the bond market. Issuer and market participant obligations need to be clearly defined and key agent or service provider roles established. Most importantly, the legal framework should describe and regulate market activities and provide for supervision and enforcement. The legal framework should also be flexible enough to allow the addition of market functions, products, and processes as the market develops.

304. Important in this context is the availability of fundamental and key legislation as well as significant regulations in (at least) an English version. While it is well understood that an English version would only ever serve as a reference, and that the domestic market language version of laws and regulations would prevail in the event of a dispute or claim, it is imperative that the legal framework is accessible to all potential issuers, investors, and other market participants so that they may understand their obligations in the market and can act accordingly.

305. This chapter firstly describes market integrity and fairness as the basic notions to be built into the legal framework; secondly, the relevant laws are described, particularly those related to developing a corporate bond market. The next section explains the professional investor concept for a bond market. Finally, the importance of the use of clear legal definitions and appropriate technical terms is discussed.

1. Market Integrity and Fairness

306. According to the International Organization of Securities Commissions (IOSCO), the core objectives of the legal framework in a securities market are (i) protecting investors; (ii) ensuring that markets are fair, efficient, and transparent; and (iii) reducing systemic risk. Securities market regulators seek to achieve these objectives by setting standards; supervising markets, market participants, and their activities; effectively enforcing those standards; and closely cooperating with other regulators.⁴⁹ Correspondingly, these features will need to be embedded in the different layers of the legal framework.

307. To achieve the objectives above, regulators need to emphasize the importance of market integrity and fairness. In securities markets, the concept of market integrity can be considered as ensuring that the securities market ecosystem—including the market itself and market infrastructure—is unimpaired, uncorrupted, sincere and honest, and sound. The concept of fairness in the market can be considered as ensuring the markets have the characteristics of being impartial and equitable. A fair market, market integrity, and market confidence are closely related and may overlap, and represent the cornerstones of a well-functioning and efficient securities market. They serve to establish the basic functions of the market to match demand and supply, offer price and yield information and their transparency, and effect trade execution in a timely manner. They not only encompass the elimination of dishonest trade or trading practices, but also promote equal access to the market for eligible investors and issuers, thereby ensuring transparency of corporate information and securities information.⁵⁰ These characteristics are indispensable to establishing fair market price formation. Therefore, the overall legal framework of a securities market must underscore and ensure market integrity and fairness as basic principles.

a. *Relationship between Fairness and Integrity of the Market and Investor Protection*

308. Appropriate market mechanisms can allocate resources efficiently by matching demand and supply. This is, however, based on an assumption that all participants are equal and treated fairly. If this assumption does not hold, the market mechanisms cannot allocate resources efficiently in a socially optimal manner. But, in reality, a market is not perfect due to various factors such as information asymmetry and the power to control demand and supply. Therefore, the market must have certain rules and mechanisms built in from the outset to correct information asymmetry, inequality, bias, and discriminatory power to manipulate a market. The fairness and integrity of the market is closely linked to investor protection. All investors must be given an equal position when participating in a market. Information asymmetry must be mitigated; necessary information must be disclosed and distributed equally. Unlike for a bank loan, information on the borrower (i.e., the issuer) must be shared with all market participants equally. Regardless of the economic power of participants, regulators must ensure a level playing field, particularly for retail investors. Regulators must also consider additional protection and control. If a market is unfair, the prices achieved in it will not be trustworthy. Biased price information and discrimination in the market drives market participants away from the market, eventually killing the market. Therefore, investor protection is closely linked with the fairness and integrity of the market, and is necessary to support sound and sustainable market development.

b. *Legal Framework to Ensure Market Integrity*

309. The legal framework to establish a fair market and ensure market integrity includes not only formal laws and regulations, but also the regulator's approvals and actions, rules set by securities exchanges and self-regulatory organizations (SROs) or market infrastructure providers, business rules, and market practices.

310. Market systems and infrastructures must treat all market participants equally and fairly, and should not unduly favor or benefit a particular group, entity, or person. In addition, the legal and regulatory framework should support a mechanism for ensuring autonomous cooperation among market participants

⁴⁹ IOSCO. 2017. *Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation*. Madrid.

⁵⁰ Group of Twenty. 2010. *The G20 Seoul Summit Leaders' Declaration*. Seoul. <http://www.oecd.org/g20/summits/seoul/G20-Seoul-Summit-Leaders-Declaration.pdf>.

to ensure market integrity. Regulators and SROs should detect, deter, and penalize market manipulation and other unfair trading practices. They should also promote fair and proper market activities. The following points must be emphasized when building a robust legal framework to ensure a fair market and its integrity.

(i) Typical Actions to Be Prevented to Ensure Market Integrity

311. Market activities to be banned include market and price manipulation, insider trading, leaking of insider information, front running (trading ahead of customers), misrepresentations of material information, spreading rumors, passing false information, and other fraudulent and manipulative practices. These actions not only destroy market confidence but also impede the formation of fair market pricing. Any action that could impede market functions must be subject to the supervision of regulators. This may go beyond overseeing financial institutions as direct market participants and lead to monitoring the activities of all market participants.

312. All eligible investors and issuers need to be given fair access to market facilities, market transactions, and disclosure and price information. Improper trading and transactional behaviors and malpractices must be prevented. Thus, the proper and timely disclosure of corporate and securities information, as well as securities prices or yields, must be established, and their continuous availability must be upheld. At the same time, the misrepresentation or falsification of a securities report must be prevented and needs to be penalized. Market practices must ensure fair treatment of orders and transactions. Also, market price information should be formulated based on a fair and reliable process.

(ii) Fair Market Price and Transparency of Price Information

313. A fair market price represents a market's perception of the creditworthiness of issuers and securities by market participants as well as the impact of external market factors that affect the demand and supply of securities. To create an accurate perception and understanding of creditworthiness and the impact of external factors, information on the issuer and securities, as well as external factors including economic and political news, must be distributed immediately and widely in the market. Regulators and SROs need to consider how such information can be disseminated in a timely and fair manner.

314. Transparency of price information can be defined as the degree of availability of pre- and post-trade information, including corporate and securities information. Pre-trade information includes bid-and-ask price quotes. The quoted price needs to be executable with some degree of certainty. Post-trade information includes the traded price and the executed volume. The legal framework should support the transparency of timely market price formation.

(iii) Fiduciary Duty and Trust Responsibility of Market Service Providers

315. Market service providers must act in the best interest of their customers at all times. Problems inherent in the agency function, such as a conflict of interest and a misalignment of incentives, must be prohibited. A market participant who acts on behalf of a customer must not commingle its own position with customer assets. Customer assets must be clearly segregated at all times. The participant must not use information from a customer to advance its own interests and position. No profit should be made from the relationship unless there is an underlying contractual agreement or an explicit consent for one-off transactions. An entrusted party must make decisions that are in the best interest of the beneficiary. This is not limited only to agency functions with inherent fiduciary or trust obligations, such as trustees or bondholders representatives.

(iv) Interactions among Various Markets

316. Bond transactions and pricing affect other markets such as those for bank loans, commodities, swaps, and other derivatives. In addition, the impact may go beyond a single domestic market. Because of such complexities, regulators cannot focus solely on their own market but also need to consider various interactions among markets to ensure fairness and integrity. Therefore, stronger coordination among domestic authorities and together with overseas authorities must be considered. Under the Asian Bond

Markets Initiative (ABMI), all relevant regulators are encouraged to cooperate and coordinate to create a well-functioning intraregional marketplace.

2. Company or Enterprise Law

317. Company, or corporate law, is a broad area of law encompassing nearly all aspects of supervision of legal entities and their businesses. The decision making process of a company for the issuance of shares and bonds is largely governed by the company laws of each economy. Furthermore, certain types of issuances, such as private placements, may be regulated by an economy's company law as it may not always be within the supervision of the securities regulator or authority.

318. A corporate legal framework that is supportive of the issuance of shares and bonds is vital to the promotion and growth of bond markets. Such an enabling and sound legal framework would normally set out smooth and fair procedures for activities necessary for issuance of equity and bonds to ensure both the benefits and protection of companies and investors. This is a key foundation for a strong and efficient bond market, particularly for emerging markets.

319. The growth and development of corporate bond markets relies on various factors. A nurturing environment made up of flexible and streamlined regulatory requirements is important to facilitate the issuance of corporate bonds. A supportive company legal framework, lighter regulation, and tailored disclosure and documentation submission requirements for offerings to professional investors can minimize entry barriers to the corporate bond market and increase issuances.

320. Corporate laws generally require that a board of directors' meeting is held to make a decision on the issuance of shares or bonds, and also require that a shareholder's meeting is held in order to approve such a decision. In general, the board of directors of a company is responsible for decision making in relation to the management of the company, including methods of funding. The directors may hold a board meeting to decide whether the company should seek funding by borrowing from banks or through the issuance of shares or bonds. In this regard, company laws play an important role, including stipulating the qualifications of directors, methods of the selection of directors, rules and procedures of holding a board meeting, and so on. A sound legal framework should ensure fairness in the methods of selection of directors and the composition of the board of directors. The law should also require that directors use due care in making decisions. This is to ensure that the decisions made by the board are beneficial to both the company and investors as well.

321. Additionally, company law may require that decisions of the board be approved by the shareholders' meeting before implementation, especially decisions to issue new shares or corporate bonds. In relation to shareholders' meetings, the law should stipulate the methods for calling the meeting, procedures of the meeting, and voting methods, among other conditions. A jurisdiction with a company law structure that ensures the ease of these processes is beneficial to companies and their investors, and would encourage the issuance of corporate bonds.

322. Company law is very broad and differs in each jurisdiction so it is likely that not all of its features will be supportive to the issuance of corporate bonds. There are still certain challenges in the company law setup in each jurisdiction that may not always promote the ease or convenience of corporate bond issuance. For example, the laws in some jurisdictions may not support the attendance of a board of shareholders' meeting via teleconference, making it inconvenient for directors who are not near the location of the meeting or who are in a different economy to attend the meeting. Additionally, there may be limited issuance options for corporate bonds in a certain jurisdiction. These issues may seem minor but practicality is often a key consideration for issuers and investors.

323. There may be different regulating agencies involved in a bond market. It is therefore important that these various governing bodies have the same understanding and interpretation of the laws. This will reduce the risk of regulatory and policy implementation gaps, as differing standards can be a hindrance to the growth of the bond market. Exposure to different policies and regulations in other markets and the sharing of information and experiences among regulators from different markets is one way of stimulating

an economy's bond market as well as ensuring that a generally standardized approach is considered when implementing new laws.

3. Bankruptcy and Insolvency Law

324. The relationship between a bond issuer and bondholders is a debtor-creditor relationship. If the issuer becomes insolvent, having an effective bankruptcy or business reorganization framework can increase the bondholders' chance of receiving debt repayment.

325. Bankruptcy laws in various markets provide a differing extent of protection to bondholders. This protection is a key element of an efficient bond market as the purpose of bankruptcy laws is to manage the assets of an insolvent debtor and facilitate the distribution of these assets for repayment to creditors, while ensuring that the remaining assets of the debtor are not jeopardized and that the creditors receive repayment in accordance with the amount of their debts and their credit priorities. Bankruptcy procedures generally consist of the following features:

- (i) Assets of the debtor are frozen. Creditors may not enforce against the assets of the debtor except through the bankruptcy procedures.
- (ii) The assets of the debtor are gathered and are to be distributed to creditors *pro rata* and *pari passu*, subject to the priorities of the creditors. For example, prioritized creditors, such as secured creditors, creditors with title finance, or creditors with a set-off right would be the first to be entitled to the debtor's assets. The remaining assets then would be distributed to the prioritized creditors.
- (iii) Cancellation of and demanding restitution from a prejudicial transfer of the insolvent debtor's properties are allowed. An example would be where a transfer of the insolvent debtor's property is made knowing that such a transfer would reduce the assets that would be available to the creditors in the bankruptcy distribution.

326. Bondholders are a major group of creditors in most large bankruptcy cases although they may or may not always receive priority in the same rank as other creditors. Having bankruptcy procedures that are effective in protecting bondholders would therefore be a major consideration for investors. If the bankruptcy procedures are effective in gathering the debtor's assets and demanding restitution from prejudicial transfer of debtor's assets, creditors would be able to have a higher chance to recover their investment amount in the event of the issuer's bankruptcy. Moreover, if the protection framework of secured creditors in relation to a bankrupt debtor is clear and effective, investors that are interested in investing in secured bonds would be more willing to invest in bond markets.

327. In addition to having effective bankruptcy and reorganization provisions, it is also necessary to have efficient judicial and enforcement processes to effectively enforce such laws. This requires the courts' skill and expertise, and a speedy enforcement process. For example, the official receiver who manages a bankrupt's assets must work efficiently; the judges in bankruptcy and reorganization cases should well understand the business in order to make decisions that most benefit the participants in the bankruptcy or reorganization case; and the court process should be in a timely manner in order to keep up with the actual business situations and to minimize any damage and costs that may be incurred.

328. Both bankruptcy and business reorganization generally require creditors' participation for them to be entitled to repayment and to enjoy other rights and benefits offered by the legal framework. For example, a typical bankruptcy law may stipulate that creditors must file for repayment through bankruptcy or business reorganization proceedings within a fixed period. Failing to do so, the creditors may not receive repayment at all. Moreover, in bankruptcy cases, creditor meetings are held to decide whether the debtor should be ordered bankrupt or if the composition of debt or debt restructuring should be accepted. In a business reorganization case, creditor meetings are held to select the planner who would prepare a business reorganization plan and to decide whether to accept the proposed plan.

329. As a bond issuance can consist of a large number of bondholders and a bondholder may have invested in a number of bonds, it would be too burdensome for each individual investor to assume the

responsibilities of being a creditor in bankruptcy and reorganization cases if the issuer becomes insolvent, such as having to file for repayment and attending creditor meetings. Therefore, it is necessary to establish a bondholders' representative or a trustee (see also the section on trustee or bondholders representative in this document) to have the power to act on behalf of the bondholders in order to minimize the burden of the investors, which would help stimulate participation in bond markets.

330. In summary, bankruptcy and business reorganization laws have the purpose of managing a insolvent debtor's assets for the benefit of both the debtor and the creditors. Having efficient bankruptcy and reorganization procedures that strengthen protection for bondholders thus promotes and supports the participation in and the growth of bond markets.

331. Further details of bankruptcy and insolvency law in different jurisdictions are set out in Annex 7.

4. Definition of Default

332. The terms and conditions of a bond govern the rights and duties between the bond issuer and the bondholders. Definitions of default and consequences of default are among the key provisions to be considered as risk of default is a concern for bond investors. As mentioned above, bankruptcy laws may provide protection for investors, but having concrete terms and conditions of the bond itself addressing these risks allows investors to better quantify these risks. Typically, such terms and conditions specify that, where the issuer breaches a default provision and does not remedy such default within a fixed period, the bondholders would be able to proceed to claim the return of the capital and other outstanding debts from the issuer.

333. Definitions of default and consequences of default are among the tools that help protect the bondholders' investment. Definitions of default often consist of a list of events that would affect a bond issuer's ability to make repayment to the investors. Typical events, other than default in payment, may include insolvency, winding up, breach of other obligations in relation to the bond, or cross-default. The more extensive the list, the more risky situations that are addressed and the more protection offered to investors.

334. For example, a bond may stipulate cross-default as an event of default and acceleration of debt repayment as a consequence of default. That is, when an issuer is in default of another debt obligation, the issuer is deemed to also be in default of the bond, allowing the bondholders to request to accelerate repayment of the outstanding debt at the same time as the creditors of such other debt. Without cross-default and acceleration terms, bondholders would have to wait until the repayment date initially specified in the terms and conditions. By that time, there is a risk that the issuer might not have sufficient assets left for repayment.

335. Having clear definitions of default reduces the likelihood of a future dispute over whether or not an event of default has arisen and is an important factor affecting an investor's investment decision. These terms allow investors to precisely evaluate their risk exposure before deciding to invest in a bond.

336. Some jurisdictions, such as Malaysia, impose minimum requirements in relation to the definitions of default of a bond, while other jurisdictions leave the definitions of default as a matter of negotiation. As such, investors in jurisdictions with regulations on the definition of default may enjoy more protection with respect to bond investment, which could facilitate the growth of the bond market in such jurisdictions. On the other hand, for jurisdictions without minimum requirements on the definition of default, the definition may depend largely on the negotiating power of each party involved. More established entities with greater negotiating power, such as government agencies or big corporates, would be able to stipulate more difficult terms for recognition of default with less chance of occurrence and longer grace periods, or stipulate ambiguous definitions that make it difficult to determine whether an event of default has actually occurred. As a matter of fact, investors in most bond markets prefer easier recognition of default. For instance,

investors would prefer that a missed payment is instantaneously construed as default in contrast to having a lengthy grace period before the missed payment is construed as default.⁵¹

337. In summary, a bond market where bonds have clear terms and conditions, and a clear definition of default, would offer stronger protection and a safer environment for investors, thereby attracting more investment. By contrast, having less protection deters investors from investing in bonds and impedes the growth and development of the bond market. One strategy to achieve this is to have supportive regulations and policies in place. It is therefore important that governing bodies in each jurisdiction recognize and adhere to the effects of terms and conditions, and the definition of default of bonds.

338. Further discussion on the definition of default of bonds in different jurisdictions is set out in Annex 8.

5. Need for A Clear Definition of Technical Terms

339. The use of clear definitions and standard terminology in the bond market is crucial. It is recommended to consider carefully when defining technical terms in law and regulations, particularly in developing markets where the regulatory framework may only now be taking shape. While definitions and terms specific to individual domestic markets are inevitable, an attempt should be made to apply internationally recognized terms and definitions to the extent possible. This is because international investors will inevitably review new markets and their terms and definitions against their own reference framework. Institutional investors with experience in the international bond markets expect a certain amount of recognition when assessing a new market's terminology. If that is not given, investors may be reluctant to proceed, fall victim to ambiguity, or create misperceptions about the target market. Such ambiguity and misperceptions should not be allowed to take hold as they take a long time to dispel. Nascent or frontier markets especially have a golden opportunity to adopt standard terms and definitions in use in the international market as they are establishing their institutions, rules, and practices. The Asian Development Bank (ADB) and the ASEAN+3 Bond Market Forum (ABMF) have included the topic of standards and, by extension, the use of standard terms and definitions in their work under ABMI. The ASEAN+3 *Bond Market Guides* are carefully designed to ensure consistency in terminologies, definitions, and usage. In addition, the single submission form (SSF) under the ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) provides a template to standardize document submission in a manner comparable to what is used in the international bond market.

340. While much effort has been dedicated to introduce international practices in the domestic bond markets in the region, the terminology used is still not always in line with international standards. Taking an example from the topic of issuance documentation and disclosure items, which are generally understood as summary terms for legal documents, regulatory approval requirements, and prescribed information on an issuer and the proposed debt securities, the terms for individual components in this context could differ widely. In principle, a "prospectus" is the usual term for the key offering and disclosure document for a public offer of debt securities. In the professional market, the terms "information memorandum" and "program information" are usually used for private placements or issuance programs, respectively. Yet, a number of markets formally refer to a "short prospectus" to delineate issuance documentation for their professional market segments from the "prospectus" used in public offers. For parties unfamiliar with this term, "short prospectus" could indicate an abridged prospectus in a public offer context, or just a summary document. In addition, some markets prescribe the need to submit a "registration statement" or "shelf-registration statement" (official approval request) plus a "base prospectus" in the public offering market. Here, foreign market participants may assume that a base prospectus will have to be followed by a full prospectus (or something similar) when in fact base refers to the core information that need only be supplemented in case of changes, as is the case for all instances of a normal prospectus across markets.

341. At the same time, some markets utilize the same term for a number of activities related to the bond or capital markets. These multiple uses are often historical and may result from the activities being carried out under the supervision of different regulatory authorities or a lack of coordination among authorities. One key example for the multiple meanings of the same term is "registration," which in a specific market could

⁵¹ ADB. 2008. *Handbook on International Best Practices in Credit Rating*. Manila.

have up to five uses each signaling different activities. The most common uses of the term “registration” are the registration of (i) an investor for a market or marketplace; (ii) debt securities to obtain approval for issuance (see also registration statement in the previous paragraph); (iii) debt securities for the trading in an organized market; (iv) a securities or capital market business subject to licensing by a securities and exchange commission or equivalent authority that may also be the corporate regulator; and (v) debt securities at a central securities depository (CSD) to be eligible for clearing, settlement, and safekeeping. Each instance of the term carries a different action, by different parties, is subject to distinct eligibility criteria and different rules, and the oversight of different regulatory bodies or market infrastructure providers. As a result, the term registration on its own does not allow an observer—whether familiar with or new to a market—to conclude what type of registration is being referred to. Context is required; if not provided, the information could be misinterpreted or lost.

342. These examples for the use of the term “registration” may not be exhaustive given the fact that the unofficial English translations of laws, regulations, and rules often provided by regulatory authorities, SROs, and market intermediaries may contain registration as a practical English term chosen to express any such accreditation, licensing, or other admission concepts for market participants without giving specific consideration to the inherent significance of the admission concept as expressed in the local language. This is understandable because many of the admission concepts mentioned above are solely applied for the purpose of admitting domestic market participants to their activities, all of whom understand both the significance and qualifications. On the other hand, some market institutions point to their underlying law or regulations as the reason for using specific terms. As an example, while CSDs are generally institutions that deposit, settle, and safekeep debt securities, CSDs in certain jurisdictions are defined as bond registration, depository, and settlement institutions and, hence, would naturally apply the term registration in their context.

343. What also occurs in the context of regulations, however, is that some markets allow the use of a number of terms for the apparently same or similar purposes, treating them like synonyms even though the meanings may differ in both actual meaning and the perception of the observers. For example, if the terms “notice” or “announcement” in a given market are used seemingly intermittently, they tend to imply the conveyance of news or denote a certain information value only. Yet, while an announcement in many contexts is a pure delivery of information, a notice may also be associated with a regulator drawing the attention of its constituents to new and binding prescriptions. While domestic market participants may be familiar with the finer distinctions, international market participants may not be able to make important distinctions at the risk of noncompliance.

344. Using registration in the context of the regulatory framework also points to another challenge in the use of appropriate terms. One of the most observed challenges is the ability to determine how market participants are empowered to carry out their activities in the bond or capital markets. Across different markets, institutions are variously registered with; licensed, authorized, or approved by; accredited with or by; or otherwise enabled for the same activities. Viewed from the perspective of a particular investor’s reference framework—its home market—licensing may be seen as being of a higher—and more stringent—quality than accreditation, which suggests some need for compliance, or a more straightforward registration, which does not appear to suggest the need for eligibility and supervision at all. This perception might take hold even if an accreditation in a given market comes with the same eligibility criteria, obligations, and responsibilities as a license, and registration for one activity may require an underlying formal business license in a core market activity, which takes in supervision over said entity. A good example for the latter are credit rating agencies (CRAs) that require licensing, typically from the securities market regulator, to carry out their activities in a jurisdiction overall while also needing accreditation with an SRO in an over-the-counter (OTC) or exchange market segment in that jurisdiction to service its constituents.

345. While the use of such terms to describe a business entity’s empowerment to carry out its activities may appear as unnecessarily complex yet acceptable, the resulting confusion or misperception on the side of an unfamiliar party may have real consequences. In an environment where everything from capital requirements to classification and supervision is measured or determined on the basis of the risk profile of an institution, dealing with counterparties or intermediaries for which the institution cannot complete satisfactory due diligence—due to lack of information, misperception, lack of knowledge, or any combination of the aforementioned—may not be acceptable. This may prolong or deter from the acquisition of and

familiarization with counterparties and market intermediaries in an investor's chosen investment destination.

346. Other examples of misleading or ambiguous terms in use in the context of the securities market include

- (i) “clearing” (the consideration of trading parties’ obligations toward the market) is occasionally treated as synonymous with “settlement” (transferring the ownership of or interests in debt securities in exchange for cash) because the outcome—the movement of cash and securities—is seen as the same;
- (ii) “funds” (money or proceeds) versus “fund” (investment vehicle);
- (iii) “security” (safety) versus “securities”; and
- (iv) “prospectus” and “short prospectus” where the term “short” may or may not refer to less disclosure or just a concise information summary.

347. Given these latent practices and the multiple possible explanations for a single technical term, it is important that laws, regulations, rules, and market practice and convention agreements contain definitions of the nature of a term, its purpose in the context of the regulatory instrument, and any interpretations if inherent ambiguity exists. While much progress has been observed, particularly in recent years, more may have to be done to avoid the potential downsides of unclear definitions and the ambiguous use of technical terms.

348. On occasion, however, terms in the national language may also offer opportunities for clear distinctions, such as in markets where regulatory instruments have specific designations. An example is the use in Cambodia of the terms *kram*, *anukret*, and *prakas* to denote laws, subdecrees, and regulations, respectively. In addition, the creation of distinct terms can aid in the understanding and acceptance of market features, such as in the case of an issuance method to professional investors only (e.g., in Thailand a private placement to institutional investors is now universally known as PP-II).

B. Accounting and Financial Reporting Standards

349. Accounting rules and financial reporting standards are the basic language of business. They can provide the status of a company's financial situation to the internal as well as external parties in a comparable manner. IOSCO Principles of Securities Regulation for issuers states that there should be full, accurate, and timely disclosure of financial results, risk, and other information that is material to investors' decisions (Principle 16). Furthermore, Principle 18 states that accounting standards used by issuers to prepare financial statements should be of a high and internationally acceptable quality. The timeliness, accuracy, integrity, and comparability of issuer disclosure are essential for maintaining investor confidence and therefore facilitating a stable international financial system.⁵² Different accounting traditions can be observed in different jurisdictions in response to varying needs of users. But comparability and compatibility need to be ensured.

350. Initial and continuous disclosures are key aspects for debt securities issuance and trading. The ability to ensure such disclosure has been adopted as one of the AMBIF Elements because this has been recognized as an important international best practice that attracts professional institutional investors such as pension funds. Financial information is a significant component of the disclosure information prior to issuance and at regular reporting intervals and underlying the financial information to be provided by an issuer are the accounting standards or financial reporting standards of a given jurisdiction.

351. In its 2009 report, the Group of Experts identified the lack of consistent financial reporting standards as one reason for the lack of cross-border transactions in the region, together with the different underlying

⁵² IOSCO. 2016. *Statement on Implementation of New Accounting Standards*. FR12/2016. Madrid.

accounting treatment. In a later assessment, the ABMF Sub-Forum 1 thought this could potentially affect the compatibility of disclosure documentation accompanying issuance under AMBIF, and therefore identified the need for issuers and investors to cover multiple standards across markets. The increasing adoption of the International Financial Reporting Standards (IFRS) across ASEAN+3 markets since the inception of the AMBIF concept has alleviated concerns in this regard.

1. International Financial Reporting Standards as Conduit to Comparable Disclosure Information

352. To invest in multiple economies, investors must overcome challenges to assessing investment targets in all markets on a comparable basis due to differing financial reporting standards. To increase cross-border bond investment, harmonized disclosure data and comparable financial reporting treatment across the different markets is preferred. Making use of IFRS appeared to be the most effective solution. IFRS have already been evident in most ASEAN+3 economies in varying forms, and were not limited to financial data to support debt securities issuance. The key objective of IFRS has been the collection and display of financial reporting data across markets in a compatible and comparable manner.

2. International Financial Reporting Standards Reflected in Domestic Accounting and Financial Reporting Standards

353. Table 16 provides an overview of the adoption of IFRS in national accounting and financial reporting standards in ASEAN+3 economies. The adoption of IFRS across ASEAN+3 economies for the purpose of financial reporting for potential issuers of debt securities appears to be largely complete. While most markets originally committed to partial or full adoption of IFRS for general financial reporting purposes, specific relevance for the issuance of fixed-income instruments occasionally remained unclear. Since 2014, most economies pursuing convergence between national standards and IFRS have focused on a top-down approach, initially committing publicly important entities—such as government agencies with debt-issuing functions, banks and other financial institutions, as well as insurance companies—to report according to IFRS. Compliance was then typically extended to all listed companies, where applicable, and to SMEs. Dedicated IFRS for SMEs had also been offered to SMEs by national authorities as an alternative, or interim, step before full compliance with the national financial reporting standards after convergence with IFRS.

Table 16: Domestic Financial Reporting Standards and Compliance with International Financial Reporting Standards in ASEAN+3

Economy	National Standards	Short form	Compliance with IFRS ^a	Remarks
Brunei Darussalam	Brunei Darussalam Accounting Standards	BDAS	Yes	Required for publicly accountable entities (including banks, financial institutions, insurance and <i>takaful</i> companies) effective January 2014
Cambodia	Cambodian International Financial Reporting Standards	CIFRS	Yes	Required for domestic public companies, listed companies
People's Republic of China	Accounting Standards for Business Enterprises	ASBEs	Yes	Effective January 2010
Hong Kong, China	Hong Kong Financial Reporting Standards	HKFRS	Yes	Effective January 2005
Indonesia	Indonesian Financial Accounting Standards (Standar Akuntansi Keuangan)	IFAS (SAK)	Convergence ongoing	Convergence approach: SAK converged with IFRS 2009; OJK leading full convergence to latest IFRS for financial markets
Japan	Japan Generally Accepted Accounting Principles	Japan GAAP	Yes	Voluntary application since March 2010
Republic of Korea	Korea Generally Accepted Accounting Principles	Korea GAAP	Yes	Mandatory for listed companies and financial institutions
Lao PDR	Lao Financial Reporting Standards	FRS	Yes	Pursuant to Accounting Law, 2013; for public interest enterprises from FY2016, all others from FY2017
Malaysia	Malaysian Financial Reporting Standards	MFRS	Yes	Effective January 2012
Myanmar	Myanmar Financial Reporting Standards	MFRS	Yes	SMEs are permitted to use either MFRS for SMEs or full MFRS
Philippines	Philippines Financial Report Standards	PFRS	Yes	Fully converged
Singapore	Singapore Financial Reporting Standards	SFRS	Yes	Fully converged
Thailand	Thai Financial Reporting Standards	TFRS	Yes	Required for public interest entities
Viet Nam	Vietnamese Accounting Standards (Vietnamese Financial Reporting Standards)	VAS (VFRS)	No	MOF road map in place to begin definition and use of VFRS from 2019, focus on entities with public benefit

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea; IFRS = International Financial Reporting Standards; FY = fiscal year; Lao PDR = Lao People's Democratic Republic; MOF = Ministry of Finance; OJK = Otoritas Jasa Keuangan; SME = small and medium-sized enterprises.

^a Compliance with IFRS for the purpose of financial reporting in the context of debt securities issuance, as may be applicable.

Sources: Asian Development Bank. 2014. *ABMF Sub-Forum 1 Phase 2 Report*. Manila; LCPAA. 2017. *Legal Financial Reporting Framework and FRS in Lao PDR*.

http://www.aseanaccountants.org/files/20th%20AFA%20Conference_PPT_Legal%20financial%20reporting%20framework%20and%20Lao%20FRS1.pdf; Brunei Darussalam Accounting Standards Council; Sciedu Press, 2018, Accounting and Finance Research Journal, International Financial Reporting Standards and Orientation of Vietnam: "Roadmap & International Experience", Toronto; www.sciedu.ca/journal/index.php/afr/article/download/14487/8910; other sources in the public domain, including IFRS website (www.ifrs.org).

3. Acceptance of International Financial Reporting Standards by Listing Places

354. Since the development of the AMBIF concept, ABMF has been aware that regional listing places, or places of issuance, have increasingly accepted the use of multiple financial reporting standards in the compilation of disclosure information, both upon issuance and for continuous disclosure obligations. This appeared to be a practical consideration, allowing for both issuer and investor preferences, while giving markets the opportunity to find the financial reporting standard most accepted by the largest number of participants. At the time, it had been ABMF's belief that the region's domestic bond markets would significantly benefit from a more unified (or comparable) treatment of financial reporting standards. Issuers would be able to present their disclosure information to multiple markets without loss of time to market and other resulting inefficiencies, and/or the incurrence of costs for the translation of accounting to reporting standards for each place of issuance. At the same time, investors would be able to apply their proprietary or proven assessment methodologies to more markets, which could increase their interest and investment horizon. Such benefits appeared to be very much in line with ABMF (and ABMI) objectives for the development of the region's bond markets. Hence, the SSF, the standard disclosure document for issuances under AMBIF, was designed with the intention to allow both IFRS and any other acceptable financial reporting standard to be applied to the information presented.

355. At the time of compilation of this document, all of the regional listing places, including the places for profile listing or registration of debt securities targeted by the AMBIF concept, are understood to accept financial disclosure information in IFRS format, in addition to existing national standards, as the case may be, and the potential use of other international formats, such as the US Generally Accepted Accounting Principles.

4. Corporate Disclosure and Governance (ASEAN Corporate Governance Scorecard)

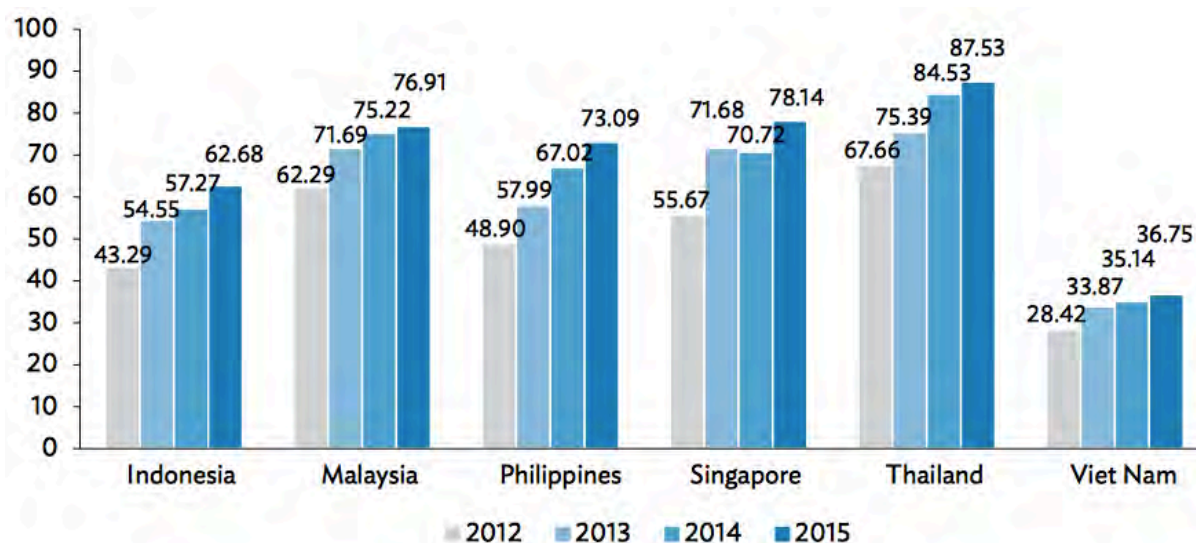
356. The ASEAN corporate governance initiative comprising the ASEAN Corporate Governance Scorecard (Scorecard) and the ranking of corporate governance of ASEAN publicly listed companies (PLCs) listed on ASEAN exchanges are among several regional initiatives under the ASEAN Capital Markets Forum (ACMF). Established under the auspices of the ASEAN Finance Ministers in 2004, ACMF comprises of securities regulators from 10 ASEAN jurisdictions to promote greater integration of the region's capital markets.

357. Prior to the development of the Scorecard, broad corporate governance principles were generally observed across ASEAN economies as many economies have benchmarked themselves against the OECD's Principles of Corporate Governance and undergone the World Bank's Report on the Observance of Standards and Codes assessment for corporate governance. There were also efforts by regulators and relevant domestic ranking bodies in assessing the corporate governance standards of PLCs in their respective markets. However, these assessments were not comparable due to differing thresholds, criteria, and methodologies.

358. The objectives of the Scorecard and the ranking exercise are to (i) raise the corporate governance standards and practices of ASEAN PLCs as ratings become more comparable; (ii) showcase and enhance the visibility and invest ability of well-governed ASEAN PLCs internationally; and (iii) complement other ACMF initiatives to promote ASEAN capital markets as an asset class. Other key initiatives include the ASEAN Green, Social and Sustainability Bond Standards for infrastructure financing, ASEAN collective investment schemes framework, ACMF professional mobility framework and capacity building for regulators from emerging economies.

359. A group of corporate governance experts representing their respective jurisdictions were involved in the development of the Scorecard, taking into account the idiosyncrasies of ASEAN jurisdictions and assessments of corporate governance practices of PLCs using the Scorecard. The assessment results are peer-reviewed to ensure the objectivity and creditability of the results. The steady improvement in the corporate governance scores of PLCs from participating economies shows the success of this initiative as companies have been willing to improve their corporate governance practices to be on par with their regional peers and global counterparts. Figure 6 shows the mean scores by economy since the assessment in 2012.

Figure 6: Mean Scores by Economy



ASEAN = Association of Southeast Asian Nations.

Source: Asian Development Bank and ASEAN Capital Markets Forum. 2015. *ASEAN Corporate Governance Scorecard Country Reports and Assessments*. Manila.

C. Credit Information and Credit Enhancement

1. Credit Assessment: What to Measure and How

360. Credit assessment or credit analysis aims to assess the creditworthiness of a borrower which could be a government, corporate, or an individual. The creditworthiness is the lender's judgment of a borrower's ability to honor its financial obligations under loans, bonds, and other financial contracts, or in other words, to evaluate the likelihood of a borrower defaulting on its financial obligations. There are many ways to conduct credit assessment or credit analysis, but when a borrower is a business entity such as a corporation, credit assessment or analysis normally covers the company's financial strength, business profile, management quality, track record, and business/industry environment (including competitive position). If the company belongs to a business group or is owned by another entity, possible support from the group or the parent can also be an important factor in the assessment.

361. Traditionally, creditors used to rely on subjective judgment to assess the creditworthiness of a borrower. However, nowadays, quantitative assessment based on statistical models and the use of credit scoring systems have become more common for credit assessment, although human judgment still plays a role in varying degrees of qualitative judgment depending on different creditor institutions and can be a key factor in the determination of the borrower's creditworthiness.

362. Among factors considered in credit assessment, the evaluation of financial strength/risks is normally reliant on quantitative assessment of financial statements of the company. From a company's balance sheet and comprehensive income statements, various financial ratios are calculated to measure the company's financial position. While historic data normally form the basis of the financial analysis, projections may also be used in the analysis to provide forward-looking insight. As a company's financial position can change considerably, qualitative assessment of its business profile, management quality, and business/industry environment are important supplements to the quantitative assessment.

363. For creditors, one of the practical objectives to conduct a credit assessment of the borrower is to assign a credit score to measure the borrower's creditworthiness against the creditor's risk appetite. Therefore, banks and other financial institutions need to develop their internal capability to conduct credit assessment and assign credit scores. Having sufficient capability allows banks and other financial

institutions to use their internal risk scores as the basis for their risk management and calculate their capital adequacy. However, when such internal capability is not sufficient, including a potential lack of sufficient data on historical default and loss instances, financial institutions including some banks use external ratings given by external parties, normally CRAs, their risk management systems or use them as reference points.

364. Credit rating agencies provide a credit rating to indicate the general creditworthiness of the borrower (the obligor or issuer rating). They also assign a credit rating to a specific debt security (the facility or issue rating), where collateral, transaction structure, and other protections against default embedded in the transaction are also considered, in addition to the borrower's creditworthiness. In bond markets, ratings are assigned to various debt instruments such as government bonds, municipal bonds, corporate bonds, asset-backed securities, and commercial papers, depending on their nature, and the individual issuer's creditworthiness.

2. Credit Enhancement: Objective and How

365. Credit enhancement is a method whereby a company attempts to improve the creditworthiness of its debt. By reducing the credit risk/default risk of its debt, credit enhancement may improve the credit rating of the debt, and help the borrower to obtain better credit terms such as a reduction of interest rates, a larger debt amount, and a longer tenor.

366. Credit enhancement can be provided in various forms. Obtaining credit enhancement in the form of a guarantee or a letter of credit from a third party such as a bank or a specialized guarantor like a monoline insurance company is a typical example. Companies may also post collateral, increase cash reserves or take other internal measures to increase their creditworthiness. When a subsidiary company with lesser credit standing needs to borrow, a parent company often supports such borrowing by providing a parental guarantee as credit enhancement. In securitization, credit enhancement refers to a risk-reduction technique that increases the credit profile of structured financial products or transactions by introducing subordination and cash flow waterfall mechanisms to protect more senior noteholders.

367. When a debt security issued by an issuer with a low credit rating is fully guaranteed by a guarantor with a higher credit rating, a credit rating agency normally upgrades the credit rating of the debt security to the level of the guarantor's credit rating by applying the concept of "credit substitution", provided that the guarantee conditions and terms meet certain criteria. However, guarantee conditions and terms required for full credit substitution depend on different rating methodologies of rating agencies.

368. When a guarantee is provided on a partial basis, e.g. covering only a certain percentage of obligations, a certain component of obligations such as principal only, or a certain time period, how such partial guarantees can improve credits ratings of debt securities also depends on different rating methodologies of rating agencies. Some credit rating agencies in ASEAN+3 still have not published rating methodologies for partial guarantees. This makes it difficult for potential issuers to understand benefits of credit enhancement when they consider such option and may limit the use of a partial guarantee in the bond market in the region.

369. Besides credit enhancement provided by parent companies or group companies, historically main providers of credit enhancement for bonds are banks and specialized guarantors like monoline insurance companies. Bank guarantees especially played an important role in bond market development in the past in countries in the region like the Republic of Korea where most corporate bonds issued before the 1997/98 Asian financial crisis were guaranteed by banks. Also, in Japan, before the liberalization of corporate bond markets in the early 1990s, there was a market practice under which arranging banks for the original bond issuance would buy back bonds if issuing companies had difficulties in servicing the bonds, thus providing implicit bank guarantees to bonds. However, although banks still provide credit enhancement to support their client company's bond issuance by providing letters of credit or guarantees in certain cases, bank guarantees are not widely used any more in bond markets in ASEAN+3 countries in recent times.

370. Monoline insurance companies are insurance companies that specialized in providing bond guarantees, often in the form of credit wraps that enhance the credit rating of debt securities they wrap based on their own high credit rating. These insurance companies first began providing wraps for municipal

bond issues in the US bond market, but expanded their guarantee business to provide credit enhancement for other types of bonds, such as project bonds, mortgage-backed securities, and collateralized debt obligations. Monoline insurance companies played an important role in the development of the US municipal bond market and also the markets for these new types of debt securities.

371. The monoline insurance companies' business model relied on their high credit ratings that used to be normally AAA. However, their involvement in structured finance products, especially collateralized debt obligations backed by residential mortgages, hit their ratings when the US sub-prime mortgage crisis started in 2007 and the successive downgrading of their credit ratings by rating agencies almost ran the entire monoline insurance industry into extinction; only a limited few monoline insurance companies survived the crisis. While monoline insurance companies operated globally before the global financial crisis in 2008, their operations focused on developed bond markets in the US and Europe, and they have never been active in bond markets in ASEAN+3.

372. In November 2010, the Credit Guarantee and Investment Facility (CGIF) was established by ASEAN+3 together with ADB and became operational in May 2012 under the Asian Bond Markets Initiative to help increase the issuance of local currency corporate bonds. Institutional investors often claim that they can take either currency risk or credit risk, but not both. Therefore, credit enhancement by CGIF will alleviate credit risk, thus, expand investor base for local currency corporate bonds. The CGIF is rated AA in international rating and AAA in domestic rating. Local currency (LCY) corporate bonds guaranteed by CGIF can enjoy the high credit standing of CGIF as a guarantor and this enables companies to access bond investors who may find it difficult to invest in bonds issued without CGIF's guarantee support.

D. Transparency in the Market

373. Transparency is the key to ensure a market's integrity. Transparency includes timely disclosure of price information, clear market rules and practices, and available services to support the transparency.

1. Over-the-Counter and Price Information

374. It is always a challenge to collect bond prices in an OTC market because bonds are traded by negotiation between counterparties over the phone or via a voice broker or interdealer broker (see relevant sections on intermediaries in this document). This is especially common when market trading occurs primarily over the phone. In some markets, quotes by brokers may only be available for reference and trades may not be executable at such indicative prices. The bond pricing information is a basis for fair valuation of debt securities on days when no trades are executed. Therefore, to ensure market transparency and increase market liquidity, regulatory authorities need to consider ways to improve pricing information in the market.

375. A possible solution is to establish a common market platform to capture and publish quotes and traded prices. This could be an official platform mandated for use by the securities market regulatory authority and operated by existing financial market infrastructure providers, a solution provided by an SRO, or a market solution. The platform may be owned by either the government or securities market regulator, and is often operated on their behalf by the securities exchanges or bond pricing agencies who already have expertise in the capture, processing, and publication of transaction information. Often, trading participants in OTC markets already use widely recognized international or commonly agreed commercial trading platforms to request quotes and confirm trades in debt securities. Examples for such platforms are Bloomberg, Reuters, and TradeWeb.

376. The prescribed use of such a platform is often accompanied with the stipulation of a specific time frame for the capture of concluded trades, commonly 15 or 30 minutes after execution. Transparency is enhanced by the timely availability of such information which, in turn, will allow market participants to closely follow the market and make decisions on the basis of actual market activity rather than speculation or guess work. The resulting information is typically displayed to all market participants through access to the capture

tool or common trading platform, and to the general public via the respective financial market infrastructure (FMI) and other bond information websites (see also the section on information services in this document).

2. Trading Rules and Market Practices

377. Key elements to achieve a certain level of transparency for market participants, regulatory authorities, and interested parties are trading rules and/or market practices. Trading rules include prescriptions for trade sizes and tick sizes (increments in price or yield); trading times and methods; and rounding methods and the inclusion or exclusion of accrued interest in the quoting of prices, which are referred to as “dirty price” or “clean price”, respectively. The purpose of establishing these rules and practices is to achieve a certain level of standardization and predictability of behavior among trading participants, and to operationalize trading and post-trade processes. Standardization is important for counterparties because trades count toward counterparty limits and represent general risk exposure criteria, with trading activity needing to be measurable against such risks and in terms of resulting financial obligations. The carrying out of trading activities in a predictable manner makes it easier for market watchers and supervisory authorities to observe such activities. Predictability also facilitates compliance checks against the relevant rules set by the regulatory authority or other governing bodies.

378. Trading rules are determined, managed, and enforced by the operators of the exchange bond market, an appointed platform operator, or the SRO mandated to self-regulate the OTC market. Trading rules may be subject to the approval from the relevant securities market regulator, in particular if a market association representing trading participants does not have full self-regulatory powers or if the regulatory authority reserves the right to do so in its regulations.

379. In the absence of specific trading rules, such as in the traditional OTC market, market practices often take the role of trading rules. Here, market participants agree on and commit to abide by a number of agreed practices, typically through negotiations by or via a bond market organization or an SRO mandated to administer the OTC bond market. In addition, market practices may arise through the interpretation of existing trading rules or where trading rules have left room for specific practices to evolve. Typical examples of market practices are the cutoff times for trades, if settlement is to be achieved by a certain date, and the settlement cycle for certain types of instruments due to their nature or complexity. Market practices related to trading are often also called trading conventions. Since market participants include both domestic and foreign participants, it is necessary to establish the trading rules and practices in line with global market practices and trading conventions.

a. Market Entry and Exit Requirements

(i) Market Entry

380. Market entry requirements may exist for issuers and investors wishing to issue debt securities or to invest in debt securities in a given market.

381. Market entry requirements for issuers may include a registration under prevailing regulations and the need to observe foreign exchange prescriptions, such as the practice to swap the proceeds obtained in local currency into a foreign currency in case the proceeds are supposed to be used outside the market of issuance. In such cases, the swap transaction tenure is often expected to match the tenure of the issued debt securities.

382. Market entry requirements for investors used to be complex and cumbersome but have largely been reduced to the need for the investors to obtain an investor ID. Markets in which an investor ID is required typically impose this ID on all market participants, including domestic entities and persons. The ID is used to track an investor’s activity and for reporting and, possibly, tax filing purposes, but may also offer the investor the ability to access and view its holdings across all intermediaries used.

383. Obtaining an investor ID is typically supported by the investor’s appointed intermediaries, such as a broker or custodian, but may also be facilitated by the exchange, securities depository, or securities market regulator, as the case may be.

(ii) Market Exit

384. Market exit requirements for issuers (i.e., prescriptions to observe regulations upon the final interest payment for and redemption of debt securities) may only include the observance of foreign exchange regulations, such as the reporting of inbound transfers of foreign currency to repay the debt securities or the closing leg of a swap transaction. This is typically limited to markets with a nonconvertible currency.

385. Market exit requirements for investors have largely been abolished across ASEAN+3, with the need to obtain tax clearance still occasionally evident. At the same time, the selling of all holdings in an investor's portfolio may not signal an actual exit from the investment market and, as long as the account continues to be maintained, may not be considered an exit from the market.

386. Only in markets that have imposed quotas on the investment in debt or other securities, an investor may have to observe the gradual repatriation of proceeds from the sale of debt securities or interest payments in line with prevailing regulations. In such cases, the appointed custodian will typically advise and manage the operational aspects of such gradual repatriation and related reporting.

(iii) Investment Limitations

387. Investors in debt securities are typically subject to few investment limitations, if at all, since debt securities do not grant ownership of entities in industries that are restricted for certain investors (e.g., foreign investors). Limitations may exist for domestic investors when buying LCY bonds or notes issued by a nonresident issuer under provisions that govern the external debt of a jurisdiction.

388. One particular limitation for the investment in debt securities, in contrast to equities, is if an issuance of debt securities is designated for select investor types only, as is the case for private placements to professional investors. In the interest of investor protection, such issues will typically carry selling and transfer restrictions that do not allow retail or general investors to participate in primary and secondary market transactions.

3. Information Services

389. Information on bonds and notes issued in a given market is often easily available for both retail and professional investors through a number of official online resources as well as market intermediaries and information vendors. Investors are principally able to obtain information on bond and note issuance, issuer details, and underlying financial data through the information disclosure prescriptions in law and regulations. In addition, a number of market institutions may also offer—typically through their websites—comprehensive information on the bond market, ranging from general descriptions of the bond market, individual market features, and instruments, to the detailed provision of prices or yields, yield curves, and other statistical data.

390. Bond information disclosure is generally classified into (i) information disclosure before issuance; including issuance documents, such as prospectus, rating documents, legal opinions, and other contents; (ii) information disclosure after issuance, such as the issuance result; and (iii) information disclosure through the life of the bonds and notes, such as rating documents, financial statements, interest and principal payment announcements, significant event announcements, and other such information.

391. The information disclosure requirements and, hence, the available information details and underlying data, may differ between market segments in a given jurisdiction or between jurisdictions. At the same time, the information disclosure requirements for different bond and note types within the same market may also vary. However, the increasing adoption of international standards and practices across the region's markets—with support from ABMF—will ensure that the same range, breadth, and depth of information should be available for the same type of instruments in similar or comparable market segments across all ASEAN+3 markets.

392. The following sections provide an overview of the bond information services typically available on debt instruments in a given bond market or market segment.

a. Government or Central Bank

393. In many markets, the Treasury or the central bank acts as the issuance agent of government securities, such as Treasury bonds, Treasury bills, and government agency bonds. Consequently, the Treasury or central bank often offer information on the types of government securities that are generally issued, including an issuance calendar, current information memorandum or prospectus, general terms and conditions, auction or tender results, and price information on the respective institution's website. This approach is desired since these are the official institutions in a given market and they are considered trustworthy. In addition, because of their public nature, these institutions have within their mandate the requirement to educate the public and give the investors, including retail or general investors, easy access to information to learn, understand, and form an opinion on a potential investment in government securities (Table 17).

Table 17: Links to Information on ASEAN+3 Government Securities

Economy	Links
Brunei Darussalam	http://www.ambd.gov.bn/Lists/News/Displayitem.aspx?ID=275
People's Republic of China	http://www.pbc.gov.cn/english/130437/index.html
Hong Kong, China	https://www.hkgb.gov.hk/en/index.html
Indonesia	http://www.djpr.kemenkeu.go.id/page/load/1332
Japan	https://www.mof.go.jp/english/index.htm
Republic of Korea	http://ktb.moef.go.kr/eng/main.do
Malaysia	https://fast.bnm.gov.my/fastweb/public/MainPage.do
	http://bondinfo.bnm.gov.my/portal/server.pt
Myanmar	http://www.cbm.gov.mm
Philippines	http://www.treasury.gov.ph/
Singapore	http://www.sgs.gov.sg/
Thailand	http://www.pdmo.go.th/en
	https://www.bot.or.th/English/DebtSecurities/Pages/default.aspx

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea.
Source: ASEAN+3 Bond Market Guides.

394. Information on debt securities issued by the government or central bank is also typically available through the open market operation of the central bank. Here, the operational procedures describe the instruments that are issued by the central bank or can be used by the constituents of the interbank market, give details of the terms and conditions, explain products in use (e.g., repo or reverse repo transactions), and put the issuance and trading activities in these debt instruments into the context of monetary policy. This type of information is typically available from the website of the central bank.

b. Market Initiative

395. Alternatively, or in addition, some jurisdictions maintain separate, dedicated, and comprehensive websites for their bond market, which may also include information for the purpose of investor education and the ability to lodge investor complaints. Such websites may be operated under the mandate of the securities market regulatory authority, by the exchange or bond market operator, the depository for debt

securities in the market, an SRO or bond pricing agency, or a commercial provider with an official mandate.⁵³

c. Credit Rating Agencies and Bond Pricing Agencies

396. Few market intermediaries have the same need for detailed disclosure and other information on issuers and their debt securities as CRAs. Consequently, CRAs and bond pricing agencies keep, process, and display a significant amount of information and data in addition to the actual credit ratings. Much of that information is available for general viewing since these agencies increasingly use public domain information to justify their rating decisions and pricing information to track the issuers' performance through the tenor of the bonds or notes. These agencies may publish such data on their websites or provide subscription services.

d. Regional Initiative

397. As a regional go-to information platform for debt securities and bond markets in ASEAN+3, *AsianBondsOnline* (ABO), an initiative of ABMI under the guidance of ADB, is the most comprehensive online resource for the regional bond markets, offering bond data and periodical publications on the government and corporate bond markets of all member jurisdictions. The recently revamped website provides news and commentary, information on yields and yield curves, and index data. ABO's integration with the *ASEAN+3 Bond Market Guides* will ensure that more information on market features and specific subjects is available online.

398. To increase data availability through ABO, ABMF has helped initiate the cooperation of its members to consider and conceptualize a regional bond information strategy. In part, the concept has been realized through the cooperation of bond pricing agencies from several regional economies. The initial step was taken by the bond pricing agencies of Indonesia, Malaysia, and Thailand, which initially made data on each other's home markets accessible through links on the others' respective websites and later through a display window that would open specific data access on demand. The initiative was credited to the ability of ABMF to bring together market services and infrastructure providers from regional markets and encourage dialogue among them. The initiative was officially launched at an ABMF meeting in 2015. In 2017, the Philippine Dealing & Exchange Corp., as the Philippine trading platform and data provider, joined the initiative.

E. Efficiency and Safety in Trading and Settlement

399. Safe and efficient trading, payment, clearing, and settlement systems reduce systemic risk and foster transparency and financial stability. Robust FMI has been shown to be an important source of strength in financial markets, giving market participants the confidence to fulfill their obligations on time even in periods of market stress.⁵⁴ Transactions of government securities involve frequent transfers of large values of both money and securities that can expose market participants and investors to significant systemic risks. Frequent high-value transfers could also involve significant time value of money, requiring speedy settlement. Thus, highly safe and efficient clearing and settlement systems are required to support the smooth operation of the market. Clearing and settlement systems need to provide efficient, economical, and convenient services for market participants to reduce transaction costs. They should provide fair access to broaden and deepen market participation while controlling the counterparty risk.

400. The backbone of a well-functioning clearing and settlement infrastructure is operational efficiency and reliability supported by a clear and sound legal framework that is enforceable with a high degree of certainty and speed. The legal framework includes property and insolvency laws as well as laws specific to the

⁵³ Examples include China Central Depository & Clearing Co., Ltd. (<http://www.chinabond.com.cn/d2s/engindex.html>), Malaysia's Bond and Sukuk Information Exchange (<https://www.bixmalaysia.com/>), and ThaiBMA (<http://www.thaibma.or.th/>).

⁵⁴ Committee on Payment and Settlement Systems and IOSCO. 2012. *Principles of Financial Market Infrastructure*. Basel.

operation of securities settlement systems. Detailed operational rules and regulations need to be provided by the regulatory authority and the clearing and settlement system operator(s) in line with the Principles for Financial Market Infrastructures.

1. Immobilization and Dematerialization

401. As a starting point, government and corporate bonds should be dematerialized or immobilized and safekept in a central custody system in electronic form. To legally support dematerialization and immobilization, securities law should recognize electronic securities records as evidence of securities ownership, and should support their registration and transfer.

402. The immobilization and dematerialization of bonds increases the safety and efficiency of the handling of bonds since physical certificates are no longer in circulation or at all necessary, respectively. Dematerialization of bonds is facilitated by recording ownership of the bonds in a book-entry system electronically (book-entry securities), eliminating the need to issue physical (paper) certificates. Specifically, dematerialization means that the title which represents ownership of the bond is recorded electronically, for example, on a book-entry basis and via a transfer account register. Immobilization involves issuance of physical certificates while concentrating the location of securities in a depository and transferring ownership by book-entry. While immobilization can be undertaken as a market initiative under the guidance of the securities market regulator, the dematerialization of securities is often required to be facilitated by a change to existing laws and regulations, so that electronic record and title transfers are possible.

403. The dematerialization of securities (electronic securities) has greatly enhanced the feasibility of the direct sale of bonds to end investors. Online networks offer new possibilities for the government to address demand directly from end investors. They are particularly useful in servicing demand from retail investors because of their extensive reach to the public at low marginal costs.

2. Delivery-Versus-Payment

404. Mitigating settlement risk is critical as trading and settlement values increase. One of the most effective measures to reduce settlement risk is DVP (delivery-versus-payment). According to the Bank for International Settlements (BIS), DVP is defined as a “securities settlement system that provides a mechanism that ensures that delivery occurs if and only if payment occurs.” DVP is categorized as follows:

- Model 1: systems that settle transfer instructions for both securities and funds on a trade-by-trade (gross) basis, with the final (unconditional) transfer of securities from the seller to the buyer (delivery) occurring at the same time as the final transfer of funds from the buyer to the seller (payment)
- Model 2: systems that settle securities transfer instructions on a gross basis with the final transfer of securities from the seller to the buyer (delivery) occurring throughout the processing cycle, but that settle funds transfer instructions on a net basis, with final transfer of funds from the buyer to the seller (payment) occurring at the end of the processing cycle
- Model 3: systems that settle transfer instructions for both securities and funds on a net basis, with final transfers of both securities and funds occurring at the end of the processing cycle

405. Clearing and settlement involve a trade-off between safety and cost efficiency. Net settlement reduces the fund liquidity requirement in comparison to real-time gross settlement system (RTGS). However, netting builds up interdependency between the settlement of individual trades and, therefore, creates systemic risk. RTGS eliminates systemic risk but requires greater money liquidity supported by the central bank for its operation. The central bank may need to mandate banks to use RTGS but can reduce costs by providing intraday liquidity flexibly to meet a high level of fund demand. It is also worth noting that DVP enables market participants to enlarge counterparty exposure limits, thus helping broaden the market and encourage trading. An active repo market or market making are often impossible unless DVP is achieved in clearing and settlement.

406. Efficient clearing and settlement processes strike an optimal balance between the liquidity requirement and systemic risk, but the optimal balance differs from one market to another because the trading volume and patterns differ. The market authority and clearing and settlement systems operators should guide market participants to strike a desirable balance.

3. Benefits of Utilizing Information and Network Technologies Including International Standards

a. Information and Network Technologies on Bond Market Infrastructure

407. It is important to utilize information and network technologies for the development of bond markets. Network technologies have made it possible for bond issuers to send and receive the necessary information for issuance (and auction) safely, accurately, fairly, efficiently, and effectively. Specifically, when conducting auctions, bid information can be transferred with sufficient confidentiality—for all bidders equally, instantly, and safely—even just before the closing time without any negative impact from traffic congestion or other physical problems.

408. Information and network technologies benefit the secondary market too. An electronic interdealer platform allows interdealer brokers to play a role in facilitating the OTC market. In a developing economy whose financial sector is dominated by banks, the interbank or interdealer market tends to form the core of the secondary bond market because banks predominantly play the role of bond dealer. An electronic trading platform needs to support this market segment. An interdealer platform allows dealers to quote prices so that they can trade competitively without disclosing their positions to each other. Dealers need to disguise their identities to their counterparties while controlling their exposure in accordance with the counterparty limits they set for each of them. They could do so with the help of interdealer brokers. If the trading platform provides a functionality to control counterparty exposure limits, they could do the same by use of the platform. Some interdealer brokers offer such electronic platforms and trading services.

b. Use of International Standards for Operations

409. It is important to use international standards to foster domestic and regional bond market development since cross-border transactions are increasing in ASEAN+3. The following are international standards that could be adopted in the region:

- (i) The International Securities Identification Number (ISIN), as defined in ISO 6166, uniquely identifies securities such as bonds. ISIN is a 12-character alphanumeric system that does not contain information characterizing financial instruments but serves for uniform identification of securities at trading and settlement. The first two alphabetic characters are allocated for the country code (ISO 3166-1 alpha-2) of the issuing economy of the bond (the economy where the place of settlement is located), followed by nine alphanumeric characters (National Securities Identifying Number) for which the naming convention depends on the economy, and one numerical check digit. ISIN is generally issued by the National Numbering Agency in each economy and registered with the Association of National Numbering Agency as the ISO registration authority.⁵⁵
- (ii) The Business Identifier Code (BIC) is a unique identification code for both financial and nonfinancial institutions. Its structure is defined in ISO 9362.⁵⁶ BIC is an 8- or 11-digit (letter) code that indicates a specific financial institution. BIC 8 consists of four letters (institution or bank code), two letters (ISO 3166-1 alpha-2 economy code), and two letters (location code). For BIC 11, three more letters for the branch code are added. SWIFT plays the role of registration authority for BIC.

⁵⁵ For further information, refer to the website of the Association of National Numbering Agencies at <https://www.anna-web.org/>.

⁵⁶ For further information, refer to the website for ISO 9362: Business Identifier Code at <https://www.iso9362.org/>.

- (iii) The Legal Entity Identifier is a unique identifier for legal entities such as corporates and firms and consists of a 20-digit alphanumeric code based on the ISO 17442 standard developed by ISO. The Legal Entity Identifier is managed by the Global Legal Entity Identifier Foundation.⁵⁷
- (iv) ISO 20022 provides the financial industry with a common platform for the development of messages in a standardized Extensible Markup Language syntax.⁵⁸ ISO 20022 consists of message sets of five business domains (Payments, Securities, Trade Services, Cards, Foreign Exchange). ISO 20022 is a single standardization approach (methodology, process, repository) to be used by all financial standards initiatives prepared by the ISO Technical Committee for Financial Services. The registration authority of ISO 20022 is SWIFT.

4. Harmonization and Standardization of Bond Market Infrastructures

410. To promote cross-border transactions and integrate bond markets in the ASEAN+3 region, it is necessary to ensure interoperability among the FMI in the region. Implementation of technical standards such as those supported by ISO is the first step in that direction. Financial authorities in the ASEAN+3 region have agreed to adopt the following: (i) ISO 20022 for message standards, (ii) ISO 9362 (BICFI) for financial institution identification, (iii) ISO 6166 (ISIN) for securities numbering, (iv) ISO 3166-1 for economy codes, (v) ISO 4217 for currency codes, and (vi) ISO 8601 date and time. All economies in ASEAN+3 will implement ISO 20022 for cross-border transactions for CSD and RTGS, possibly by 2025.

411. In addition to the ISO standards, the Cross-Border Settlement Infrastructure Forum (CSIF) published *Common Understanding on Cross-Border Business Continuity Planning and Cybersecurity*⁵⁹ in May 2018 to prevent serious cyber incidents from propagating among counterparty FMI connected with each other in the region. A *Common Understanding on International Standards and Gateway for CSD-RTGS Linkages* will be published in May 2019 to increase interoperability among FMI in the region.

5. Current Situation in ASEAN+3

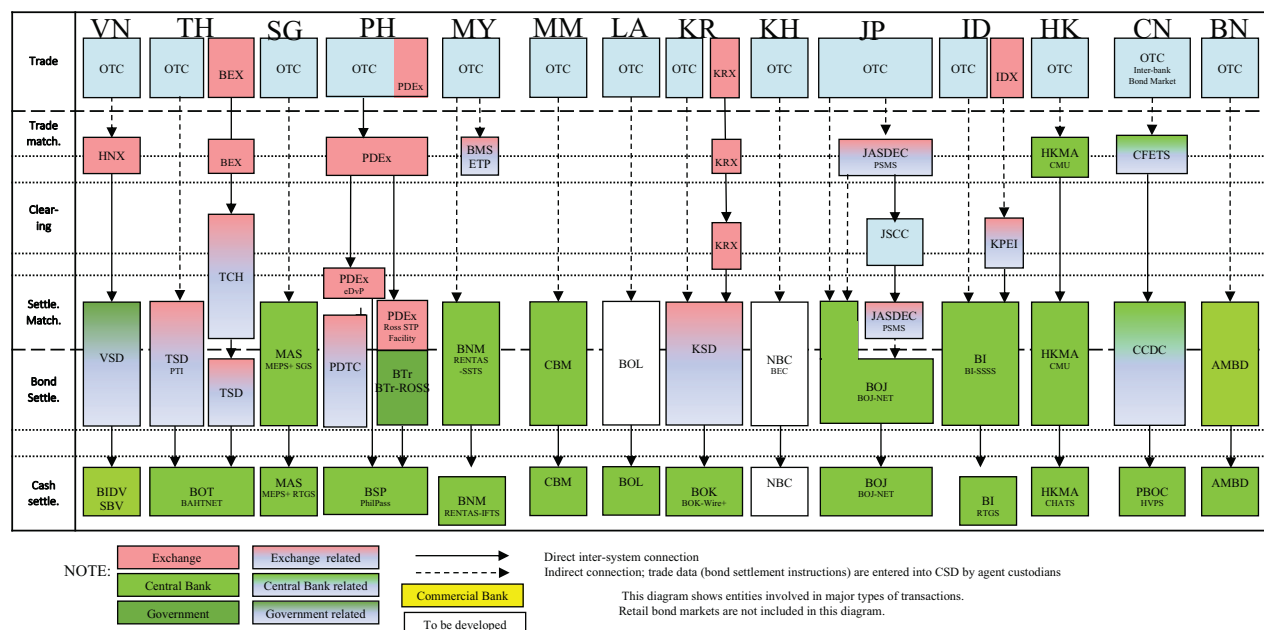
412. Most of the bond markets in ASEAN+3 economies have already embarked on the implementation of a dematerialization of securities though dematerialization has only been completed in the People's Republic of China (PRC) and Japan. With respect to government bonds, all economies in the region, except Cambodia and the Lao PDR, have implemented book-entry systems for securities settlement (Figure 7).

⁵⁷ For further information, refer to the website of the Global Legal Entity Identifier Foundation at <https://www.gleif.org/en/>.

⁵⁸ Recently, not only Extensible Markup Language but also JavaScript Object Notation has been used. Although, ISO 20022 for FMI is mostly based on Extensible Markup Language.

⁵⁹ ADB. 2018. *Common Understanding on Cross-Border Business Continuity Planning and Cybersecurity*. Manila. <https://www.adb.org/publications/cross-border-business-continuity-planning-cybersecurity>.

Figure 7: ASEAN+3 Government Bond Market Diagram



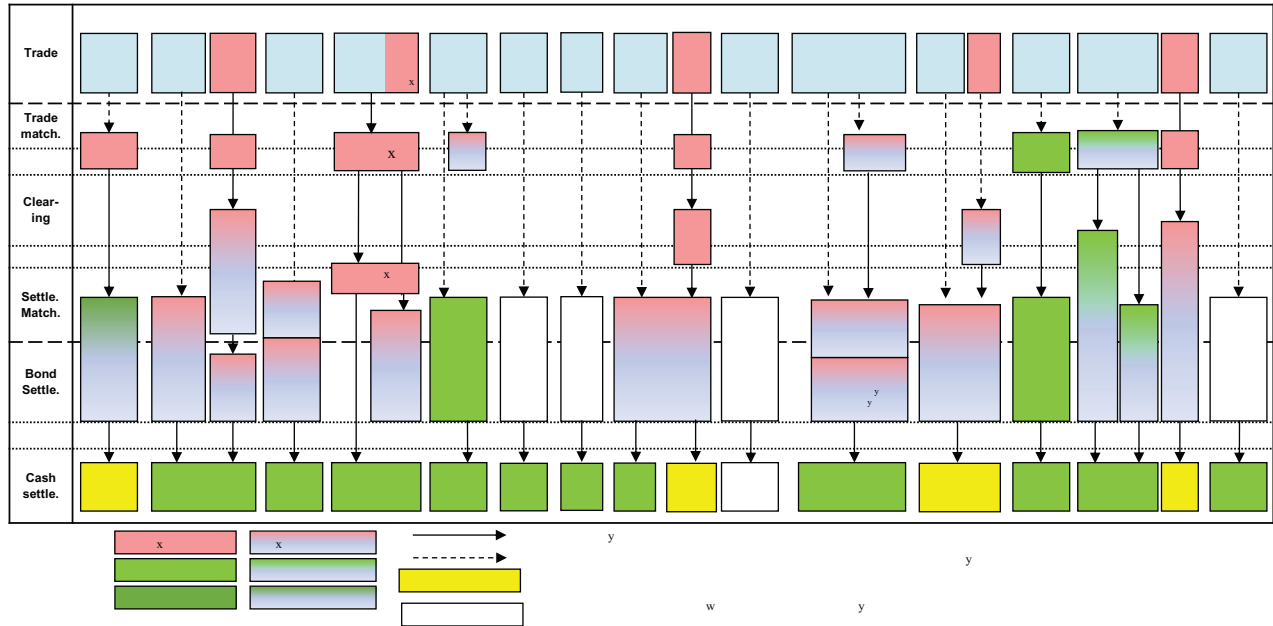
AMBD = Autoriti Monetari Brunei Darussalam; ASEAN = Association of Southeast Asian Nations; ASEAN+3 = ASEAN plus the People’s Republic of China, Japan, and the Republic of Korea; BEX = Bond Electronic Exchange; BI = Bank Indonesia; BIDV = Bank of Investment and Development of Viet Nam; BMS = Bursa Malaysia Securities; BN = Brunei Darussalam; BNM = Bank Negara Malaysia; BOJ = Bank of Japan; BOK = Bank of Korea; BOL = Bank of the Lao PDR; BOT = Bank of Thailand; BSP = Bangkok Sentral ng Pilipinas; BTr = Bureau of the Treasury; BTr-ROSS = Bureau of the Treasury Registry of Scripless Securities; CBM = Central Bank of Myanmar; CCDC = China Central Depository & Clearing Co., Ltd.; CFETS = China Foreign Exchange and Trade System; CMU = Central Moneymarkets Unit; CN = People’s Republic of China; ETP = Electronic Trading Platform; HK = Hong Kong, China; HKMA = Hong Kong Monetary Authority; HNX = Hanoi Stock Exchange; ID = Indonesia; IDX = Indonesia Stock Exchange; JASDEC = Japan Securities Depository Center, Inc.; JP = Japan; KH = Cambodia; KR = Republic of Korea; KRX = Korea Exchange; KSD = Korea Securities Depository; LA = Lao People’s Democratic Republic; MAS = Monetary Authority of Singapore; MEPS = MAS Electronic Payment System; MM = Myanmar; MY = Malaysia; NBC = National Bank of Cambodia; OTC = over-the-counter; PBOC = People’s Bank of China; PDEX = Philippine Dealing & Exchange Corp.; PDTC = Philippine Depository & Trust Corp.; PH = Philippines; PhilPass = Philippine Payment and Settlement System; PSMS = Payment and Settlement Matching System; PTI = Post-Trade Integration System; RENTAS-SSTS = Real-time Electronic Transfer of Funds and Securities System - Scripless Securities Transfer System; RTGS = real-time gross settlement; SG = Singapore; STP = straight-through-processing; SBV = State Bank of Vietnam; TH = Thailand; TSD = Thailand Securities Depository; VN = Viet Nam; VSD = Vietnam Securities Depository.

Source: Asian Development Bank.

413. Regarding corporate bonds, all economies in the region, except Brunei Darussalam, the Lao PDR, and Myanmar, are operating book-entry systems for corporate bonds (Figure 8).

414. Also, DVP for bond settlement using central bank money is available in those economies in the region where book-entry systems are already in operation. The National Bank of Cambodia is now developing RTGS capabilities for the cash settlement of bonds.

Figure 8: ASEAN+3 Corporate Bond Market Diagram

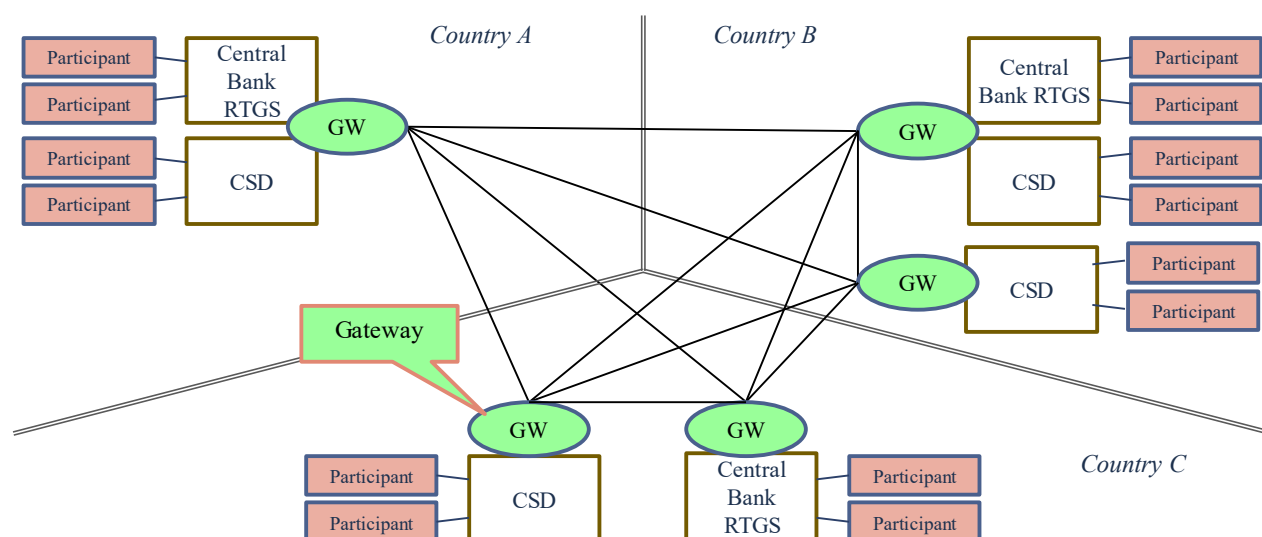


AMBD = Autoriti Monetari Brunei Darussalam; ASEAN = Association of Southeast Asian Nations; ASEAN+3 = ASEAN plus the People's Republic of China, Japan, and the Republic of Korea; BEX = Bond Electronic Exchange; BIDV = Bank of Investment and Development of Viet Nam; BMS = Bursa Malaysia Securities; BN = Brunei Darussalam; BNM = Bank Negara Malaysia; BOJ = Bank of Japan; BOK = Bank of Korea; BOL = Bank of the Lao PDR; BOT = Bank of Thailand; BSP = Bangko Sentral ng Pilipinas; BTr = Bureau of the Treasury; BTr-ROSS = Bureau of the Treasury Registry of Scripless Securities; CBM = Central Bank of Myanmar; CCDC = China Central Depository & Clearing Co., Ltd.; CDP = Central Depository; CFETS = China Foreign Exchange & Trading; CMU = Central Moneymarkets Unit; CN = People's Republic of China; CSD = central securities depository; CSDCC = China Securities Depository and Clearing Co., Ltd.; CSX = Cambodia Securities Exchange; DCSS = Debt Securities Clearing Settlement Systems; ETP = Electronic Trading Platform; HK = Hong Kong, China; HKMA = Hong Kong Monetary Authority; HNX = Hanoi Stock Exchange; HOSE = Ho Chi Minh Stock Exchange; ID = Indonesia, IDX = Indonesia Stock Exchange; JASDEC = Japan Securities Depository Center, Inc.; JP = Japan; KH = Cambodia; KR = Republic of Korea; KRX = Korea Exchange; KSD = Korea Securities Depository; KSEI = Kustodian Sentral Efek Indonesia; LA = Lao People's Democratic Republic; LSX = Lao Stock Exchange; MM = Myanmar; MY = Malaysia; NBC = National Bank of Cambodia; OTC = over-the-counter; PBOC = People's Bank of China; PDEX = Philippine Dealing & Exchange Corp.; PDTC = Philippine Depository & Trust Corp.; PH = Philippines; PhilPass = Philippine Payment and Settlement System; PSMS = Payment and Settlement Matching System; PTI = Post-Trade Integration System; RENTAS-SSTS = Real-time Electronic Transfer of Funds and Securities System - Scripless Securities Transfer System; RTGS = real-time gross settlement; SG = Singapore; STP = straight-through-processing; SBV = State Bank of Vietnam; SHCH = Shanghai Clearing House; SSE = Shanghai Stock Exchange; SZSE = Shenzhen Stock Exchange; TH = Thailand; TSD = Thailand Securities Depository; VN = Viet Nam; VSD = Vietnam Securities Depository; YSX = Yangon Stock Exchange.

Source: Asian Development Bank.

415. In line with discussions on the potential harmonization of market practices and cross-border legal framework collateral arrangements, bond market infrastructure in the region could be connected to make the regional market more efficient, stable, and robust (Figure 9).

Figure 9: Possible ASEAN+3 Linkages under CSIF



ASEAN = Association of Southeast Asian Nations, ASEAN+3 = ASEAN plus the People’s Republic of China, Japan, and the Republic of Korea; CSD = central securities depository; GW = gateway; RTGS = real-time gross settlement.
Source: Asian Development Bank.

416. Also, ASEAN+3 central banks and CSDs under CSIF are discussing ways to connect with each other bilaterally through CSD-RTGS linkages, which will hopefully lead the region to be more efficient, stable, and robust against external turmoil.

6. Future Perspectives Utilizing Latest Technologies and Implementing Regional Initiatives

417. Some ASEAN+3 central banks and CSDs are conducting research on fintech, in particular distributed ledger technology (DLT), to be implemented in key market infrastructures.⁶⁰ DLT offers the potential to (i) drastically decrease the period from issuance to subsequent settlement of government bond issuance processes, delivering the bond as soon as possible to the buyer; (ii) safely complete DVP settlement between CSD and RTGS systems in different locations; (iii) increase the robustness of CSD and RTGS systems for disaster recovery capability; and (iv) establish a regional settlement intermediary without having a single physical platform.

418. Technology alone cannot change financial transactions. It must be supported by changes in the legal and regulatory framework as well as market practices. It also requires thorough verification of the technology before its implementation to ensure the soundness of market infrastructure. Therefore, further regional and global cooperation among various stakeholders in the region, particularly by FMI operators, will be required.

F. Communication Between the Government and Market Participants

419. The government has multiple faces when communicating with market participants. It is a securities market regulator that needs to consider communication as a means to ensure effectiveness of their policy

⁶⁰ For example, Bank of Thailand has selected the savings bond sales processes as its first use case of DLT (<https://www.bot.or.th/English/DebtSecurities/Documents/DLT%20Scriptless%20Bond.pdf>).

and market transparency. Also, it is an issuer of bonds that wants to raise funds cheaply and smoothly. Besides, it is a tax authority that may have a significant influence over market participants because taxation can change market behavior. In addition, the central bank as a public authority plays an important role because the government bonds are key assets to be used for a central bank's market operations.

420. An empirical study shows that communication by the central banks can be an important instrument of monetary policy since it has the ability to move financial markets.⁶¹ Likewise, communication by the government can be an important policy tool. It can not only move the market but also promote or even impede market development. Improving public understanding of government policy can reduce economic and financial uncertainty. If market participants can have a better understanding of how policy is implemented and is likely to move or respond to shocks and changes, bond yields will tend to respond more smoothly than anticipated. Clarity in the government policy may help anchor the expectations of market participants; hence, they can make a long-term commitment to contribute to market development. Therefore, within the government, the securities market regulator, the bond issuer, and the tax authority, together with the central banks, should coordinate and avoid sending contradictory messages to the market. Desirably, they should come up with a common understanding on how to communicate with the market participants, though their policies may not come with the same direction.

421. Such communication or interaction between the government and market participants can come in a number of forms, such as (i) through the appointment of and dialogue with primary dealers, (ii) delegation of regulatory power to a self-regulatory organization (SRO), and (iii) the dialogue with a market representative body, such as an industry or intermediaries association. These measures can be utilized on their own or in combination and may be deployed in line with particular stages of a bond market's development.

422. The communication or interaction between market parties is effectively a feedback loop that can be used to evaluate policymaker's intentions, but also it can be used to check the performance of market stakeholders for the benefit of the market as a whole. Key to the success and effective use of the communication or interaction lies in the strength of the degree of mutual trust. Each party's handling ability is also a key to perform their role according to law, regulations, or individual mandate. While the individual market functions as such are explained in greater detail elsewhere in this document, their role and typical activities for effective communication between these market parties are described in the following sections.

1. Primary Dealers

423. Primary dealers are appointed by the government or its issuing agency to bid for and absorb sovereign securities in the primary market, thereby ensuring full placement of individual issues and giving the government the certainty that the intended funding operation will be successful. The role carries obligations and privileges. Primary dealers need to ensure smooth placement of the government bonds. This may include obligation to bid at auction and underwrite a certain amount. In addition, primary dealers need to make a market, thus, they always need to show a price indication to buy and sell to create market liquidity. The obligation can be a privilege to access the auction and it can create more business opportunity. The ability to facilitate market-making can strengthen its position in the market. To manage the role and performance of primary dealers, the government will put in place an evaluation process, which will review eligibility and compliance with requirements and key performance indicators. In an OTC market, the SRO tasked with overseeing the market and its participants may also carry out such an evaluation.

424. The communication with primary dealers has an aspect of investor relations, thus, it is of mutual interest to have regular dialogues. Primary dealers should be able to register their concerns in relation to their performance and issuance activities overall. Due to their role connecting the primary market and the demand in the secondary market, primary dealers are uniquely placed to give feedback on the demand and investor preferences, as well as market and liquidity perceptions.

⁶¹ A. Blinder et al. 2008. Central Bank Communication and Monetary Policy: A Survey of Theory and Evidence. *National Bureau of Economic Research Working Paper 13932*. Cambridge, MA.

2. Self-Regulatory Organization

425. SROs have a crucial role to play to ensure and facilitate policy dialogue and market feedback in a functioning bond market. For a full description of the role, legal basis, and regular functions of SROs, refer to Roles of Relevant Stakeholders and Building Blocks for Bond Market Development. This section focuses on the important functions of SROs in the context of communication with or on behalf of the government, such as conducting training, the implementation of regulations, and public consultation work.

426. The government can delegate regulatory authority to SROs. SROs may make rules and conventions, and monitor and govern the market on a day-to-day basis. Such delegation of the power can create smoother communication and implementation of policies because the nature of an SRO requires the market participants to be members or participants of the SRO. It can allow the participants to help shape the implementation of rules and conventions and convey a market voice to the government and vice versa. Rules and conventions set by SROs can be more effective because they are based on a practical bottom-up process rather than a top-down approach of the rules set by the government. Thus, they can follow and accommodate changes in technology and market environment.

3. Industry Association

427. An industry or market association may be constituted of all or selected stakeholders in the bond or larger capital market, other than the government and its agencies. Market associations may exist for selected intermediaries, such as underwriters, fund managers, or custodians, or be focused on a particular market, such as the bond or money market. They can have a significant influence on acceptance and implementation of laws and regulations in the market.

428. Communication between the government and industry association is essential because it can facilitate the understanding of laws and regulations, and association members can voice their concerns to the government. Public consultation through industry associations can be more effective than a comment by an individual.

429. Planning and execution of training programs and training courses are another important function of SROs and industry associations. Through the implementation of such training programs, SROs and the associations can raise the level of knowledge and expertise of staff in the member institutions along with the objectives of laws and regulations.

G. Market Liquidity

430. Market liquidity can be defined as the ability to buy or sell assets when required and without unduly impacting the market. Market liquidity may be affected by various factors such as the size of the market; frequency of issuance; the number of underwriters, market makers, brokers, and investors; concentration of bondholders; structure of bonds such as maturity and coupon payments; credit rating; currency denomination; taxation; availability of data; index eligibility; depository and custody system; and payment and settlement infrastructure.

431. In general, market liquidity is an important element that investors will seek when they make a decision whether to engage and invest. From an issuer's perspective, a liquid market may mean the ability of the primary market to absorb any planned issuance across instrument types and maturities. From an investor's perspective—and this is often considered the prime definition of a liquid market—it means that the investor is able to buy the required debt securities when needed, sell specific debt securities without delay if needed, and use debt securities holdings as collateral or to obtain cash liquidity through a variety of means. A liquid market can attract more investors, then more issues, ultimately generating more liquidity. On the other hand, an illiquid market cannot attract investors; hence, it is likely to see fewer issues. Low liquidity may limit market growth while high liquidity can be an engine to drive growth. Of course, the impact of market liquidity on growth depends on the market structure. Investors that tend to hold bonds until maturity may not be concerned much about market liquidity. But for investors who need to be prepared for sudden

redemption, such as hedge funds and asset managers, market liquidity is essential. At the early stage of market development, market liquidity may not be a primary concern, but as the market grows, it will become a critical factor for market development.

1. Measurements of Market Liquidity and Their Limitations

432. In practice, it is not easy to measure market liquidity. Liquidity is experienced differently by different stakeholders in the bond market and, hence, often measured more subjectively. A fund manager may consider that a market is illiquid if there is no quote available. But an issuer may feel that the market is liquid if a bond can be issued at lower than the targeted price. As IOSCO states, no single metric can act as a reliable measure of liquidity; therefore, an examination of many different metrics is needed to see a more complete picture of bond market liquidity.⁶² Measurements of market liquidity may include availability of pricing information, bid–ask spreads, trading volume, turnover ratios, price impact measures, average trade size, block trade size, average number of counterparties or market makers, investor base, dealer inventories, execution costs, and dealer mark-ups.⁶³ These measurements gauge different aspects of market liquidity such as tightness (costs), immediacy, depth, breadth, and resiliency.⁶⁴

2. Policy Measures to Support Liquidity

433. Market liquidity serves as a key indicator for policy makers, regulatory authorities, market participants, and observers on the attractiveness of a bond market. Market liquidity effectively represents the sum of policy measures, market features, and participant behavior.

434. Market regulations should help increase market liquidity. They should widen an investor base including foreign investors, favor the broad availability of information and price-finding mechanisms, and include the use of standards and conventions in line with international best practices, including language and documentation. They should be aimed at encouraging participant behavior that aids liquidity. A practical example is the unlocking of assets held by investors with a buy-and-hold investment philosophy, such as mutual funds and insurance companies and pension funds, by allowing them to engage in securities lending and repo transactions within acceptable prudential limits. Transparency in the market, clear rules and regulations—including for reporting obligations and taxation—and effective market representation will help increase liquidity. Policy measures conducive to a liquid market will ensure a level playing field for the participation of many investor types and their access to a range of suitable products, as well as the availability of a range of instruments meeting investor demand and issuer needs. Hence, it is important to consider improvement of overall market liquidity in any market development strategy.

3. Interaction Between Primary and Secondary Markets

435. Market liquidity may not be the most accurate measurement for the development status of a given bond market or of the effectiveness of the primary market or secondary market. A vibrant primary market with many issuances and a functioning primary dealer (PD) system and active and deep investor ranks may not result in much liquidity in the secondary market. At the same time, the lack of either sufficient supply or corresponding demand will certainly result in less market liquidity. Hence, it is desirable to aim for a good balance between the functions of a primary and a secondary market, and to equip each market segment with suitable features.

436. In the primary market, the key to its attractiveness for issuers—other than low borrowing rates and favorable issuance costs, which are subject to market conditions—is the ability of the market to absorb planned issuances. The existence of a PD concept (see also the section on primary dealers in this

⁶² IOSCO. 2017. *Examination of Liquidity of the Secondary Corporate Bond Markets*. FR05/2017. Madrid. <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD558.pdf>

⁶³ The features of some of these metrics are explained in Footnote 62.

⁶⁴ Text adopted from A. Sarr and T. Lybek. 2002. *Measuring Liquidity in Financial Markets*. IMF Working Paper No. 02/232. Washington, DC: International Monetary Fund. <https://www.imf.org/en/Publications/WP/Issues/2016/12/30/Measuring-Liquidity-in-Financial-Markets-16211>.

document) or similar syndicated underwriting approach (see also the section on underwriters in this document) representing a market commitment gives issuers the confirmation sought to pursue funding through the bond market, and not only for sovereign issuers. Alternatively, an efficient procedure for the offering of debt securities to the public (public offer), where public demand will be assessed, generated, and met through the effective cooperation of underwriters, brokers, and selling agents is also important, regardless whether this occurs in an OTC market or on an exchange market. Authorities may consider using an official common platform to facilitate such public offers. Other features, such as the ability to issue debt securities through a program or as a result of reverse enquiries, are also desirable in the primary market.

437. However, without the ability to resell debt securities after acquisition in the primary market, participants in the primary market may soon saturate the issuance pipeline and stifle liquidity from the supply side. Buying or trading patterns in the secondary market will help identify the actual demand for debt securities and their sought-after characteristics, including a specific yield, tenor, and rating. This information is crucial to primary market participants, who then seek to satisfy such demand in the secondary market. To obtain such information, the need for transparency in price-finding mechanisms in the secondary market and the public availability of quotes and traded prices is paramount (see also the section on transparency in the market in this document). In turn, the availability of quotes, yield, and price information is one of the key ingredients in the pricing of new debt securities for the primary market.

438. One of the key connections between the primary and secondary markets is inherent in the much-used definition of (market) liquidity: the ability to (re)sell debt securities in the (secondary) market after having acquired said debt securities in the (primary or secondary) market. Market participants analyze the ability to dispose of debt securities if needed before purchasing them. In particular, institutional investors with large portfolios and the need to acquire significant holdings to fulfill their investment objectives need to understand the disposal quality of debt securities in order to avoid making the market (i.e., affecting yields as a result of the disposal) or invest in debt securities that are not in demand. This is particularly important for collective investment schemes or other portfolios that could face redemption pressures and may need to dispose of debt securities to meet redemption payments on short notice. For that, market liquidity remains key.

4. Repurchase Agreements and Securities Lending and Borrowing Functions

439. Repurchase agreements (repo) and securities lending and borrowing (SLB) are examples of tools to increase or improve market liquidity in a bond market. They represent policy measures that require implementation through a comprehensive legal and regulatory framework, while their introduction may not always be suitable at the early stages of a bond market's development. Repo and SLB require the existence of pledge and/or loan concepts, preferably a predetermined solution as to their tax treatment, as well as clarity on the treatment of such transactions during insolvency or bankruptcy proceedings (see also the section on a robust legal framework in this document).

440. At the same time, repo and SLB are products that give market participants greater flexibility in the use of their debt instrument holdings and create financing and additional earning opportunities with limited risk since these transactions are fully collateralized. They are also indispensable products in the interbank money market, and the implementation of a central bank's monetary policy, for obtaining the right type of collateral to support business operations, as well as in the context of shorting selling strategies.

a. Repurchase Agreements

441. A repo market needs to be developed as a special segment of the secondary market. It is a key instrument for creating market liquidity while controlling counterparty risk and is critically important for promoting bond market liquidity. A well-functioning repo market is a precondition for feasible market making by dealers, thus leading to the successful implementation of a PD system. A master repurchase agreement should be adopted to standardize the repo transactions in line with international practices. The development and adoption of a master repurchase agreement should involve all key participants of a repo market, including banks, brokers, and large institutional investors able to participate in the repo market.

442. There are different legal forms of repos, which generally can be categorized into two types: (i) pledged repos and (ii) repos with title transfer. The former does not allow repo buyers to reuse (rehypothecate) the repo securities to obtain liquidity; thus the efficiency and liquidity of the instruments and the market are limited. The latter type with title transfer, also known as classic repo, could give the repo buyer greater security in the event of default or bankruptcy of the repo seller. Most ASEAN+3 economies with a repo market have adopted repo with title transfer. If the title transfer allows rehypothecation, it facilitates market making by bond dealers and, therefore, enhances the feasibility of a PD system.

443. However, rehypothecation could create systemic risk. FMIs need to provide the efficient clearing and settlement of repo transactions, together with effective management of repo collateral and the enforcement of margin requirements. Appropriate third parties and/or FMI such as a CSD should provide repo securities substitution services with appropriate prudential limits if rehypothecation is allowed.

444. It is important to ensure that the bankruptcy framework permits close-out netting of repo positions among repo market participants in the case of default by or bankruptcy of one of the participants. In economies with a continental civil code legal tradition where a core of accounting rules is built into law, the requirement to book repo securities with the seller (borrower) can compromise the right of the repo buyer (lender). It is because the court could rule in favor of the seller (borrower) if the latter's bankruptcy is brought before the court even if repo agreements give ownership right of the repo securities to the buyer (lender). This possibility is higher if the repo seller is a bank with many retail depositors who are senior creditors and are protected under banking law. Legal authorities, the central bank, the securities market regulator, and market participants need to work together to address this issue to support the development of a repo market.

b. Securities Lending and Borrowing

445. Securities lending and borrowing (SLB), which is also known as securities borrowing and lending in some markets, represents another practical way for asset owners to utilize their holdings and for borrowers to obtain debt securities of choice. The key difference from repo is that lenders are able to generate income from making available their holdings for a loan even if they do not need liquidity from the market; borrowers are able to borrow the desired debt securities even if they do not have excess cash liquidity. Hence, the objectives of lenders and borrowers differ significantly from that of a repo seller or repo buyer, respectively.

446. Securities lending—the perspective of the lender(s)—may be conducted by an individual market participant or using a pooled approach. In the latter, an exchange or depository, or an asset manager across its many portfolios, may offer the underlying asset owners the opportunity to make available eligible holdings to a lending pool from which a designated service provider, which could be the same FMI, will then lend the debt securities in demand. For the purpose of the lending pool, eligible assets are temporarily marked as “on loan” or transferred out of the ordinary securities account of an asset owner into a loan pool account, as the case may be. Appropriate algorithms are used to calculate the individual utilization and resulting income for each of the asset owners in the lending pool. Individual securities lenders tend to be large(r) asset owners or servicers, such as banks and custodians, funds, and insurance companies.

447. In the context of securities lending relative to market liquidity, asset owners with a buy-and-hold strategy—often prudential investors such as insurance companies and pension funds—are able to unlock their debt securities holdings, which are otherwise lost to circulation in the market, as loanable assets without compromising their investment objectives and in return for a lending fee, which will help defray safekeeping and other asset servicing costs.

448. Securities borrowing—the perspective of the borrower—is often driven by the need for certain debt securities as cover for short-selling strategies, the need for specific collateral to support any of the operations of the borrower, or similar objectives.

449. In the context of securities borrowing and market liquidity, the attraction for borrowers is twofold: (i) obtaining assets of a liquid character for appropriate use in the market; and (ii) unlocking its own securities holdings, including equities, as collateral without affecting its cash position, including assets that are not able to be used as collateral in the original business activities, which gave rise to the borrowing transaction.

While this increase in liquidity may be limited to the borrower and is temporary in nature, the regular conduct of borrowing transactions increases familiarity of counterparties and may lead to greater acceptance of a wider range of collateral which, in turn, would improve liquidity in the market at large.

450. To conduct SLB, lenders and borrowers must execute an SLB agreement, either bilaterally and/or with a service provider that offers pooled lending. For cross-border transactions, the quasi-standard agreement is the Global Master Securities Lending Agreement, where the template is maintained by the International Securities Lending Association. The agreement is a standard master agreement for securities lending transactions and available as a standard PDF copy for reference from the International Securities Lending Association website (registration may be required).⁶⁵ When conducting SLB in domestic markets, participants, in particular international firms, will likely favor the use of a Global Master Securities Lending Agreement unless domestic market practice has been established by the securities market regulator or a market SRO.

451. Securities lending is conducted against the provision of collateral, which may be in the form of cash or other securities, and not limited to debt instruments. Collateral eligibility needs to be either defined in the market regulations on SLB or is specified through market practices or conventions. In closed applications for SLB, such as in the case of depository or fail lending by a CSD or exchange, the eligibility criteria, as well as other related practices, will be described in the operating rules of the FMI.

452. Operationally, SLB also differs from repo transactions in that the settlement of SLB transactions is conducted as a free-of-payment (FOP) transaction type since the collateral may not be cash. Hence, an organized market (see also the section on organized markets in this document) will need to have the legal provisions or prescriptions in its regulatory framework to permit the conduct of FOP transactions on said organized market. In the past, this has occasionally been proven to be a technical but substantial issue in markets with a focus on DVP transactions, with a view of ensuring STP for all transactions. If permitted, FOP transactions can have the same STP characteristics as DVP transactions.

5. Note Issuance Program and Reverse Enquiry Opportunity to Facilitate Issuance

453. Note issuance programs and reverse enquiries are market features that help create or enhance market liquidity, while also responding to the specific needs of both issuers and investors. Their use typically signals a more mature or sophisticated bond market. Note issuance programs represent a formal issuance method prescribed in law or regulations, while reverse enquiries represent a market practice in an institutional or professional market place.

a. Note Issuance Program

454. A note issuance program enables issuers to offer debt securities on a regular and/or continuous basis. Note issuance programs are typically listed on an exchange or other profile listing or registration place (referred to as program listing). By using a note issuance program, an issuer, once it has registered the maximum outstanding limit for the value of bonds that can be issued within a set period (typically 1–3 years) and published the required basic financial and other information, can issue bonds or notes as and when desired, up to the maximum outstanding limit of the registered amount.

455. Note issuance programs represent a type of issuance, not a distinct instrument. As such, like other issuance types, a note issuance program requires issuance approval or consent in line with the usual applicable regulatory process in a given market, depending on whether the note issuance program is effected via public offers or private placements. Likewise, issuance documentation and disclosure information for the note issuance program (program information) follow the prescriptions for the issuance method and applicable market practices.

⁶⁵ International Securities Lending Association (ISLA). 2014. *Global Master Securities Lending Agreement*. London. <https://www.isla.co.uk/legal-services/global-master-securities-lending-agreement>.

456. A note issuance program allows the issuer to issue defined debt instruments as stipulated in the program information, depending on its funding requirements and in reaction to market conditions. This flexibility also allows the issuer to be open to reverse enquires (see next section). A note issuance program gives the issuer the ability to create additional liquidity in its debt securities by issuing more to meet investor demand or to withhold further issuances from the market if such supply would deteriorate market conditions for the debt securities.

b. Reverse Enquiry

457. Reverse enquiry refers to the ability in selected markets for institutional investors to contact an issuer of debt securities to issue such debt securities specifically to the institutional investors that are enquiring. Among the prerequisites for reverse enquiries are the ability for an issuer to readily issue debt securities, such as under a note issuance program (see the previous section), and for the institutional investor to be able to invest in the type, quality, and amount of debt securities that the issuer would be able to issue. Due to the nature of this activity, reverse enquiries are limited to debt securities, including money market instruments. Reverse enquiries are not possible if an issuer proceeds with a note issuance program via a public offer mechanism and, hence, are typically a feature of an OTC bond market.

458. Reverse enquiries may not be mentioned in the law and may often also not be specifically mentioned in regulations for a bond market, since they are not an issuance method as such, just a trigger mechanism for issuance. They are, however, typical occurrences in markets with a defined institutional or professional investor base, where investors and issuers are familiar with one another through regular interaction and the availability of adequate information on issuer and issuances.

459. Reverse enquiries fulfill a regular, important function in a mature or more sophisticated market but can also offer opportunities for market growth and development in nascent markets. Reverse enquiries offer institutional investors the opportunity to acquire familiar, suitable debt instruments at market or preferential rates to fulfill their investment objectives within a short time frame. Similarly, an issuer is able to place its debt securities in the market, typically using its existing note issuance program(s), within a short time frame, and without additional issuance cost. There is no additional risk specific to reverse enquiries since the issuer has already been able to issue the same or similar debt securities on previous occasions, and the investor is already familiar with said type and quality of debt instrument(s).

H. Taxation

460. Taxation of financial transactions, instruments, interest, and capital gains has a major impact on bond market development. Ambiguous and inconsistent tax policies can create serious impediments to the proper functioning and healthy development of the bond and capital markets. They can also affect the savings, investment, and financial behavior of borrowers, savers, and investors.

461. Generally, taxation should not be seen as a negative factor for bond market development. In fact, professional investors often acknowledge taxation as a cost of doing business. However, public authorities should consider side effects when determining taxation for the markets. Ambiguous and inconsistent tax policies should be avoided as they could create serious impediments to the proper functioning and healthy development of the bond and capital markets.

462. This section aims to discuss key aspects of bond market-related taxation. It does not aim to propose good practices on taxation, nor suggest harmonizing tax rates within the region. It is generally well understood that tax policies and practices can differ by economy given different legal frameworks, national economic development policies, and fiscal situations. However, taxation can either be a driver or an impediment to bond market development. In addition, the standardization of tax procedures and tax processing can support a bond market development, particularly when inviting nonresident investors.

1. Key Aspects of Taxation in Relation to the Bond Market

463. In principle, taxation should be neutral to any kind of financial transactions and should provide a level playing field for all savings and investment instruments. An examination of the tax framework needs to take into account the impact of not only taxes on specific forms of financial income, but also the underlying personal and corporate income tax framework. For example, income derived from investment in debt securities, whether outright trading or repo (sell and buy back) can be classified into three categories: (i) interest income, (ii) capital gain, and (iii) discount or the difference between the redemption price and bid price. The latter type of bond does not pay interest but is sold at a price below face value. Depending on the national tax policy, however, tax liabilities of income from investment may be treated differently for each type of income and the nature of investors. In some cases, the number of investors, or so-called “lenders,” is also the determinant of tax liabilities. Therefore, any tax incentives should be carefully considered so as not to create distortions, gaps, or loopholes, and to avoid unintended tax incidents caused by the price elasticity of demand and supply of capital.

464. A transaction tax, or quasi-transaction tax, is often adopted in place of an income tax for ease of tax collection and administration. But such practice needs to avoid inadvertently impeding the trading of debt securities, particularly repo transactions. Tax treatment of foreign investors and applications under tax treaties should be clear and understandable. Withholding tax is often applied to interest income. The use of withholding tax should avoid creating uncertainty in the tax treatment of foreign investors. Complicated tax reporting requirements and difficulties in the application of tax treaties could cost foreign investors significantly. According to preliminary research, it can reduce up to 40 basis points from their investment returns due to additional compliance costs including, for example, the engagement of legal and tax advisors. In some cases, foreign investors do not seek the application of tax treaties because the processes are too difficult to understand, even by the local market participants.

465. Tax administration should be clearly understandable, practical, and enforceable. Tax authorities should provide clear guidelines to investors and market participants on the necessary documentation and reporting requirements. In some ASEAN+3 markets, custodians required their clients, mostly foreign institutional investors, to submit documents in hardcopy format that were not required by the tax authorities. This so-called “market practice” creates an unintended additional burden for investors which, in the long-term, contributes to making a market inefficient and less competitive. See also the section on tax processing below for more information on prohibitive and desirable practices.

2. Tax Incentives and Exemptions

466. Tax incentives are often seen as an attractive way to promote capital market development, including the LCY bond market. As discussed in the previous section, tax policies can support market development, while at the same time also create distortions, gaps, or loopholes. Thus, any tax incentives should be carefully considered to avoid unintended tax incidents caused by price elasticity of demand and supply of capital.

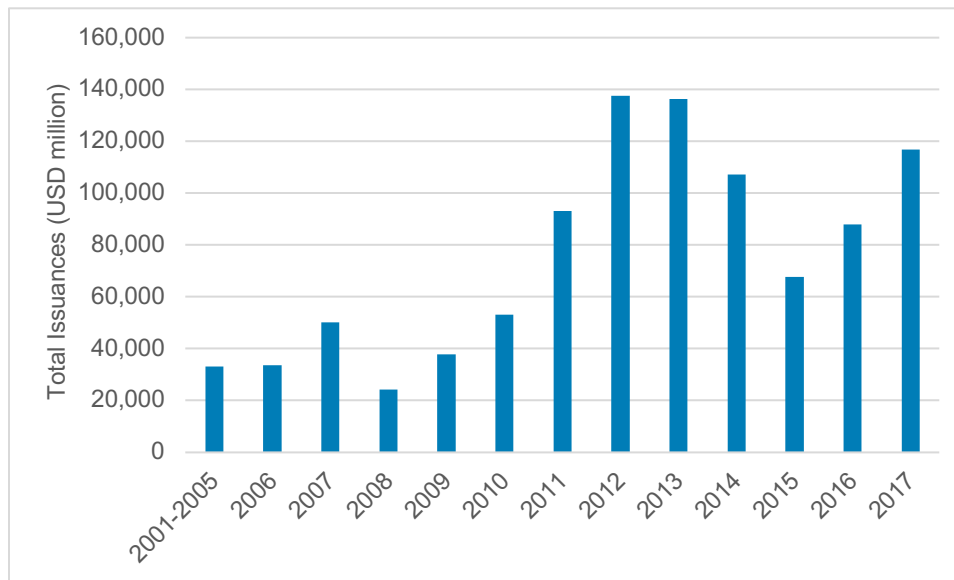
467. One of the most successful tax incentive programs in the region is the Government of Malaysia’s initiative to promote Malaysia as the global Islamic finance hub (Figure 10). Several incentives were provided to *sukuk* issuers and investors. For issuers, expenses incurred issuing *sukuk* under the principles of *ijarah* and *wakalah* are eligible for deduction for the purpose of income tax. A further deduction is also eligible to be claimed on additional costs incurred in the issuance of such *sukuk*, such as professional fees, printing costs of prospectus, advertisements, and Securities Commission prospectus registration fees. The issuance of retail bonds and retail *sukuk* incurs additional costs compared with the issuance of nonretail bonds and nonretail *sukuk*.⁶⁶ These additional costs are also eligible for tax incentives.

468. It is important to note that providing tax incentives alone cannot support Islamic capital market development in a sustainable manner. Prior to the provision of tax incentives, Malaysia underwent a

⁶⁶ Government of Malaysia, Ministry of Finance. 2018. *Budget 2019*. <http://www.treasury.gov.my/pdf/budget/speech/bs19.pdf>.

comprehensive review of tax treatment as certain Islamic financial transactions had not always been consistent with the treatment of conventional financial transactions; the former were more likely to be subjected to an additional tax burden. To ensure neutrality in the current tax regime governing Islamic securities transactions, Securities Commission Malaysia together with industry participants have collaborated and will continue to collaborate with tax authorities to address relevant tax issues that may impede the product development and innovation process, and discourage participation in Islamic capital market transactions.⁶⁷

Figure 10: Global Sukuk Issuances



Source: International Islamic Financial Market.

469. Tax incentives, which were first included in the government’s 2003 budget, have helped Malaysia achieve its goal of becoming a major Islamic finance hub. This example shows that proper coordination among relevant stakeholders, including in the private sector, is very important to the development of the domestic capital market. Based on Malaysia’s experience, comprehensive measures proposed by government to ensure the neutrality of tax treatment and (where necessary) to provide appropriate tax incentives for the Islamic capital market facilitated wider opportunities for issuers to use the Islamic capital market as a platform to raise long-term funds to finance their business activities and expansion.

470. Tax exemptions for certain investors or instruments are found in many economies. Pension funds are usually exempted from a tax on their investment income. Tax exemption, particularly for long-term investors like pension funds, can help bond market development. In addition, the aging population is becoming a major concern in many jurisdictions. Therefore, it is becoming a common practice even among emerging markets to provide tax exemption for mutual funds or implement deferred tax policies for pension funds.⁶⁸

471. These tax incentives and exemptions, however, necessitate close monitoring of the proper application and must avoid an increase in administrative costs. In addition, careful consideration must be made not to fragment the bond market between taxable and tax-exempt investors, and complicate the pricing, thus, undermining market efficiency.

⁶⁷ Government of Malaysia, Securities Commission Malaysia. 2006. *Malaysian ICM*. <https://www.sc.com.my/api/documentms/download.ashx?id=34e7cc8a-978e-4158-ab48-d6a170ffe8aa>.

⁶⁸ IOSCO. 2012. *Development and Regulation of Institutional Investors in Emerging Markets*. FR04/2012. Madrid.

3. Tax Processing

472. Tax processing refers to the necessary activities of a service provider and/or financial market infrastructure, or the issuer and its service provider(s), for the actual application of the tax status of a given investor during income events in the context of taxation treatment in a given market, and the need for the investor to produce and submit documentation that supports such tax status. The activities are also referred to as tax compliance, which references the view from the authorities' perspective.

a. *Know-Your-Customer*

473. The Know-Your-Customer (KYC) concept, which is also known as Know-Your-Client or Know-Your-Counterparty, is an established principle in business acquisition that is not limited to banking or the capital market. KYC is aimed at understanding whom one is doing business with and to what extent such business is possible. It influences an entity's decisions ranging from shipping or processing to payment or credit options. Key to this understanding is the provision of documentary evidence from the customer or counterparty on their existence, legal and tax status, and ability to conduct the proposed business.⁶⁹

474. In the context of the bond market, tax processing subsumes the necessary activities to establish a customer's tax status and the corresponding application of that tax status in the event of payment of interest entitlements by the investor, and under the taxation treatment and practices in a given market. Both KYC and tax processing rely heavily on the provision of relevant documents and information from the customer or investor, require the effective storage and efficient processing of the received documents and information and, hence, represent a significant source of effort and cost for both customer and services provider.

475. The underlying reason for the existence of the tax processing practices and requirements is the typical application of concessionary tax rates for nonresident (foreign) investors under double-taxation agreements. Hence, the principal availability of concessionary tax treatment for foreign investors gives rise to the tax processing procedures, with the investor triggering the request to avail themselves of the offered concessions and the service provider(s) acting as agent(s) to ensure that such tax concessions may be claimed. Tax processing includes parts of the initial KYC documentation and its periodical review, as well as the raising and submission of documents and data by the investor, and the receipt, storage, and processing of tax-related documentation and information by the service provider(s), which may include the custodian and/or a withholding agent for the issuer, the issuer itself, the CSD, and the relevant tax authorities. Tax-relevant documentation and information may include (i) basic information for each investor (separately for distinct portfolios or funds), including full legal name, address, and nature of the investor; (ii) a certificate of residence or certificate of domicile, as the case may be; (iii) potentially, event-specific forms or documents for income or redemption events; and (iv) possibly additional requirements from the tax authorities, depending on the market or type of investor.

476. Given the inherent similarities of the data collected to satisfy both KYC and tax processing requirements, a certain degree of harmonization between the two processes should be considered in the interest of efficiency and market attractiveness.

⁶⁹ According to the Financial Action Task Force Recommendations (2018), customer due diligence measures include identifying (i) the customer and verifying that customer's identity using reliable, independent source documents, data, or information; (ii) the beneficial owner and taking reasonable measures to verify the identity of the beneficial owner, such that the financial institution is satisfied that it knows who the beneficial owner is. For legal persons and arrangements, this should include financial institutions understanding the ownership and control structure of the customer by (i) understanding and, as appropriate, obtaining information on the purpose and intended nature of the business relationship; and (ii) conducting ongoing due diligence on the business relationship and scrutiny of transactions undertaken throughout the course of that relationship to ensure that the transactions being conducted are consistent with the institution's knowledge of the customer, their business and risk profile, including (where necessary) the source of funds. See <http://www.fatf-gafi.org/media/fatf/content/images/Updated-2017-FATF-2013-Guidance.pdf>.

b. Challenges for Know-Your-Customer and Tax Processing

477. Know-Your-Customer (KYC) is becoming increasingly important. As a consequence, the volume and frequency of the required information have increased dramatically. Much of the challenges related to the maintenance of KYC may also be associated with tax processing and vice versa. Because KYC and tax processing are driven by different laws and regulations, different authorities set different requirements for information and apply different practices. Though it has not yet been quantified, costs associated with KYC measures in different practices are not negligible.

c. Potential Remedies

478. Key to any efforts in normalizing the raising, storing, processing, and reporting of KYC and tax data will be the ability to reuse information, or the ability to satisfy any data requirements from a set of information that has already been captured—preferably once—and stored in a manner recognizable by many other stakeholders. This is because much of the information used is substantially similar or the same, and will remain the same, particularly business activities with institutional investors. For such a task, the use of standards is imperative. In addition, the use of digital technologies to raise or capture and transmit documentary evidence between investor or asset owner, service provider(s), and users of that information in a given market and across markets will need to be explored.

479. The use of standards should also apply to practices for KYC and tax data collection and processing in a given market and, preferably, across all the domestic bond markets. The stipulation of a common data collection protocol, the definition of data itself, and the transmission channels will make the implementation of best practices easier. The resulting cost reduction can be immediately felt across the value chain of the information.

I. Professional Investors Bond Market

480. Unlike equities, bond investors are normally large professional institutional investors. Professional investors are institutions or individuals, as the case may be, with the expertise to assess the potential risks and benefits of an instrument, its issuer, and prevailing market conditions; thus, they can make an informed investment decision under all circumstances. Professional investors are able to make such decisions on the basis of limited, specific information for their own purposes, and need not be subject to the same investor protection mechanisms afforded to general and retail investors. Professional investors can make their own investment decisions based on information that suits their own purposes and processes, and need not necessarily be described in full in law and regulations.

481. The creation of a specialized market or market segment for professional investors is very important for the sustainable development of a bond market. A professional market where only professional investors can invest and trade can provide the flexibility to create large issue sizes by utilizing broader issuance and offering methods. It can meet various needs and objectives of issuers and investors. Professional markets or market segments are often prescribed in laws or regulations but also come into being as a result of market practices, which may eventually be formalized in regulations.

1. Professional Markets (Exempt) Regimes

482. Professional markets are typically constituted by the existence of an exempt regime. An exempt regime refers to the exemption of market participants, notably issuers and professional investors, from the need for full compliance with market requirements for offers of debt securities to the general public; these concessions cover eligible investor types, the number of investors, specific instruments or instrument types, issuance methods, documentation, initial and continuous disclosure requirements, and a simplified registration mechanism with the authority for issuance.

483. The typical exempt regime is a concept of limited (but defined) information disclosure by issuers on the assumption that market participants are professional investors able to make their own investment decisions on the basis of available information. Professional markets may be conceptualized in several

ways: they can be defined by an exempt regime from the public offering scheme, based on a private placement with clearly defined procedures and registration for disclosure by regulations; or defined as a market of its own. The international bond market (i.e., the Eurobond market) is a professional market, but it is based on private agreements and market practices agreed upon by the market participants. Therefore, it is possible to create a professional market domestically via the private placement bond market with agreements among market participants. However, it is desirable to have in place suitable regulations to create a professional bond market to provide legal certainty and clarity. Table 18 shows the status of the professional market in each ASEAN+3 economy.

Table 18: Professional Markets (Exempt) Regimes in ASEAN+3

ASEAN+3 Jurisdiction	Type of Professional Market (Exempt) Regime
Brunei Darussalam	Not yet announced
Cambodia	Not yet announced
People's Republic of China	China Inter-Bank Bond Market: Nonpublic issuance to targeted investors (Simplified registration to NAFMII is possible.)
	Exchange bond market: Nonpublic issuance to qualified investors (Simplified listing procedure on SSE/SZSE is possible.)
Hong Kong, China	Concise disclosure is available for the listing of debt issues to professional investors only.
Indonesia	Not yet announced, but MTN issuances (private placements) are exempt from present disclosure and reporting requirements since they are not yet regulated.
Japan	Concise disclosure is available for the listing of debt issues on TOKYO PRO-BOND Market (offers to professional investors only). Short-term instruments, such as commercial paper, and placements to a small number of investors (fewer than 50) are exempt as private placement.
Republic of Korea	Offers to qualified institutional buyers (QIB) in the QIB market are exempt. Short-term instruments, such as commercial paper, and placements to a small number of investors (fewer than 50) are exempt as private placement.
Lao People's Democratic Republic	Not yet announced
Malaysia	Offers to sophisticated investors (professional investors) are exempt.
Myanmar	Not yet announced
Philippines	Sale to qualified buyers or those transactions classified as exempt from registration with the Securities and Exchange Commission, including private placements to fewer than 19 buyers.
Singapore	A placement to accredited investors or institutional investors is exempt from prospectus requirements.
	Private placements are exempt from filing and full disclosure requirements.
Thailand	Private placements to institutional investors and high-net-worth investors are exempt from full disclosure.
	Short-term instruments are exempt from registration with the Securities and Exchange Commission Thailand.
Viet Nam	Not yet announced, but private placements to fewer than 100 investors are nonregulated. The ongoing review of the legal and regulatory framework may determine whether this will eventually qualify as an exempt regime.

ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea; MTN = medium-term notes; NAFMII = National Association of Financial Market Institutional Investors; QIB = Qualified Institutional Buyers; SSE = Shanghai Stock Exchange; SZSE = Shenzhen Stock Exchange.

Note: information as of February 2019.

Source: Asian Development Bank.

2. Disclosure in Public and Professional Markets

484. Disclosure refers to the activities, by an issuer of debt securities, of publishing information to investors or the market at large that an issuer is either required or willing to provide in order to offer its debt securities in the market. For a public offer of debt securities to general and retail investors, disclosure is typically defined in law and regulations and the provision of the stipulated information is compulsory. The securities market regulator will ensure (during the issuance approval process for such offer if such approval is necessary and no such prior approval process is required in some markets) that all prescriptions for disclosure are complied with. Correspondingly, the underwriter or other issuer agents will make sure that those parts of the disclosure for which they are required to provide input are supplied as prescribed, including the results of the due diligence (see also Chapter V for more information) to be carried out prior to the public offer.

485. In the case of private placements or other offers to be made to professional investors only, the disclosure standard (i.e. the level of detail of the information to be disclosed) is typically agreed between the issuer and the targeted investors, likely with the support of the underwriter and legal advisor or other intermediary. If a professional market or market segment exists (see also the above section on professional markets [exempt regimes]), such disclosure standards will have already emerged through market practice. In the exchange-regulated professional market, disclosure standards are set by the exchange. Some markets regulate the basic contents of disclosure for private placements, if only to distinguish its components from the disclosure requirements for a public offer.

a. Full versus Limited or Defined Disclosure

486. Public offer markets are based on full information disclosure (i.e., the provision of maximum information on the issuer and the instruments proposed to be issued) to support the key mandate of the securities market regulatory authorities to protect general and retail investors. This full disclosure is aimed at providing investors with as much information as possible to allow them and their advisers to make an informed investment decision. To ensure full disclosure, policy bodies and regulatory authorities prescribe the disclosure form, format, and contents in law and regulations, including a list of required, specific documents and their constituent parts.

487. The key disclosure document for a public offer requiring full disclosure is the prospectus, which is also called the offering circular in selected markets (also see Glossary). Both the prospectus and offering circular refer to full disclosure documents and the terms should not be used in a non-full disclosure context to avoid ambiguity. The contents of this key disclosure document is highly structured and regulated, with a formal and detailed table of contents; the arrangement of the contents should be logical and clear; the issuer shall interpret the specific meanings of matters discussed and terms used in the prospectus in order for investors to understand the topics stated; information sources and dates have to be clearly described; clear, accurate, and standardized wording and descriptions in plain English or the national language are required; marketing statements are to be avoided. The document should indicate the issuance approval(s) sought or received and any qualifying remarks from auditors or intermediaries as a result of their due diligence.

488. The prospectus contains information on terms and conditions of the debt being offered, the basic situation of the issuer such as its credit rating and financial position, management, and business outlook (including its industry); the use of proceeds and its appropriateness; as well as parties involved in the issuance. Details on the issuance process, related dates, the rights and obligations of the prospective bondholders in this process, interest payment methods and frequency, and information on safeguarding methods, such as the appointment of a trustee or bondholders representative and a description of their function, are also required. In view of the investor protection element of a public offer, specific focus in the prospectus is also placed on information that explains the potential risks resulting from an investment in the proposed instrument, as well as the risk factors that influence the issuer's business prospects.

489. In contrast, disclosure for private placements or other nonpublic offers aimed at professional investors only represents limited or defined disclosure, which involves sufficient information for the targeted investors to make an investment decision on the basis of their own professional assessment of the issuer and

instrument. This level of disclosure is called limited because it may consist of much less information than is required for a public offer. It is also called defined disclosure because the level of information to be provided by the issuer—the disclosure standard—is specifically defined in the documentation for each issuance on the basis of an agreement between the issuer, the underwriter or intermediaries, and the targeted investors.

490. Defined or limited disclosure is easier for the issuer to produce and cheaper, since much of the information provided under full disclosure rules may not need to be included. The details that may be omitted include the (i) general and specific risk factors of the instrument since professional investors understand the risk factors involved; (ii) detailed description of an issuer's business interest and business outlook; (iii) appointment of a trustee or bondholders representative, and the comprehensive prescriptions governing their activities; and (iv) formal elements prescribed for a prospectus, including review of investor protection regulations and related compliance.

491. The key disclosure document for a private placement or other offer to professional investors is called an information memorandum, which is commonly used as disclosure document for concise or limited disclosure in European exchange-regulated markets and professional bond markets or market segments in Asia. There are other disclosure documents being used in professional markets globally, such as an offering memorandum or private placement memorandum (see Glossary for their definitions), which tend to have similar or comparable content. The contents of an information memorandum follows market practice and, other than general and key financial information, are often limited to specific types of information requested by the professional investors, such as the rights and obligations of the issuer and investors in relation to the private placement (in the absence of a trustee or bondholders representative), the disclosure standard, the governing law and dispute resolution, and any covenants the issuer has agreed to.

492. Common to the disclosure for both public offers and private placements, or other offers to professional investors, are the general descriptions of the issuer and proposed instrument (e.g., name of issuer and instrument, tenor, interest rate, interest payment frequency) and the key financial data of an issuer (e.g., balance sheets and financial statements for a number of past financial years).⁷⁰ In particular, the financial statements are to be updated periodically as part of the issuer's continuous disclosure obligations (see next section).

b. Initial versus Continuous Disclosure

493. Disclosure consists of two parts: (i) initial disclosure, and (ii) the continuous disclosure of information through the lifecycle of the debt securities. As a matter of principle, these two parts apply to all types of issuance methods, including public offers and private or nonpublic placements. However, the level of detail of information for each disclosure part depends on the issuance type of the underlying debt securities. Initial disclosure refers to the information an issuer provides prior to the issuance of debt securities, and represents an integral part of the offer of debt securities to the intended investor universe. Initial disclosure information is presented in the disclosure documents applicable for the type of issuance (i.e., the prospectus for a public offer with full disclosure and the information memorandum for a private placement or other nonpublic offers with defined disclosure).

494. Continuous disclosure itself consists of two components: (i) the periodical release of updated information on the issuer, typically financial information and other data committed to by the issuer in the issuance documentation; and (ii) the ad hoc disclosure of material events. The periodical data include annual updates on the review of the issuer and instrument credit rating (if applicable), updated audited financial statement(s) upon the conclusion of the respective statutory fiscal periods, and regular updates on the use of proceeds or the resulting business activities. For nonpublic offers, the content and frequency of continuous disclosure is typically determined between issuer and parties concerned and specified in the issuance documentation, if not otherwise prescribed.

⁷⁰ The number of years may differ by market and issuance type.

495. During the lifecycle of a debt instrument, the issuer should also disclose in a timely manner, to its investors or the market at large, depending on the issuance type, any significant or material event that may affect its ability to service its debt or that significantly changes its organization structure, ownership, or business interests. For debt securities issued via a public offer, the type of material event is typically prescribed in law or regulations, while for a private placement or nonpublic offering, the reportable events can be agreed between issuer and investors, and stated in the issuance documentation, if the legal and regulatory framework of a market so permits. Typical reportable events include a default on a major debt obligation, material losses, liquidity issues, investigations, censures or penalties, major lawsuits, change in credit rating or ownership, loss of major contracts, and similar occurrences.

496. The distribution of continuous disclosure information, particular for ad hoc reporting of material events, is either specified by the relevant regulatory authorities or in the issuance documentation. Such disclosure information may be submitted in physical form and/or by electronic means, as may be required by applicable regulations of the relevant jurisdiction. At the same time, a number of markets also provide a central disclosure information portal, particularly for publicly offered debt securities, where issuers or appointed agents can upload any updated financials and other disclosure information, and which general investors can easily access to retrieve the available information.

497. Where a debt instrument is listed on an exchange or registered at another place of disclosure, the prevailing disclosure rules of the place of listing or registration apply, in addition to those prescribed in the issuance documentation; information dissemination is likely achieved via the website of the listing or registration place, or a dedicated webpage for that purpose. Where such a market feature is not available, issuers may be able to provide their updated information by way of referring to a particular filing place or website in their issuance documentation, including their own corporate website.

3. Ring-fencing Requirement in a Professional Market

498. One of the critical success factors of a professional bond market is the ability to ring-fence the professional market from any investors or investor types that are not eligible to participate in that market. This is essential to fulfilling investor protection principles and, hence, is the key role of the policy bodies and regulatory authorities in the context of establishing a professional bond market. Ring-fencing consists of effective selling and transfer restrictions in both the primary and secondary markets. Such ring-fencing practices can be embedded in law or regulations, and/or delegated to market intermediaries.

499. The key purpose of ring-fencing is that debt securities aimed at professional investors are only issued to professional investors in the primary market and, subsequently, are only sold and transferred to other professional investors. A sale or transfer to retail or general investors cannot be permitted at any time, and the selling and transfer restrictions will need to be reflected in the offering and issuance documentation for debt instruments aimed at the professional market. Market intermediaries and direct market participants are obligated to ensure that they only sell such instruments to eligible investors. In addition, a system or trading platform functionality to restrict trades among the professional investors can be considered. Likewise, the CSD may consider a system under which such debt instruments can be transferable only among professional investors. Violations should be subject to penalties and censure of the entities involved, while inadvertent errors should be correctible through a prescribed process.

4. Benefits of a Professional Investors Bond Market

500. Unlike in equities, bond investors are largely institutional investors. Therefore, market regulators may be able to relax some regulatory requirements. This creates the room needed for regulators to govern the market and allow flexibility for market participants.

a. Benefits for Investors

501. From an investor perspective, a professional market is expected to increase investment opportunities. Unlike for publicly offered bonds, underwriters can solicit professional investors and create various instruments across a number of tenors in response to investor demand. Such negotiations can broaden and deepen overall market offerings. This also includes the ability to conduct reverse enquiries, where the

investor contacts the issuer or their market representatives in search of additional issuances of familiar instruments with mutually beneficial conditions.

502. Professional investors also benefit from the recognition effect of issuance documentation and disclosure practices in the professional market, such as an information memorandum or a similar document in line with templates used in the international bond market, rather than a prospectus. This can reduce research time while improving data capture and information assessment.

b. Benefits for Issuers

503. From an issuer's perspective, the cost associated with producing issuance documentation and disclosure information is lower than the cost of a public offering, which would require additional information for the purpose of investor protection. In addition, the time to market can be much shorter, which enables timely issuance.

c. Benefits for Regulatory Authorities

504. Since participants in the professional market are professional institutions who are already registered or licensed with the market regulators, the governance of the market can be delegated to an SRO. This makes the market more responsive to changes and increases the effectiveness of market governance.

d. Benefits to Create a Regional Bond Market

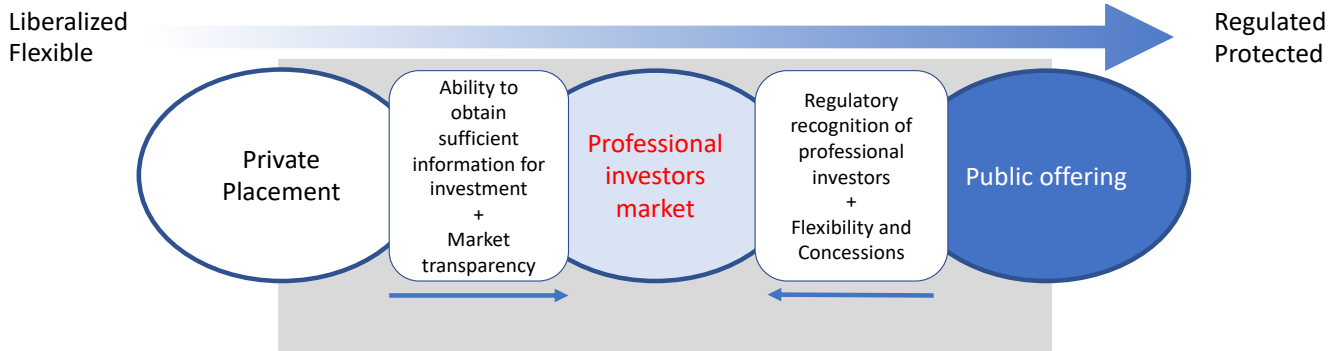
505. The common characteristics of a professional investors bond market provide an opportunity to create more standardized and harmonized bond markets regionally. By focusing on professional markets, documentation, issuance rules, and disclosure requirements can be standardized and recognized as a common regional market. This is the basic concept of AMBIF (refer to Annex 10).

506. The definitions of professional investors across different jurisdictions are generally similar; they are financial institutions including funds such as mutual funds and investment trusts. But the inclusion of high-net-worth individuals among professional investors and their definition varies from market to market. This is inevitable due to different levels of national income. It is also common to include foreign investors, as long as they fulfill the eligibility criteria.

507. Consequently, the application of the AMBIF concept led to acceptance of a standardized document for submission, the SSF, as a common language for finance and information disclosure based on international financial reporting standards. These should make the assessment of issuers and individual issues much easier. Of course, issuance procedures for bonds offered to professional investors are different from market to market, but the procedures are clearly documented in the AMBIF Implementation Guidelines for participating markets, which explain these procedures step-by-step. This increases transparency in the regulatory process and addresses the problem of information asymmetry that often prevents investors from coming to an emerging market.

508. Defined and standardized documentation, as well as more standardized market practices, will amplify the potential benefits of a professional investors market. In particular, issuers who already produce issuance documentation and disclosure in their home market can issue a bond to professional investors in other AMBIF markets more easily. This cannot happen without the presence of a professional investors market.

Figure 11: Professional Investors Bond Market



Source: Asian Development Bank.

VII. Sequencing, Mapping, and Institutional Arrangements of Building Blocks

509. The necessary building blocks and ecosystems discussed in Chapters V and VI identify common elements to develop a bond market across economies. However, markets with different levels of developments face different challenges at different times within and across these building blocks, and in forming the necessary ecosystem.

510. Challenges in addressing the issues and implementing the reform measures identified above tend to arise from two angles. First, many reform measures are interdependent to varying degrees because a bond market is not a single institution but a place of interaction. No single party, including the government, can dictate this development process; all stakeholders must play their parts. A successful implementation strategy must identify critical paths and the appropriate sequencing to achieve an optimal result. Market and economic circumstances can change over time, sometimes quickly. Thus, there should be continuous consultation among stakeholders to ensure the most effective implementation.

511. The second challenge stems from the fact that this effort requires cooperation among stakeholders and market participants whose interests may sometimes conflict. They must be brought together to achieve the ultimate common goal of bond market development. This requires strong leadership and coordination among the policy-making authorities: the finance ministry as the issuer, the securities and exchange commission as the guardian of market integrity and functionality, and the central bank as the key market operator. Insurance and contractual savings authorities also need to play an important role. Market infrastructure operators such as exchanges, central securities depositories (CSDs), and clearing houses need to work together with the authorities.

A. Coordination Among Policy-Making Authorities

512. To ensure coordination among stakeholders and market participants, economies that have successfully developed an local currency (LCY) bond market have often adopted a high-level interagency bond market committee, led by the policy-making authorities, to guide and coordinate the implementation of interdependent tasks. Some economies faced difficulties in forming an interagency committee due to their unique government structures and/or the status of the central bank in relation with the government. But, even if a formal interagency committee is not possible, it is highly preferable to have an informal coordination mechanism to ensure close communication among them. A lack of coordination and conflict of leadership among the policy-making authorities often creates confusion and is likely to result in limited outcomes.

513. As a good example, in Thailand, the Capital Market Development Committee was appointed by the Prime Minister. The committee comprises the Minister of Finance as the chairperson and experts from public and private sectors. The committee was tasked with formulating an overall master plan for the development of the Thai capital market as well as monitoring the implementation of such a plan.

514. A high-level interagency committee may task multiple subgroups to formulate a detailed action plan for specific tasks, which should be aggregated to the committee's master action plan. It is desirable that a subgroup is led by the relevant authority. The private sector experts may be invited and the involvement of legal experts from the central bank, the securities regulator, and the insurance regulator may be necessary when task implementation precipitates legislative changes.

B. Bond Market Development Master Plan and Road Map

515. An interagency committee should examine interdependence among the building blocks and necessary ecosystems, and develop a master plan and road map. To develop a master plan and road map, it is necessary to conduct a study to identify which building blocks are lacking or weak. It is not possible to have all building blocks in place from the beginning, but a clear understanding of current market condition facilitates faster market development. A master plan and road map should be published and updated periodically as needed.

516. A master plan and road map should contain detailed action plans to guide and coordinate stakeholders for implementation. It is necessary to consider a multiyear plan because it often requires a preparation and execution period. The implementation and progress of action plans need to be monitored periodically to ensure relevance and effectiveness because of uncertainties and unanticipated factors. Market development tends to be opportunistic, which makes the actions under the master plan moving targets to some extent. Conflicts of interest among various stakeholders can also cause delays in the implementation of some reforms. Thus, the proposed updating and public announcement mechanism will be useful in keeping market participants informed of future actions and maintaining strong reform momentum.

517. To sequence and prioritize actions, it is first necessary to identify the necessary legislation to support and create the building blocks, the promulgation of which can often be a lengthy process. In addition, a comprehensive study of the tax framework is recommended at an early stage. Tax reform is generally not a precondition for market development, but tax reform also takes time and rational taxation is a key prerequisite for building a liquid and efficient secondary market.

518. To develop a bond market, it is desirable to start from the government bond market because it requires fewer building blocks than a corporate bond market. It can also facilitate market players to familiarize themselves to market transactions. Besides, the necessary ecosystem may not have to be as sophisticated as it should be for a corporate bond market. Having said that, a bond market can be developed from a corporate bond market or by creating the government and corporate bond market simultaneously, but additional efforts and preparation of the legal framework may be necessary.⁷¹

519. Along with the government bond market development, the government needs to enhance public debt management. Proper and timely disclosure of debt sustainability and fiscal conditions, as well as scheduled auctions, will help develop a secondary market, which will also reinforce the functionality of the primary market. This will enhance the funding capability of the government through the market and reduce funding costs.

520. To develop a corporate bond market, it is desirable to have most of the building blocks and ecosystem in place, which can also be developed together with an equities market. A robust legal framework, accounting standards, and transparency in the market are indispensable for capital market development.

521. Without a sufficient local investor base, it is difficult to develop a bond market. Therefore, it is desirable to set up pension funds, provident funds, and insurance companies with the inception of a bond market because the development of such institutional investors also takes time. Unlike in an equities market, bond market investors are mostly institutions. Therefore, it is necessary to differentiate a regulatory framework for bonds separate from that for equities, which focus more on protection for individual investors.

⁷¹ The first bond to be issued in Cambodia was a corporate bond in December 2018.

C. Some Key Takeaways from ASEAN+3

522. The development of the market is not an easy task. As mentioned above, it involves various aspects such as engagements and commitments of the governments, relevant authorities, market participants; establishment of key market infrastructures such as central securities depository; enabling environments including legal and accounting systems; and sequence of the events which often can be seen as a chicken-and-egg situation. Based on the experience of ASEAN+3, or the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China, Japan, and Republic of Korea, there is no one-size-fits-all approach in development of bond market. Where the level of market development varies, it may not be practical to apply the same prescription to all. Therefore, careful diagnostics may be necessary before applying possible policy measures.

523. Having said, there are certain common elements to build a bond market. In the development of bond market, necessary ingredients and steps for the government bond market development can be similar in most of jurisdictions. But there may be a different approach when developing a corporate bond market. The United States had a different experience due to its restriction on interstate banking, which contributed to develop a large bond market compared to the other markets. The countries where the private sector played an important role in developing railways and electric companies had corporate bonds from the early stage of capital market development. But in many developing markets, the capital markets start from the government bonds and equities market. In such case, it is better to distinguish some key differences between equities and bond markets. In a bond market, credit of issuer is critical while in an equities market, future prospect of issuer is important. In an equities market, investors need to be diversified if ownership concentration to be avoided while, in a bond market, investors does not have to be diversified as it does not affect ownership structure of issuer. In equities market, retail investor protection must be considered while, in a bond market, regulation can be relaxed as a bond issuance can be targeted to professional institutional investors who have sufficient knowledge and means to protect themselves. In an equities market, an issuer normally issues one kind of equity while, in a bond market, an issuer issues various kind of bonds, depending on maturities and timing of issuance. Because of such differences, simple introduction of corporate bond market in the framework of equities market often fails to develop. It is important to understand such differences, and create necessary building blocks and ecosystem for corporate bond market.

524. Based on such understanding, ASEAN+3 agreed to focus on development of professional bond market for corporate bonds. By focusing on the professional investors, regulations on the market can be lighter. For example, the regulators can assume the professional investors can understand international accounting rules and differences between the local and the international rules. The professional investors should have better understanding on finance and may be able to understand risks associated with various financial products and bonds. Professional investors may be able to negotiate with an issuer and receive appropriate information for investment. Professional investors may be able to follow changes in market circumstances and have additional measures to hedge comparing to retail investors. By creating professional investors markets in different countries, the countries may be able to consider standardizing and harmonizing the markets for greater efficiency. Since regulations and investors protection for the professional investors are relatively similar or the same, it would lead to the further market integration. Level of investors protection can be eased and professional investors and issuers may be able to enjoy faster and timely issuances. In addition, regulators can assume professional investors can understand English well as a common language of finance, thus, disclosure in English can be acceptable for professional investors market. Hence, a regional bond market could be created. This is the objective of ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF).

VIII. Role of Regional Cooperation

525. Regional cooperation can help alleviate development challenges by dealing the problems collectively. Developing a local currency bond market is basically a national agenda. But regional arrangements can support and often complement its efforts. Regional cooperation under ASEAN+3, or the Association of Southeast Asian Nations (ASEAN) plus the People's Republic of China (PRC), Japan, and Republic of Korea, aims to enhance financial stability of the region. The cooperation has two aspects: one is to prevent a contagion of financial market failure in a short-term; and the other is to facilitate developing more stable financial environment in the long run. The Chiang Mai Initiative Multilateralization (CMIM) mainly addresses the former while Asian Bond Markets Initiative (ABMI) addresses the latter. Highlighting local currency bond market development under the ABMI helped receiving supports from various stakeholders and establishing better coordination not only among the ASEAN+3 member economies but also in each jurisdiction. In addition, regional arrangements can reinforce commitments of the governments involved, which also increase commitments by market participants. In other words, regional cooperation and regional arrangements can reduce uncertainty associated with the development of the markets. Besides, joint efforts and collective action under regional arrangements may be able to attract more attention and increase recognition of the efforts to develop the markets. These support and commitments would not have been possible by a single action by a solo emerging market

A. Peer Support and Encouragement

1. Establishing Common Understanding and Objective

526. The 1997/98 Asian financial crisis showed that financial globalization and linkages pose risks of financial contagion. ASEAN+3 economies recognized the need for a regional mechanism to mitigate financial contagion risks. One of the most valuable lessons from the crisis was that the region must develop LCY bond markets as an alternative funding source to bank loans. Prior to the crisis, financial institutions and corporations in the region relied on foreign currency loans for funding. However, ungrounded expectations of quasi-fixed exchange rates were suddenly reversed when people realized such exchange rates were not sustainable. In addition, much of the borrowing was short-term in nature for long-term investments. Euphoria and poor corporate governance led to misallocation and overinvestments, contributing to the accumulation of nonperforming loans. These combined factors triggered the financial crisis. Since then, ASEAN+3 policy makers have undertaken structural reforms to improve corporate governance in financial institutions and corporations, and to strengthen financial supervision within the public sector. They have also reached a consensus to develop local currency (LCY) bond markets to ensure the availability of long-term domestic currency funding in order to prevent maturity and currency mismatches and channel the region's savings into regional investment.

527. To ensure their commitment, ASEAN+3 finance ministers and central bank governors meet regularly to establish a common understanding on the current state of their economies and markets, as well as on potential risks and necessary policy measures. The establishment of the ASEAN+3 Macroeconomic Research Office (AMRO) in 2011 reinforced the institutionalized arrangement of macroeconomic surveillance among ASEAN+3 economies as the surveillance unit under the Chiang Mai Initiative Multilateralization (CMIM), a regional financing arrangement for ASEAN+3 members. ABMF and CSIF also help to establish a common understanding among market participants and experts in both the public and private sectors, as well as key market infrastructure operators, for standardization and harmonization through the following projects and programs.

2. Information Sharing and Dissemination through Regional Platforms

a. ASEAN+3 Macroeconomic Research Office

528. AMRO is a regional macroeconomic surveillance organization that aims to contribute to securing macroeconomic and financial stability in the ASEAN+3 region. AMRO's vision is to be an independent, credible, and professional regional organization acting as a trusted policy advisor to members of ASEAN+3, which includes the 10 member states of ASEAN plus the People's Republic of China; Japan; and the Republic of Korea. To fulfill its mandate, AMRO focuses on three core functions: (i) conducting macroeconomic surveillance, (ii) supporting the implementation of the CMIM, and (iii) providing technical assistance to members. AMRO was initially established as a company limited by guarantee in 2011 and transformed into an international organization in 2016.⁷²

b. AsianBondsOnline

529. *AsianBondsOnline* is a web portal functioning as one-stop clearing house of information on the government and corporate bond markets of ASEAN+3. It was created in 2003 and is managed by the Asian Development Bank (ADB) as the ABMI Secretariat. It presents both regional and market-specific information and data in a structured format, giving market participants and potential investors a clear and up-to-date perspective of ASEAN+3 markets.

c. ASEAN+3 Bond Market Forum

530. ABMF was established in May 2010 by the ASEAN+3 finance ministers as an important regional platform to foster standardization of market practices and harmonization of regulations relating to cross-border bond transactions in ASEAN+3. Since its establishment, the ABMF has produced various outputs and created impacts.

531. In 2012, the ABMF released the *ASEAN+3 Bond Market Guide*⁷³, the first officially recognized publication of bond market regulations and settlement procedures in ASEAN+3 economies. The market guide helped narrow information gaps and increase market transparency, which was often regarded as the biggest barrier to entry. In 2013, to provide policy recommendations to standardize securities transaction flows in the region, ABMF published the Sub-Forum 1 (SF1) *Phase 2 Report: Proposal on ASEAN+3 Multi-Currency Bond Issuance Framework*⁷⁴ as a regionally standardized bond issuance framework, and the Sub-Forum 2 (SF2) *Phase 2 Report: ASEAN+3 Information on Transaction Flows and Settlement Infrastructures*⁷⁵.

532. After the endorsement of both reports by the ASEAN+3 finance ministers in 2015, ABMF released two Phase 3 reports: *Implementation of the AMBIF: ABMF SF1 Phase 3 Report*⁷⁶, and *Harmonization and Standardization of Bond Market Infrastructures in ASEAN+3*⁷⁷: *ABMF SF2 Phase 3 Report*. The SF1 Phase 3 report contained the SSF to be utilized in the markets participating in AMBIF and explained the procedures for issuing an AMBIF bond, which led to the first AMBIF pilot issue in Thailand in September 2015. The SF2 Phase 3 report (i) identified and agreed upon key transactional financial messages to be harmonized and standardized to facilitate cross-border bond transactions, and (ii) successfully demonstrated the readiness of the region to implement key international standards such as ISO 20022 by 2025. As a result,

⁷² For further information, refer to the AMRO website at <https://amro-asia.org/>.

⁷³ ADB. 2012. *ASEAN+3 Bond Market Guide*. Manila. <https://www.adb.org/publications/asean3-bond-market-guide>.

⁷⁴ ADB. 2013. *Proposal on ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF)*. Manila. <https://www.adb.org/publications/proposal-asean3-multi-currency-bond-issuance-framework-ambif>.

⁷⁵ ADB. 2013. *ASEAN+3: Information on Transaction Flows and Settlement Infrastructures*. Manila. <https://www.adb.org/publications/asean3-information-transaction-flows-and-settlement-infrastructures>.

⁷⁶ ADB. 2015. *Implementation of the ASEAN+3 Multi-Currency Bond Issuance Framework: ASEAN+3 Bond Market Forum Sub-Forum 1 Phase 3 Report*. Manila. <https://www.adb.org/publications/implementation-ambif-asean3-bond-market-forum-sf1-p3>.

⁷⁷ ADB. 2015. *Harmonization and Standardization of Bond Market Infrastructures in ASEAN+3: ASEAN+3 Bond Market Forum Sub-Forum 2 Phase 3 Report*. Manila. <https://www.adb.org/publications/harmonization-and-standardization-bond-market-infrastructures-asean3>.

implementation of ISO 20022 was included as one of strategic measures for financial integration in the ASEAN Economic Community Blueprint 2025.

d. Cross-Border Settlement Infrastructure Forum

533. The Cross-Border Settlement Infrastructure Forum (CSIF) was established in 2013 to facilitate discussion on the improvement of cross-border bond and cash settlement infrastructure in the region, including the possibility of establishing a regional settlement intermediary. CSIF aims to (i) enhance dialogue among policy makers and operators of bond and cash settlement infrastructure in the region; (ii) assess the existing settlement infrastructure and identify comprehensive issues and requirements to facilitate cross-border bond and cash settlement infrastructure in the region; (iii) develop common basic principles for cross-border bond and cash settlement infrastructure with a medium- and long-term perspective; and (iv) discuss prospective models, an overall road map, and an implementation plan for the establishment of cross-border bond and cash settlement infrastructure in the region.

534. In 2014, CSIF published *Basic Principles on Establishing a Regional Settlement Intermediary and Next Steps Forward*⁷⁸: *Cross-Border Settlement Infrastructure Forum*. CSIF members considered linking existing infrastructure in a flexible manner and proposed linkage between central securities depositories (CSDs) and real-time gross settlement (RTGS), which connects domestic CSDs and RTGS systems operated by central banks. This enables LCY bonds to be settled by delivery-versus-payment (DVP) via central bank money, which ensures safety of settlement, is compliant with international standards, and is cost-efficient. As CSIF members work toward realizing CSD-RTGS linkages, issues related to cross-border business continuity planning and cybersecurity have been identified as important elements in ensuring resiliency to unexpected or unforeseen events that could negatively affect the stability of such systems. To support the development of CSD-RTGS linkages, *Common Understanding on Cross-Border Business Continuity Planning and Cybersecurity*⁷⁹ was published in 2018. CSIF continues to discuss and establish a common understanding on technical specifications to realize these linkages.

B. Market Integration through Standardization

1. Open Regionalism and Market-Led Integration of ASEAN+3

535. Market integration can bring various benefits such as larger production, lower costs of capital, more opportunities for risk sharing, and stronger political influence in global discussions. ASEAN+3 recognizes such merits but its development is different from that of the European Union, which comprises a single market under the same regulations and directives. ASEAN+3 is market-led based on the expansion of sophisticated global value chains and direct investment. In other words, it is bottom-up and driven by markets rather than top-down and driven by politics. Thus, regional integration in ASEAN+3 needs to be responsive to private sector needs: an open regionalism marked by market-friendly, multitrack, and multispeed integration based on pragmatism and encompassing various economic stages of collegial groups.⁸⁰ Therefore, the region focuses more on standardization rather than harmonization. Standardization tries to ensure conformity while harmonization tries to eliminate differences. Standardization tries to ensure interoperability among different systems in different jurisdictions, while harmonization tries to implement the same system in all jurisdictions.

2. Market Fragmentation as a Barrier to Integration

536. LCY bond markets in the ASEAN+3 region have grown significantly since the 1997/98 Asian financial crisis. The aggregated size of ASEAN+3 LCY bond markets exceed those of the US and Europe. However, market fragmentation is one of the challenges faced by ASEAN+3 markets. In terms of GDP, the market

⁷⁸ ADB. 2014. *Basic Principles on Establishing a Regional Settlement Intermediary and Next Steps Forward: Cross-Border Settlement Infrastructure Forum*. Manila. <https://www.adb.org/publications/basic-principles-establishing-regional-settlement-intermediary-next-steps>.

⁷⁹ ADB. 2018. *Common Understanding on Cross-Border Business Continuity Planning and Cybersecurity*. Manila. <https://www.adb.org/publications/cross-border-business-continuity-planning-cybersecurity>.

⁸⁰ ADB. 2008. *Emerging Asian Regionalism: A Partnership for Shared Prosperity*. Manila.

size of Thailand or Malaysia is comparable to or bigger than that of some European economies. However, these markets are still small in absolute size and are denominated in different domestic currencies. The PRC bond market is now bigger than that of any single European economy, but foreign exchange and capital restrictions remain a barrier for nonresidents. Asia's high levels of savings should be recycled within the region but, at this moment, investing in neighboring economies is not easy. ASEAN+3 markets are heterogeneous in many ways. Levels of economic and market development are different; legal traditions and regulatory frameworks may be different; and languages are different. These differences remain as constraints on regional integration; thus, ASEAN+3 needs standardization.

3. Setting Standards to Ensure Interoperability

537. The region needs to connect and link markets to maximize the benefits of integration even under different currencies. To achieve this objective under ABMI, ABMF has been promoting standardization as a driver to integrate the markets. For example, Chinese characters and Thai letters need to be converted into the Roman alphabets to execute cross-border financial transactions. This problem could be mitigated if all transactions were executed under ISO's new standard, ISO 20022. ISO 20022 incorporates technology that can process different national letters and characters. In addition, under the flexible framework of ISO 20022, the region can develop regional standards, which conform to international standards. However, this is not currently possible because individual economies have their own systems and standards, which is inevitable because certain transaction procedures follow national requirements to account for unique circumstances. In addition, some segments of a market may prefer their own ways of handling transactions, which creates differences in transaction procedures and, hence, requires additional conversions to international practices.

538. To achieve the objective of integration, ABMF has clarified all procedures involved in cross-border bond transactions from a buyer to a seller. ABMF has also promoted ISO standards for messaging formats, securities numbering, and trade and settlement matching to address these problems. Ideally, it is desirable to execute a cross-border transaction without any manual processes or transaction-information conversion between the different systems. Thus, ABMF has been discussing how to enhance regional straight-through processing (STP). Standardization of transaction procedures and utilization of international standards ensure interoperability among different systems in the region as well as STP; hence, they can facilitate cross-border transactions and reduce costs.

539. Likewise, ABMF supports standardizing corporate bond markets across ASEAN+3 by focusing on the professional market segments. ABMF promotes a regional common bond issuance program, AMBIF, as a nexus of regional professional bond markets. In general, professional markets are less restricted and regulated because investors do not need to be protected because they should be able to make a judgment based on their professional knowledge. For example, professional investors should be able to read and understand various disclosure information in English; they should be able to understand differences in accounting rules among different economies; and, they should be able to manage market risks. AMBIF sets common elements so that issuers can issue bonds in multiple jurisdictions with the same document known as the single submission form (SSF), and investors can invest in LCY bonds by looking at the SSF without specific knowledge of a local market.

C. Role of Multilateral Development Banks in Regional Cooperation and Integration

540. Multilateral development banks (MDBs) like the Asian Development Bank (ADB) can support regional cooperation and agreements.⁸¹ MDBs can help reduce knowledge and information gaps, and show the merits of regional cooperation. They can also help reduce the costs of coordination. Although everyone can understand the merits of regional cooperation, the costs associated with the cooperation can sometimes

⁸¹ For discussion of the merits of regional cooperation, see ADB. 2018. *Asian Economic Integration Report: Toward Optimal Provision of Regional Public Goods in Asia and the Pacific*. Manila.

hinder agreements. In such cases, MDBs can subsidize these costs and mobilize financial resources to help low-income economies develop capacities. Coordination may require negotiation among the members. Here, MDBs can play the role of a trusted honest broker between various parties, particularly if information asymmetry between members is high and those in an inferior position are wary of negotiating. Regional cooperation and integration is a process of building mutual trust among members. Thus, MDBs need to be a facilitator and find a solution that everyone can agree on. MDBs can be a promoter of standards that provide a basis for regional cooperation and market integration. To fulfill this role, MDBs need to understand the specificities of each member economy and inclusively bring together all stakeholders as part of a regional arrangement.

541. In this regard, ADB launched the Asian Currency Note Program in 2010 to promote local currency bond market development by issuing a local currency bond. ADB is committed to helping its developing members develop their domestic capital markets by issuing local currency bonds (Table 19).

Table 19: Outstanding Local Currency Borrowings (as of 10 September 2018)

Currency	Issue Date	Maturity Date	Principal	Amount	Coupon %
Armenian dram ^{1/}	29 Aug 2018	29 Aug 2023	AMD	2,660,000,000	7.2392
Indonesian rupiah ^{1/}	13 Dec 2017	13 Dec 2028	IDR	1,000,000,000,000	6.30
Indian rupee ^{1/}	31 Oct 2017	6 Oct 2026	INR	11,000,000,000	6.20
Indian rupee ^{1/}	1 Sep 2017	24 Feb 2021	INR	2,000,000,000	6.00
Indian rupee ^{1/}	6 Jul 2017	20 Dec 2022	INR	14,000,000,000	5.90
Indian rupee ^{1/}	24 May 2017	24 Feb 2021	INR	3,000,000,000	6.00
Indian rupee ^{1/}	3 Apr 2017	8 Aug 2021	INR	1,900,000,000	6.45
Indian rupee ^{1/}	9 Dec 2016	8 Aug 2021	INR	5,000,000,000	6.45
Indian rupee ^{1/}	6 Oct 2016	6 Oct 2026	INR	9,000,000,000	6.20
Indian rupee ^{1/}	9 Sep 2016	8 Aug 2021	INR	7,000,000,000	6.45
Indian rupee ^{1/}	8 Aug 2016	8 Aug 2021	INR	5,000,000,000	6.45
Indian rupee ^{1/}	31 Mar 2016	16 Jan 2020	INR	3,000,000,000	6.95
Georgian lari	19 Feb 2015	15 Feb 2018	GEL	100,000,000	FRN
PRC yuan	23 Jan 2015	10 Nov 2019	CNY	250,000,000 (tap)	3.20
PRC yuan	10 Nov 2014	10 Nov 2019	CNY	1,000,000,000	3.20
Singapore dollar	14 Nov 2013	14 Nov 2018	SGD	500,000,000	1.0270
PRC yuan*	21 Oct 2010	21 Oct 2020	CNY	1,200,000,000	2.85
PRC yuan	8 Dec 2009	8 Dec 2019	CNY	1,000,000,000	4.20

FRN = floating rate note, IFC = International Finance Corporation, PRC = People's Republic of China.

Note: *Offshore CNY.

^{1/} Payable in US dollar.

Source: Asian Development Bank.

IX. Conclusion

542. To develop a bond market, policy makers, regulators, and market participants need to understand the importance of market integrity. A capital market is not just a place to match the demand for and supply of securities. Developed markets have evolved through a series of failures and crises. These markets had to be equipped with measures to mitigate deficiencies so that market participants can trade with trust and confidence. The market needs to be fair and sound, and it should not allow any manipulation, misleading information, or insider trading. All transactions have to be executed safely and the transfer of title through the market must be protected. When there is a failure, it must be solved fairly and swiftly. If there is a wrongdoing in the market, it has to be detected, identified, properly prosecuted, and penalized. Prevention measures have to be implemented to avoid a recurrence. These measures should be institutionalized and deeply imbedded in the market. The cost of building and maintaining market integrity is not low, but a well-functioning market can mobilize and allocate resources efficiently and support further economic development.

543. An enabling environment and ecosystem to support the market's development may take time to develop. The market requires a certain number of practitioners who can operationalize transactions properly. There is often inertia to be overcome before changing market behavior. Market participants are generally conservative; thus, some accumulation of precedent may be necessary to change their ways of conducting financial transactions.

544. Within ASEAN+3, the development of bond markets has not always been smooth. To fully recognize the full benefit of market development required facing the impacts of another financial crisis. When a banking system can intermediate funds smoothly, people do not feel the need to develop a bond market. Efforts in peace time to prepare for a rainy day are often disregarded. However, without such efforts, it is very difficult to develop a bond market. And efforts under regional cooperation may be able to support and provide a good justification for this endeavor.

545. A bond market is one of the fundamental institutions required to support economic activity. Market practices are in need of constant maintenance to ensure good performance as market evolves. As such, the necessary building blocks and ecosystem must be continuously reviewed and reassessed.

References

- Asian Development Bank. 2008. [Handbook on International Best Practices in Credit Rating](#). Manila.
- _____. 2008. [Emerging Asian Regionalism: A Partnership for Shared Prosperity](#). Manila.
- _____. 2012. *ASEAN+3 Bond Market Forum (ABMF) Phase 1 Report*. Manila.
- _____. 2012. [ASEAN+3 Bond Market Guide](#). Manila.
- _____. 2013. *ASEAN+3: Information on Transaction Flows and Settlement Infrastructures*. Manila.
- _____. 2013. *Proposal on ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF)*. Manila.
- _____. 2014. *Basic Principles on Establishing a Regional Settlement Intermediary and Next Steps Forward: Cross-Border Settlement Infrastructure Forum*. Manila.
- _____. 2015. *Harmonization and Standardization of Bond Market Infrastructures in ASEAN+3: ASEAN+3 Bond Market Forum Sub-Forum 2 Phase 3 Report*. Manila.
- _____. 2015. *Implementation of the ASEAN+3 Multi-Currency Bond Issuance Framework: ASEAN+3 Bond Market Forum Sub-Forum 1 Phase 3 Report*. Manila.
- _____. 2015. [Local Currency Bonds and Infrastructure Finance in ASEAN+3](#). Manila.
- _____. 2016. [ASEAN+3 Bond Market Guide, Hong Kong, China](#). Manila.
- _____. 2016. [ASEAN+3 Bond Market Guide, Japan](#). Manila.
- _____. 2016. [ASEAN+3 Bond Market Guide, Malaysia](#). Manila.
- _____. 2016. [ASEAN+3 Bond Market Guide, Singapore](#). Manila.
- _____. 2016. [ASEAN+3 Bond Market Guide, Thailand](#). Manila.
- _____. 2017. [ASEAN+3 Bond Market Guide, Indonesia](#). Manila.
- _____. 2017. [ASEAN+3 Bond Market Guide, Lao People's Democratic Republic](#). Manila.
- _____. 2017. [ASEAN+3 Bond Market Guide, Brunei Darussalam](#). Manila.
- _____. 2017. [ASEAN+3 Bond Market Guide, Philippines](#). Manila.
- _____. 2017. [Meeting Asia's Infrastructure Needs](#). Manila.
- _____. 2017. [The Asian Bond Markets Initiative: Policy Maker Achievements and Challenges](#). Manila.

- _____. 2018. [ASEAN+3 Bond Market Guide, Cambodia](#). Manila.
- _____. 2018. [ASEAN+3 Bond Market Guide, Republic of Korea](#). Manila.
- _____. 2018. [ASEAN+3 Bond Market Guide, Lao People's Democratic Republic](#). Manila.
- _____. 2018. [ASEAN+3 Bond Market Guide, Myanmar](#). Manila.
- _____. 2018. [ASEAN+3 Bond Market Guide, Viet Nam](#). Manila.
- _____. 2018. *Asian Economic Integration Report: Toward Optimal Provision of Regional Public Goods in Asia and the Pacific*. Manila.
- _____. 2018. *Common Understanding on Cross-Border Business Continuity Planning and Cybersecurity*. Manila.
- _____. 2018. *Promoting Green Local Currency Bonds for Infrastructure Development in ASEAN+3*. Manila.
- D. Park, K. Shin, and S. Tian. 2018. Do Local Currency Bond Markets Enhance Financial Stability? *ADB Economics Working Paper No. 563*. Manila: Asian Development Bank.
- Association of Credit Rating Agencies in Asia. 2016. *Asia Credit Rating Guidebook: Regulatory Rating Requirements and Credit Rating Agencies in Asia*. Manila.
- Bank for International Settlements. 1992. [Delivery versus Payment in Securities Settlement Systems](#). Basel.
- _____. 2013. [Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools](#). Basel.
- _____. 2018. [Net Stable Funding Ratio \(NSFR\) – Executive Summary](#). Basel.
- N. M. Birdsall et al. 1993. *The East Asian Miracle: Economic Growth and Public Policy*. New York: Oxford University Press and World Bank.
- A. Blinder et al. 2008. Central Bank Communication and Monetary Policy: A Survey of Theory and Evidence. *National Bureau of Economic Research Working Paper 13932*. Cambridge, MA.
- Committee on Payment and Settlement Systems and International Organization of Securities Commissions. 2012. [Principles for Financial Market Infrastructures](#). Basel.
- Government of Japan, Ministry of Finance of Japan. 2018. *Debt Management Report 2018*. Tokyo.
- Government of Malaysia, Ministry of Finance. 2018. *Budget 2019*. <http://www.treasury.gov.my/pdf/budget/speech/bs19.pdf>
- Government of Malaysia, Securities Commission Malaysia. 2006. *Malaysian ICM*. <https://www.sc.com.my/api/documentms/download.ashx?id=34e7cc8a-978e-4158-ab48-d6a170ffe8aa>
- Group of Twenty. 2010. [The G20 Seoul Summit Leaders' Declaration](#). Seoul.
- D.S. Harun. 2002. [The Development of Debt Markets in Malaysia](#). *BIS Papers No 11*. Basel: Bank for International Settlements.

- International Monetary Fund and World Bank. 2001. [Guidelines for Public Debt Management](#). Washington, DC.
- _____. 2016. [Development of Local Currency Bond Markets Overview of Recent Developments and Key Themes. Staff Note for the G20 IFAWG](#). Seoul.
- _____. 2018. [Recent Developments on Local Currency Bond Markets in Emerging Economies. Note for the G20 IFAWG](#). Seoul.
- International Monetary Fund, World Bank, European Bank for Reconstruction and Development, and Organisation for Economic Co-operation and Development. 2013. [Local Currency Bond Markets-Diagnostic Framework](#). Washington, DC.
- International Organization of Securities Commissions. 2000. [Model for Effective Regulation](#). Madrid.
- _____. 2003. [IOSCO Statement of Principles Regarding the Activities of Credit Rating Agencies](#). Madrid.
- _____. 2003. [Report on the Activities of Credit Rating Agencies](#). Madrid.
- _____. 2012. [Development and Regulation of Institutional Investors in Emerging Markets](#). Madrid.
- _____. 2015. [Code of Conduct Fundamentals for Credit Rating Agencies](#). Madrid.
- _____. 2016. [Statement on Implementation of New Accounting Standards](#). Madrid.
- _____. 2017. [Examination of Liquidity of the Secondary Corporate Bond Markets](#). Madrid.
- _____. 2017. [Methodology for Assessing Implementation of the IOSCO Objectives and Principles of Securities Regulation](#). Madrid.
- _____. 2017. [Objectives and Principles of Securities Regulation](#). Madrid.
- _____. 2017. [Regulatory Reporting and Public Transparency in the Secondary Corporate Bond Markets](#). Madrid.
- International Securities Lending Association (ISLA). 2014. [Global Master Securities Lending Agreement](#). London. <https://www.isla.co.uk/legal-services/global-master-securities-lending-agreement>
- H. T. T. Nguyen and T. T. T. Nguyen. 2016. [Viet Nam's Securities Market—16 Years of Establishment and Development \(2000–2016\)](#). *Nomura Journal of Asian Capital Markets*. 1 (1).
- Organisation for Economic Co-operation and Development. 2017. [Annual Survey of Investment Regulation of Pension Funds](#). Paris.
- Public Debt Management Office. 2005. [A Century of Thai Bonds](#). Bangkok.
- A. Sarr and T. Lybek. 2002. [Measuring Liquidity in Financial Markets](#). IMF Working Paper WP/02/232. Washington, DC: International Monetary Fund.
- S&P Global Ratings. 2018. [Guide to Credit Rating Essentials](#). New York.
- Thai Bond Market Association. 2007. [Thai Bond Market](#). Bangkok
- F. Wendt, P. Katz, and A. Zanza. 2018. [Organizing Central Securities Depositories in Developing Markets—7 Considerations](#). IMF Working Paper WP/18/66. Washington, DC: International Monetary Fund.

World Bank. 1993. [*The East Asian Miracle: Economic Growth and Public Policy: Main Report \(English\). A World Bank Policy Research Report*](#). New York: Oxford University Press.

_____. 2006. [*Unlocking Indonesia's Domestic Financial Resources: The Role of Non-Bank Financial Institutions*](#). Washington, DC.

World Bank and International Monetary Fund. 2001. [*Developing Government Bond Markets: A Handbook*](#). Washington, DC.

Glossary

accreditation	term used to reflect the acceptance of market participants with an underlying business license in an additional role regulated by the securities market authority
authorization	equivalent concept to licensing from the relevant regulatory authority
bonds	without exception, debt securities or debt instruments having a tenor of more than 1 year
bondholders representative concept	refers to an intermediary in the bond market in civil law jurisdictions appointed by the issuer but acting for the interests of bondholders
central counterparty clearing house	service provider in a given domestic market that guarantees a trade by stepping into the role of counterparty for a buyer and seller, and assuming their obligations to one another
clearing house	entity owned and operated by a securities exchange that calculates and monitors counterparty obligations throughout their trading activities
collective investment scheme	term used to designate an investment vehicle, such as a mutual fund or unit trust, that allows the participation of many investors; the actual term used in a given market may change, according to the legal framework of a particular jurisdiction
custodian	service provider in the capital market that holds assets, including debt securities, on behalf of investors
domestic custodian	service provider in a given domestic market that offers custody and related services directly to clients, regardless of whether they are domestic or foreign investors
filing	act of submitting documentation
fiscal agent	role similar to a paying agent; often employed in mature markets to act on behalf of the issuer and distribute interest and redemption payments to a number of paying agents

global custodian	service provider offering the ability to hold assets, settle transactions, and report on all of the assets of an institutional investor, including debt securities, across all investment markets
listing	typically, the act of submitting a bond issue or other securities to an exchange for the purpose of trading, price finding, disclosure, or profiling
notes	refers to debt securities or debt instruments, without necessarily any restriction on their tenor. In practice, notes often refer to debt securities or debt instruments with a tenor of less than 1 year. At the same time, issuances under a medium-term note or other note issuance program are typically always referred to as notes, regardless of their tenor
paying agent	agent of the issuer that distributes interest and capital repayments and, possibly, withhold applicable taxes
profile listing	listing on an exchange for the purpose of disclosure and without the intent to trade the debt securities
registration	the act of registering debt securities with the relevant regulatory authority in selected markets (where no official issuance approval is required) in order to be able to proceed with the issuance
registration	the act of registering a bond with a marketplace or self-regulatory organization in selected markets as a prerequisite to be tradable in the over-the-counter market, and to commit to applicable disclosure
registration	the act of registering an investment entity with a marketplace in selected markets to be a recognized investor and counterparty, and to be able to trade on said marketplace
US SEC Rule 17f5	refers to regulation prescribing the eligibility of custodians outside the United States (US) to hold assets on behalf of US-based mutual funds; synonymous with general qualification to hold assets of foreign investors
US SEC Rule 17f7	refers to regulation prescribing the eligibility of securities depositories outside the US to keep assets on behalf of US-based mutual funds
subcustodian	service provider in a given domestic market that offers custody and related services to a global custodian for that specific market
<i>sukuk</i>	Islamic bond or note
trustee	intermediary in the bond market in common law jurisdictions appointed by the issuer but acting for the interests of bondholders

Annexes

Annex 1: Checklist of Good Practices for Developing a Government Bond Market

A. Preconditions

- The economy has a minimum size to justify the cost of bond market infrastructure, operation, and supervision.
- The government is empowered to borrow in order to finance viable public projects and cash needs in an agile manner, while also being required to control deficits prudently.
- The government puts in place a sound framework and the capacity for public debt and cash management with well-defined objectives, including one to develop a domestic public debt market.
- The macroeconomy is stable with inflation under control.
- The financial sector should be adequately liberalized (e.g., in setting interest rates and making credit decisions), competitive, and solvent.
- The central bank should not be allowed to purchase government securities directly in the primary market.
- Be mindful about the risk of crowding out private investment through public borrowing.
- Be mindful of ensuring intergenerational equity.

B. Public Finance and Debt Management

- A legal framework should allow the government to borrow (borrowing authority) in order to finance economically viable public projects without undue constraints, while also acting prudently to ensure debt sustainability.
- An annual borrowing limit for the government should be set in net terms, not gross, to allow it to flexibly refinance and reprofile existing debt and manage short-term cash needs and balances.
- A debt management legal framework should
 - include a market-based funding strategy.
 - allow the government to communicate and share information with the investor community and the central bank in order to coordinate monetary policy operations.
 - clearly state its objectives, including the (i) timely and secure funding of required public sector finances at the least cost in the long-term, while taking into account the associated risks; and (ii) promotion of government debt market development.
- A debt management legal and regulatory framework should define the delegation of the government's borrowing authority to debt managers to ensure that their borrowing binds the government to assume the liabilities arising from it.
- The responsibilities and functions of all officials involved in debt management should be defined and publicly disclosed, including those related to debt issuance, restructuring, and refinancing, as

well as secondary market arrangements, clearing and settlement arrangements for government securities, and debt management policy advice.

- The risks inherent in the structure of government debt—currency, term, floating rate—should be monitored, evaluated, and mitigated by modifying the debt structure and identifying the cost of doing so.
- Debt managers should
 - regularly conduct stress tests of the debt portfolio, taking into account possible economic and financial shocks to the government and the economy.
 - carefully consider exposures to contingent liabilities, including those arising from public–private partnerships, and their potential impact on the government’s financial position.
- The government should have a policy to price guarantees and limit or deter the proliferation of contingent liabilities, and develop a mechanism and capacity to finance such liabilities if and when they are realized (e.g., an extra-budgetary guarantee fund).
- Government cash managers should
 - consider the financial and other risk characteristics of the government’s cash flows and ensure that its financial obligations are met cost-effectively as they fall due.
 - be able to accurately project the volume and timing of the government’s future cash inflows through taxes, customs, and other revenues, as well as the volume and timing of outflows through salary payments, public expenditures, and redemption of outstanding debt, thus identifying future cash balances and profiles, including any seasonality.
 - should be able to replenish expected future cash shortfalls in a timely manner, typically by issuing short-term instruments such as Treasury bills or financing bills, in order to stabilize and minimize the government’s cash balance, thus enabling the government to reduce the volume of debt and associated costs.
- A Treasury Single Account (TSA) with a link to an interbank payments system should be established, typically at the central bank, to manage the government’s cash balance.
- The central bank should be able to sterilize the impacts of volatility in the government’s cash balance with daily open market operations and to stabilize the liquidity position of the banking system while influencing money market interest rates.
- The government and the central bank should establish a mechanism to frequently communicate and systematically coordinate their actions, including exchanging cash flow forecasts, without compromising the independence of their respective monetary and fiscal policies.
- Debt and cash management activities should be supported by a comprehensive management information system with proper safeguards and business recovery procedures to mitigate the risk of business interruptions, including natural disasters, power cuts, social unrest, and terrorism.

C. Money Markets and Monetary Policy Operations

- A central bank should avoid relying heavily on direct monetary policy tools, such as interest rate control and credit ceilings, and instead use indirect tools such as open market operations.
- The interbank market should be liberalized to allow banks to compete in pricing (interest rates) and actively trade money and bonds.
- The central bank can consider incentivizing banks to trade liquidity actively by, for example, shortening the reserve compliance period and excluding interbank borrowing based on repurchases (repos) from reserve requirements.
- The central bank should

- aim to minimize excess liquidity in the banking system—the aggregate balance in commercial banks’ reserve accounts at the central bank in excess of the required reserves—on a daily basis to encourage banks to competitively trade liquidity among themselves.
- closely coordinate its daily monetary operations with the government’s cash management operations to manage impacts of the volatility in the government’s cash balance on banks’ liquidity positions.
- avoid relying heavily on a standing accommodation facility that allows to absorb banks’ daily excess reserves. When unavoidable, the central bank should avoid generously remunerating the facility so as to encourage banks to seek counterparties in the interbank market to trade excess liquidity.
- The government should be able to manage its cash balance to minimize idle cash, volatility, and seasonality with accurate projections of future revenue and expenditure flows by using the TSA at the central bank. The finance ministry should be able to counteract the government cash balance volatility by prefunding anticipated shortages with Treasury bills and redeeming those against anticipated surpluses.
- The TSA should consolidate cash holdings of different line authorities into one account while maintaining notional subaccounts for the line authorities.
- The central bank should be able to observe the TSA balance as well as outgoing and incoming payments of the government on a daily basis to act as a fiscal agent.
- The central bank can manage the issuance and redemption of Treasury bills on behalf of the government and conduct the rough-tuning of the cash balance. It can also auction the remaining government cash balance on a daily basis in the interbank market to minimize idle cash and optimize returns on the balance.
- The monetary policy department of the central bank and the government cash and debt managers should closely communicate and coordinate their daily operations while not compromising the independence of their respective monetary and fiscal policies.
- The issuance of Treasury bills contributes to the deepening of the money market. The central bank can use repurchase agreements (repos) on government bonds with banks to stabilize the reserve balance of banks.
- The finance ministry can consider allowing the central bank to conduct add-on issuances of Treasury bills as part of its monetary operations.
- Bond dealers should fund their holdings of government bonds by the use of repos, whether with the central bank or with other market participants as counterparty, in order to deepen the money market and its linkages with the government bond market.

D. Bond Issuance and the Primary Market

- The government should
 - develop an issuance strategy based on its funding requirements and their timing, appropriate instruments and issuance methods, the target investor base, and the level of market access by different groups of investors.
 - provide market participants and the public with sufficient information about its debt structure, funding needs, and debt management strategies, including an amortization schedule, issuance calendar, description of outstanding securities, schedule for reopening and buyback operations, and Treasury cash balance.
- In formulating debt management strategies, the government should systematically consult key market participants to understand sources of demand, develop, and select appropriate instruments to mobilize demand and remove impediments to investing in them.

- To promote wide acceptance by a broad range of investors, a simple design is important. Fixed-coupon bonds are the most common type of instrument, with the coupon rate being near auction yield.
- Floating rate instruments could attract demand from investors who need to manage interest rate risk. Inflation-linked bonds are increasingly found in economies where pension funds are growing. However, floating rate or inflation-linked instruments are not expected to be traded actively in the secondary market, while reliable money market benchmarks or a timely inflation index to price the rate are required.
- The government should be a price-taker in issuing bonds. If it cannot avoid controlling the yield in the primary market due to unacceptably high yields or volatility in the early stage of market development, it should strategize steps to become a price taker as soon as possible. It is possible to place government bonds at a below-market rate by motivating market participants with regulations (e.g., reserve requirements for banks). However, such practice prevents the secondary market from developing.
- The government should consider using various issuance methods such as competitive auction, syndicated underwriting, private placement, and tap issuance, and select appropriate methods and instruments depending on the market conditions and demand sources.
- The dematerialization of securities (electronic securities) and online networks have greatly enhanced the feasibility of the direct sale of bonds to end investors, including retail investors, because of an extensive reach to the public at low marginal costs. Individuals could have bond accounts through intermediaries such as banks and broker-dealers or fixed-income mutual funds. A mobile telephone company could be allowed to maintain retail investor accounts, but that would require special regulatory arrangements.
- The government, or the central bank as fiscal agent, should establish an electronic bond registry.
- The government generally should conduct competitive auctions to enhance the reliability of market-determined yield. This could be done as primary market participants gain experience in competitive bidding and as the institutional investor base is broadened.
- Emerging markets tend to start with single-price auctions and consider adopting multiple price auctions as market participants gain experiences in bidding. A mixed auction has been adopted successfully in the People's Republic of China, which promotes price discovery by institutions with stronger pricing ability while also allowing less sophisticated institutions to participate.
- The government should periodically update and announce its issuance calendar to the market to help primary market participants in preparing to bid aggressively at auctions.
- The government should develop a methodology to reopen and refinance existing series of bonds to consolidate them into a limited number of large benchmark series to enhance their tradability. It also needs to (i) refinance bonds series as they shift in and out of relevant benchmark maturity segments and (ii) avoid the concentration of redemptions.
- Buyback programs, exchange offers, and switch auctions should be used to refinance existing bonds, standardize instruments to promote their liquidity in the secondary market, and reprofile the debt structure.
- An issuing strategy should weigh the preferences of investors against the government's own cost and risk targets and debt management objectives. It should seek to promote benchmark issues in key maturities that facilitate the growth of secondary markets.
- Effective coordination between the fiscal and monetary authorities is essential for avoiding auction failures, especially when the central bank issues its own securities or bills in maturity segments in which government securities are also issued.
- The government can consider establishing a primary dealer (PD) system to promote the development of both the primary and the secondary markets. Under a PD system, the government provides certain privileges for qualified intermediaries acting as PDs in exchange for their

performing certain obligatory services to help the government meet its debt management objectives.

- A basic condition for a PD system to be effective is that there should be an adequate number of market participants and investors. Obligating market making to create liquidity in the secondary market for government bonds is often key to maximizing the benefits of a PD system. But the feasibility of market making is preconditioned upon the availability of delivery-versus-payment (DVP) settlement of bond trades, the development of repo markets, and/or government securities lending services.
- Information and communication technology and network technology are making it increasingly possible for the government to mobilize demand for government bonds directly from end investors. The enhanced feasibility of electronic trading reduces the value addition of market-making services, while greater transparency in the secondary market and resulting competitiveness makes market making less lucrative for PDs. Governments should consider those new conditions in considering the adoption of a PD system.

E. Investor Base

- The structure and composition of the investor base is closely linked to the state of development and sophistication of the financial system. The development of contractual savings institutions such as pension funds and insurance companies is critical to diversifying the investor base. They are key institutional investors needed to mobilize long-term funds.
- In frontier market economies where the nonbanking financial sector is small, banks tend to form a core group of investors in the government securities market in addition to their role as intermediaries and custodians of these instruments.
- The presence of insurance companies is growing in emerging Asian economies. In addition to their core insurance business, life insurers can offer annuities and, together with pension and provident funds, build a large pool of long-term savings that can be a major source of demand for bonds.
- Collective investment schemes can be developed in conjunction with the asset management industry. Contractual savings institutions could benefit from opportunities to invest in fixed-income collective funds. Fixed-income funds comprising government bonds offer a safe deposit substitute for retail investors. Investor education and appropriate securities regulations for investor protection, including know-your-customer rules, are necessary.
- Government bonds as highly creditworthy and liquid securities can be sold directly to retail investors by use of information and communication technology, which also enables direct mobilization of demand from nonfinancial corporates and foundations, among others. Yet, direct sale to end investors creates a pricing challenge, which can be addressed only through a competitive institutional market.
- Foreign investors in local currency (LCY) bonds need to hedge their currency risk, especially when the convertibility of the underlying LCY is limited. Foreign exchange and derivatives markets complement the LCY bond market by allowing foreign investors to participate in the market while controlling the currency risk.
- Restrictions on the participation of foreign investors in onshore derivatives market is leading to the formation of offshore non-deliverable forward markets overseas fragmenting the market and reducing the efficiency and depth of the onshore derivatives market. Emerging market authorities should consider establishing onshore foreign exchange derivatives markets. Standardized foreign exchange derivatives such as foreign exchange futures and options contracts should be listed on an exchange.

- To manage capital flows, host economy authorities need to understand the source and nature of the flows, including the identities of end investors, their investment motives, and the destination of the money. To avoid a regulatory burden that expels important foreign inflows, the authorities should consider implementing a standardized reporting format under ISO 20022 (Universal financial industry message scheme).
- The authorities may need to distinguish between bona fide long-term foreign investors and short-term speculators. To address the issue, the authorities should consider adoption of qualified institutional investors definition and Legal Entity Identifier, which is defined by ISO 14001 as a unique number utilized to identify funds and entities. In line with ISO 20022, the authorities can consider a standardized reporting format.
- A deep and diverse domestic investor base, particularly an institutional investor base, can absorb capital flow shocks that can be caused by foreign investors.

F. Intermediaries and Secondary Markets

- Well-functioning secondary markets provide a cost-efficient environment in which market participants can trade bonds in a fair and transparent manner and an exit mechanism for investors in medium- and long-term securities. By doing so, they permit governments to issue long-term debt in the primary market to better manage their exposure to interest rate and rollover risks.
- Developing an active and liquid secondary market requires sufficient market intermediaries and institutional investors with diverse motives to invest and trade appropriate instruments using different transaction types and well-established trading mechanisms. Trading mechanisms encompass not only standardized transaction conventions and technical infrastructure for trading, clearing, and settlement facilities, but also prudential and business conduct rules, effective market surveillance, and investor protection.
- Different groups of market participants—such as dealers, interdealer brokers, and institutional investors—play different roles in the market and are faced with different business interests that often conflict. A sound secondary market structure is one that reconciles and balances them well.
- Trading activity and liquidity are heightened when a competitive market structure is established. To enhance the tradability of government bonds, bonds need to be consolidated in a limited number of standardized and simple instruments (benchmarks). Transaction costs, including transaction taxes, need to be minimized. Market infrastructure needs to be made operationally efficient and robust, and market participants should have varying transaction needs and investment horizons. PDs, and marketmakers and interdealer brokers that facilitate trading among dealers, often contribute to greater market liquidity.
- Bonds are traded predominantly in over-the-counter markets, which tend to lack transparency unless conscious efforts are made to better organize them. As a starting point, transaction conventions should be standardized in accordance with international standards. Private market information vendors are usually not able to fully capture all transactions because only major market participants with high trading volumes can afford to subscribe to their expensive systems. Thus, market participants, particularly bond dealers and interdealer brokers, should be required to report their transactions (post-trade price and volume) to a designated trade repository immediately (e.g., within 10 minutes) after the trade. There should be arrangements in place to monitor compliance with this requirement and penalties imposed for noncompliance. The trade repository or its associated trade information system should publicly provide information on benchmarks.
- The role of trade associations and self-regulatory organizations (SROs), such as a bankers' or a bond market association, is important in enhancing the efficiency and transparency of the market and reliability of benchmarks. It is the role of such trade associations and SROs to promote the standardization of transaction conventions. They can also register bonds and play the role of bond pricing agency for illiquid bonds that commercial market information vendors may not be able to provide. Emerging bond markets, as well as some more developed bond markets, have a

significant number of bonds that are not traded every day. The availability of pricing information for such illiquid bonds not only facilitates trading but also enables institutional investors to evaluate or disclose the net asset value of their bond portfolios and comply with prudential requirements. Therefore, bond pricing agencies need to develop models to rationally price such bonds.

- Trade associations and SROs also need to play an important role as an administrator of money and bond benchmarks. Their failure to play a proper role can result in unreliable benchmarks as was seen in the case of LIBOR manipulation. Benchmarks are used to price all money and debt instruments, including loans for consumers, and their manipulation can cause profound damage to the public's trust in money and debt markets. The central bank and/or the securities regulator should consider requiring the registration of market information vendors with a requirement to provide monitoring access to the market through their terminals. It is because the administrator of benchmarks needs to rely on the platforms of the vendors and their networks to collect pricing information from market participants, process it, and disseminate it back to the market. In doing so, it is increasingly important to make use of post-trade transaction information instead of relying on pre-trade price quotes by dealers. If their platforms enable market participants to execute trades, they should be more formally regulated because they would be functioning as a trading platform.
- They could also better organize the secondary market by using electronic trading platforms to promote market transparency and liquidity, and to enhance the reliability of benchmarks and the yield curve. The secondary market and its platforms should be designed to reconcile the conflicting business interests of bond dealers and buy-side investors. Bond dealers are reluctant to share their price quotes (pre-trade price information) beyond their clients because they invest their resources through monetary and fixed-income research. Even with their client buy-side investors, they wish to disguise the cost of their inventory of bonds, while buy-side investors wish to know it as a basis for price negotiations with the dealers.
- An electronic interdealer platform should allow interdealer brokers to play an appropriate role to organize the over-the-counter market. In a developing economy whose financial sector is dominated by banks, the interbank or interdealer market tends to form the core of the overall secondary bond market because banks predominantly play the role of bond dealer. An electronic trading platform is needed to support this market segment. An interdealer platform should allow dealers to quote prices to each other so that they can trade among themselves competitively and adjust their bond positions.
- Dealers need to disguise their identities to their counterparties while controlling their exposures in accordance with the counterparty limits they set for each of them. They could do so with the help of interdealer brokers. If the trading platform provides a functionality to control counterparty exposure limits, they could do the same by use of the platform. Some interdealer brokers offer such electronic platforms and trading services. But trading in such a "blind market" must be supported by DVP settlement. DVP eliminates principal risk, the largest component of counterparty risk. Without it, market participants in a blind market would be exposed to large counterparty risk without knowing the identity and risk of the counterparty. Market participants that face stressful market conditions might completely stop trading in the market except for in a face-to-face manner with fully trusted counterparties.
- As contractual savings institutions and other institutional investors grow, it becomes important to support the dealer-to-client segment of the market with a platform. In fact, it is generally desirable to support this segment of the market from a relatively early stage. By combining the two market segments (interdealer and dealer-to-client segments), a multi-dealer platform can be developed. Said platform should allow buy-side investors to request quotes from multiple dealers to compare and choose the best price for execution, thus enhancing transparency, competitiveness, and efficiency. By capturing a wider market, the market price and volume information should also be more reliable and representative.
- A repo market needs to be developed as a special segment of the secondary market. It is a key instrument for banks to trade fund liquidity while controlling counterparty risks and is critically important for promoting bond market liquidity. A well-functioning repo market is a precondition for feasible market making by dealers, thus leading to the successful implementation of a PD system.

A master repurchase agreement should be adopted to standardize the repo transactions in line with international practices. The development and adoption of a master repurchase agreement should involve all key participants of a repo market, including both banks and securities brokers.

- There are different legal forms of repos, which generally can be categorized into two types: pledged repos and repos with title transfer. The former does not allow repo buyers to reuse (rehypothecate) the repo securities to obtain liquidity, thus limiting the efficiency and liquidity of the instruments and the market. It could also create uncertainty about the repo buyer's ownership of repo securities in the event of bankruptcy of the repo seller because repo securities are to be booked with the seller under accounting rules. Repos with title transfer, or so-called classic repos, could give the repo buyer greater security in the event of default or bankruptcy of the repo seller. If the title transfer allows rehypothecation, it facilitates market making by bond dealers and, therefore, enhances the feasibility of a PD system.
- However, rehypothecation could create systemic risk. A clearing and settlement system needs to provide efficient clearing of repo transactions with effective management of repo collateral and enforcement of margin requirements. Appropriate third parties and/or market infrastructure such as a central securities depository should provide repo securities substitution services with appropriate prudential limits if rehypothecation is allowed.
- It is important to ensure that the bankruptcy framework permits close-out netting of repo positions among repo market participants in the case of default by or bankruptcy of one of the participants. Particularly in economies with a continental civil code legal tradition, there may be legal uncertainty even if repo agreements specify ownership right of the repo securities. Legal authorities, the central bank, the securities regulator, and market participants need to work together to address this issue to support the development of a repo market.

G. Securities Custody and Settlement Infrastructure

- Government securities trades involve frequent transfers of large values of both money and securities that can expose market participants and investors to significant systemic risks. Frequent high-value transfers could also involve significant time value of money, requiring swift settlement. Thus, a highly safe and efficient clearing and settlement system is required to support the smooth operation of the market. A clearing and settlement system needs to provide efficient, economical, and convenient services for market participants to reduce transaction costs. It should provide fair access to broaden and deepen market participation while controlling the counterparty risk.
- Government securities should be dematerialized and kept in a central custody system in the form of electronic records. To legally support dematerialization, securities law should recognize electronic securities records as evidence of securities ownership, registration, and transfer. On the money leg of the settlement process, the central bank's money should be used to ensure safe settlement since the central bank is the only plausible entity that can readily provide necessary fund liquidity while withstanding counterparty risk. A clearing and settlement system must achieve DVP to eliminate principal risk, the most serious element of counterparty risk. By substantially reducing the counterparty risk, DVP enables market participants to enlarge counterparty exposure limits, thus helping to broaden the market and activate trading. Active repo transactions or market making are often impossible unless DVP is achieved in the clearing and settlement process.
- As the market grows, it is necessary to adopt real-time gross settlement (RTGS) for payments to achieve Model 1 DVP. The central bank needs to either incentivize or require banks to use an RTGS payment system by providing intraday liquidity support since RTGS requires a high level of fund liquidity. Securities custody and payments systems should be interconnected to enable the central bank to automatically collateralize the intraday credit by taking an appropriate portion of the bank's long holdings of government bonds as collateral. The interconnected systems should also be able to rapidly avail government securities for market participants as collateral or margin assets to cover their exposures in various financial instruments and to counterparties. Market participants also need to pledge repo government securities to readily obtain fund liquidity from the interbank market or the central bank.

- In parallel, the central custodian of government securities should consider providing government securities lending services. The central custodian safekeeps government securities owned by its participating intermediaries and their client investors. Therefore, it needs to make an arrangement to systematically borrow government securities to create a pool of government securities out of which it can lend. Such government securities lending services should provide only very short-term lending services limited to ensuring the timely settlement of government securities trades; they should not allow for long-term speculation.
- Because of the need to build interconnected systems, it is necessary to strategize the use of government securities in a master plan for financial market infrastructure development. A consensus should be built on whether the central bank or a national central securities depository should safekeep government bonds, considering pros and cons. The central bank can often offer central custody and core clearing services for government securities at low cost. When the central bank provides such services, however, arrangements should be made to allow market participants as users of the services to govern their provision. The central bank should also accept qualified nonbank participants in the government bond market to have money accounts as well as securities accounts so as not to give banks unfairly advantageous access to this critical market infrastructure.
- The clearing and settlement process involves a trade-off between safety and cost efficiency. Net settlement reduces the fund liquidity requirement in comparison to RTGS. However, the netting builds up interdependent trades and, therefore, creates systemic risks. RTGS eliminates systemic risk but requires greater money liquidity supported by the central bank for its operation. An efficient clearing and settlement system is one that strikes an optimal balance between the liquidity requirement and the systemic risk, but the optimal balance differs from one market to another because the trading volume and patterns differ. The market authority and clearing and settlement system operator should guide market participants to strike a desirable balance. Being concerned about systemic stability under its policy mandate, a central bank often provides inexpensive intraday liquidity to entice (or require) market participants to use RTGS to minimize systemic risk in government securities trades.
- The backbone of a well-functioning clearing and settlement system is operational efficiency and reliability supported by a clear and sound legal framework, which is enforceable with a high degree of certainty and speed. The legal framework includes property and insolvency laws as well as laws specific to the operation of securities settlement systems. Detailed operational rules and regulations need to be provided by the regulatory authority and the clearing and settlement system operator in line with the recommendations of the Committee on Payments and Market Infrastructures and the International Organization of Securities Commissions (IOSCO).

H. Accounting and Taxation Framework Conducive to Bond Market Development

- Taxation of financial transactions, instruments, interest, and capital gains has major impacts on financial market development. Poor tax policies can create serious impediments to the proper functioning and healthy development of the bond and capital markets. They can also affect the savings, investments, and financial behaviors of borrowers, savers, and investors.
- A framework for capital income taxation should, in principle, provide a level playing field for all savings and investment instruments. An examination of the tax framework needs to take into account impacts of not only taxes on specific forms of capital income such as interest income, dividends, and capital gains, but also the underlying personal and corporate income tax framework. Any tax incentives should be carefully considered so as not to create distortions, gaps, or loopholes, and to avoid unintended tax incidence caused by price elasticity of the demand and supply of capital.
- Tax administration should be clearly understandable, practical, and enforceable. A transactions tax is often adopted in place of an income tax for ease of tax collection and administration. But it needs to avoid inadvertently impeding the trading of government bonds, particularly repo transactions. Tax treatment of foreign investors and applications under tax treaties should be clear and understandable. The use of withholding tax for ease of tax collection and administration should avoid creating complications or uncertainty in the tax treatment of foreign investors.

- Tax-exemptions for certain investors or instruments are found in many economies. Pension funds are usually exempt from a tax on their investment incomes. Local government bonds in some economies are tax-exempt. These arrangements necessitate close monitoring of the proper application of tax-exemptions and increase administrative costs. They also tend to fragment the bond market between taxable and tax-exempt investors, complicate the pricing of instruments, and thus compromise market efficiency.
- Accounting rules for fixed-income instruments should be clear with respect to those held to maturity and those available for trade. Fair value accounting (mark-to-market or mark-to-model) of fixed-income portfolios encourages institutional investors and banks to trade bonds actively while facilitating the management of interest rate risk. However, the implementation of International Financial Reporting Standards is challenging in many emerging markets.

Annex 2: Overview of the Asian Bond Markets Initiative

A. Background and Brief History

1. The Asian Bond Markets Initiative (ABMI) was launched in December 2002 and adopted in August 2003 at the Finance Ministers Meeting of the Association of Southeast Asian Nations (ASEAN) and the People's Republic of China (PRC), Japan, and the Republic of Korea—collectively known as ASEAN+3. ABMI aims to develop local currency (LCY) bond markets as an alternative source of funding to foreign-currency-denominated bank loans to minimize the currency and maturity mismatches that had made the region vulnerable to the sudden reversal of capital inflows. Policy makers in the ASEAN+3 region have also aimed to promote regional financial cooperation and integration under ABMI. This approach is based on the rationale that more developed and integrated LCY bond markets enable economies in the region to mobilize domestic savings to finance their long-term investment needs and reduce their vulnerabilities to the reversal of capital flows. Since ABMI's launch, the Asian Development Bank (ADB) has been working with ASEAN+3 and serving as Secretariat to provide technical support for the implementation of the initiative.⁸²

2. During the initial phase of ABMI (2002–2007), ASEAN+3 policy makers focused on establishing basic market infrastructures and regulations for LCY bond markets. They aimed to improve access to bond markets for potential issuers; develop robust clearing and settlement systems, rules, and regulations; and strengthen the capacity of domestic credit rating agencies. The AsianBondsOnline website (www.asianbondsonline.adb.org) was also launched in 2004 to disseminate information on market developments and to guide investors to LCY bond markets.⁸³

3. In 2008, ASEAN+3 developed the Medium-Term Road Map for ABMI to reflect the external environment and ongoing market developments in the region. The 2008 Road Map focused on four activity areas: (i) promote the issuance (supply) of LCY bonds, (ii) facilitate demand for LCY bonds, (iii) strengthen the regulatory framework, and (iv) improve bond market infrastructure. Activities in each of these four areas are being implemented by four separate task forces. In addition, a technical assistance and coordination team was established to facilitate technical assistance to selected ASEAN member economies in support of their individual initiatives to promote bond market development. In 2010, the Group of Experts report was published to identify potential market impediments as well as cross-border transaction costs. The report also provided models for regional settlement intermediaries to be considered in the future. Based on these findings, it was proposed in 2010 that the ASEAN+3 Bond Market Forum (ABMF) be a platform to bring the region's public and private sector experts together to foster harmonization and standardization. Also in 2010, the Credit Guarantee and Investment Facility (CGIF) was established to provide credit guarantees for LCY bonds issued by investment-grade companies in ASEAN+3 economies.

4. In 2012, ASEAN+3 policy makers undertook a review of the 2008 Road Map and agreed to implement a new set of policy measures and activities under the New ABMI Road Map+. The priorities of the New Road Map+ are to (i) advance ongoing activities supported under ABMI to achieve tangible outcomes; (ii) include new activities to strengthen momentum in further developing LCY bond markets and facilitating

⁸² Adopted from Asian Development Bank. 2017. *The Asian Bond Markets Initiative: Policy Maker Achievements and Challenges*. Manila.

⁸³ Footnote 73.

regional financial integration; and (iii) address relevant issues to meet the changing global financial environment, including measures to mitigate the impact of capital flows on the region. In 2012, ABMF published the *ASEAN+3 Bond Market Guide*, which was the first comprehensive guide for ASEAN+3 bond markets officially recognized by ASEAN+3. The guide provided not only regulatory information but also settlement-related information. In 2013, the Cross-Border Settlement Infrastructure Forum (CSIF), composed of the central banks and central securities depositories (CSDs) in the region, was established to discuss a regional settlement intermediary to promote cross-border bond transactions. CSIF agreed to propose linkages among the CSDs and real-time gross settlement (RTGS) systems of the central banks (CSD-RTGS linkages) as the model of a regional settlement intermediary. In 2015, ABMF proposed the ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) as the nexus of professional bond markets in the region. AMBIF proposes a standardized bond issuance document and procedure to facilitate cross-border bond issuance and investments. The first pilot AMBIF bond (Thai baht) was successfully launched in September 2015 by Mizuho Bank.

5. In 2016, the revised Mid-Term Road Map was adopted. The revised Road Map retained the following ongoing activities: (i) explore options to expand the CGIF guarantee capacity and broaden its operations to meet the financing needs of the region; (ii) continue support for the operations of *AsianBondsOnline* and participation in the annual Asian Bond Markets Summit; (iii) continue reforms to strengthen financial market resilience and facilitate investment in local currency bonds; (iv) continue to develop government bond markets; (v) advance achievements made under AMBIF; (vi) advance cross-border bond transactions and promote regional bond market integration; (vii) promote the adoption of international standards, including ISO20022 or the universal financial industry message scheme, and standardization of regulatory and tax procedures for cross-border bond transactions; (viii) further improve market infrastructure for cross-border transactions; and (ix) advance comparability of credit ratings by domestic credit rating agencies within the region. It also included the following new activities: (i) promote green bonds for infrastructure development, (ii) promote covered bonds to meet housing needs and explore options to develop municipal finance for infrastructure development in selected member countries, (iii) assess the feasibility of establishing an information platform, and (iv) review the potential for expanding prime collateral for cross-border repo markets in the region. Table A2.1 highlights milestones in the development of ASEAN+3.

Table A2.1: ASEAN+3 Major Milestones

	Event
Jul 1997	1997/98 Asian financial crisis starts in Thailand
Feb 1997	First ASEAN+3 Summit
Apr 1999	First ASEAN+3 Finance Ministers' Meeting
May 2000	ASEAN+3 Finance Ministers agree on Chiang Mai Initiative Multilateralization
Aug 2003	Asian Bond Markets Initiative (ABMI) adopted
May 2004	Launch of <i>AsianBondsOnline</i> website under ABMI
Nov 2004	First publication of the <i>Asia Bond Monitor</i>
May 2008	ABMI New Road Map+
Mar 2010	Launch of the Chiang Mai Initiative Multilateralization
Apr 2010	Publication of Group of Expert Report
Oct 2010	Establishment of ASEAN+3 Bond Market Forum (ABMF)
Nov 2010	Establishment of Credit Guarantee and Investment Facility
Apr 2011	Establishment of ASEAN+3 Macroeconomic Research Office
Apr 2012	First <i>ASEAN+3 Bond Market Guide</i> published
May 2012	ABMI New Roadmap+
Jul 2013	Establishment of Cross-Border Settlement Infrastructure Forum
Dec 2013	ABMF Sub-Forum 2 Phase 2 Report: ASEAN+3 Information on Transaction Flows and Settlement Infrastructures
Feb 2014	ABMF Sub-Forum 1 Phase 2 Report on the Proposal on ASEAN+3 Multi-Currency Bond Issuance Framework
May 2015	Cross-Border Settlement Infrastructure Forum Progress Report
Aug 2015	ABMF Phase 3 Reports: Implementation of ASEAN+3 Multi-Currency Bond Issuance Framework; and Harmonization and Standardization of Bond Market Infrastructure
Feb 2016	Internationalization of the ASEAN+3 Macroeconomic Research Office

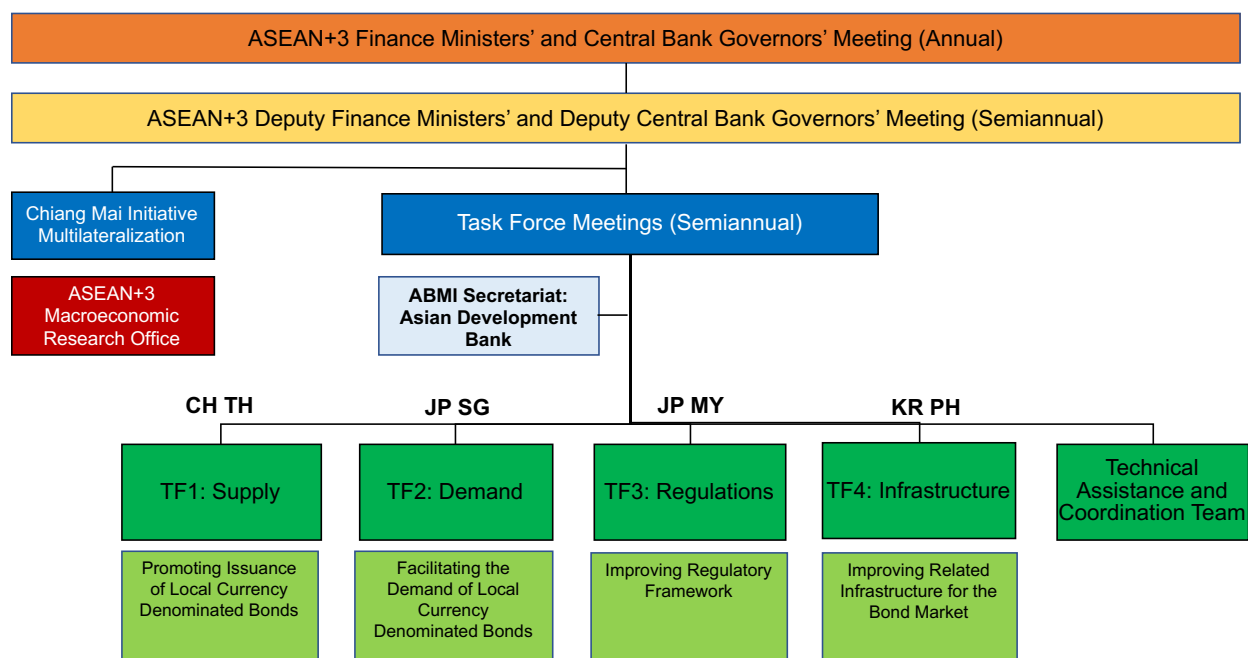
ASEAN = Association of Southeast Asian Nations, ASEAN+3 = ASEAN plus the People's Republic of China, Japan, and the Republic of Korea.

Source: Asian Development Bank.

B. Work of Asian Bond Markets Initiative Task Forces

- Currently, ABMI is structured under four task forces. The functions, role, and recent activities of each task force are described below.

Figure A2.1: Structure of the Asian Bond Markets Initiative



ADB = Asian Development Bank; 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; CH = People's Republic of China; JP = Japan; KR = Republic of Korea; LCY = local currency; MY = Malaysia; PH = Philippines; SG = Singapore; TF = task force; TH = Thailand.

Source: Asian Development Bank.

Task Force 1: Promoting the Issuance of LCY Bonds (co-chaired by the People's Republic of China and Thailand)

7. To help promote the issuance of LCY bonds, the CGIF was established on November 2010 as an ADB trust fund to provide credit enhancement and increase the access of investment grade-rated firms to LCY bond markets, and to lengthen the maturities of their bonds (See Annex 9 for more information on CGIF). In 2016–2018, 20 bonds were guaranteed in Indonesia, the Philippines, Singapore, Thailand, and Viet Nam. To address the CGIF's guarantee capacity constraints, CGIF contributors agreed in December 2017 to increase CGIF's capital from the initial USD700 million to USD1.2 billion.

8. In the ASEAN region, the investment gap in the infrastructure sector is estimated at USD102 billion per year, of which 60% (USD61 billion) is to be funded by private investments. However, the ability of domestic financial institutions in the region to supply needed infrastructure finance is still hampered by their limited risk-taking capacity. Besides, many ASEAN+3 economies are vulnerable to climate risk. The region has suffered from large typhoons and health threats from pollution. Therefore, the region needs to consider a new approach to mobilize and intermediate funds to create more environment-friendly finance. Particularly, the establishment of a green bond market should be supported. Studies on the use of LCY bonds for infrastructure finance (see Annex 3), including the use of green bonds (see Annex 4), were also prepared for policymakers' consideration.

Task Force 2: Facilitating Demand for LCY Bonds (co-chaired by Japan and Singapore)

9. To disseminate the outputs under ABMI and to promote investment in LCY bonds, the *AsianBondsOnline* website was launched in 2004 (Box A2.1). ABO disseminates data and various information on ASEAN+3 bond markets. Meanwhile, the annual Asian Bond Markets Summit has been organized since 2005 to discuss market developments and challenges. In July 2018, information

dissemination for the LCY bond markets of ASEAN+3 economies improved significantly with the major revamp of ABO, which included improved appearance, data accessibility, and usability.

Box A2.1: AsianBondsOnline

AsianBondsOnline (ABO) is a website portal that provides key information on ASEAN+3 bond markets in support of bond market development under the Asian Bond Markets Initiative (ABMI). It operates under ABMI's Task Force 2, which disseminates information on local currency (LCY) bond markets. ABO aims to support bond market development in ASEAN+3 markets by (i) providing information on the region's bond markets in the ABO portal, (ii) creating knowledge products such as *Asia Bond Monitor* (ABM), and (iii) engaging in capacity building activities in financially less-developed economies.

ABO is a one-stop clearinghouse of information on LCY sovereign and corporate bonds. The goal is to provide relevant information to various stakeholders and users in order to better guide their decision making processes as well as to enhance awareness of ASEAN+3's bond markets. Its users encompass institutional and individual investors, sovereign and corporate issuers, financial intermediaries, credit rating agencies, market regulators, policy makers, multilateral institutions, academic researchers, and journalists, both in local markets and outside the region. ABO is widely recognized by its many stakeholders as a key source of information for ASEAN+3 LCY bond markets.

The ABO team produces high-quality knowledge products, in particular the *Asia Bond Monitor* (ABM), an Asian Development Bank flagship report, as well as *Weekly Debt Highlights* and *Monthly Debt Roundup*. ABM is a quarterly report that reviews recent developments in emerging East Asian LCY bond markets, including the outlook, risks, and policy options. More recently, ABM editions have included special theme chapters based on in-depth research and analysis. The theme chapters explore topics related to bond markets that are technically rigorous yet relevant for market participants. Some recently published theme chapters explore infrastructure bond market development in Asia, the benefits of LCY bond markets, and the role of green bonds in financing along with green bond pricing. In October 2018, the *Monthly Debt Roundup* was launched to provide monthly updates on key financial data including foreign bond flows in ASEAN+3 markets. ABO is also the information portal for ABMI and provides access to ABMI knowledge products such as economy-specific *Bond Market Guides*.

To further support bond market development, particularly in ASEAN+3 economies with less-developed capital markets, ABO conducts capacity building workshops for policymakers to develop their LCY bond markets. ABO has conducted capacity building workshops in Viet Nam (2014), Cambodia (2016), Myanmar (2017), and the Lao People's Democratic Republic (2018).

In 2018, a new technical assistance project funded by the Japanese government was started to provide website enhancements for ABO. On 3 July 2018, a revamped website was formally launched, with improved aesthetics and easier navigation. An interactive data search was created, allowing users to select the data needed for specified markets, and additional tools were added such as interactive graphs. Other initiatives that ABO has undertaken include harmonizing data across different markets and increasing data transparency in discussions with various government stakeholders.

Task Force 3: Improving the Regulatory Framework (co-chaired by Japan and Malaysia)

10. To facilitate market integration, ASEAN+3 policy makers looked to the experience of the European Union in harmonizing and coordinating the diverse interests of member economies and financial institutions. Based on the experiences of the European Union, policy makers established a Group of Experts on Cross-Border Bond Transactions and Settlement Issues in 2008 to provide advice to governments on cross-border clearing and settlement issues in order to foster regional bond market development and integration. Based on the Group of Experts recommendations, the policy makers established ABMF in 2010 as a common platform to foster standardization of market practices and harmonization of regulations relating to cross-border bond transactions in the region.

11. ABMF consists of two forums: Sub-Forum 1 (SF1) and Sub-Forum 2 (SF2). SF1 activities include the development of AMBIF (see other related sections in the main text and Annex 10); the publication of *Bond Market Guides*, which document bond market regulations and settlement procedures in ASEAN+3 economies; a Working Group for Cross-Border Collateral and Repo Business; and a Working Group for AMBIF Information Platform. SF2 focuses on harmonization and standardization of transaction flows and message items, and the implementation of international standards for electronic data interchange between financial institutions (ISO 20022). To support AMBIF, SF2 also conducted a tax study to identify taxation and tax procedures in relation to AMBIF.

12. AMBIF promotes cross-border bond issuance and investment. As of February 2019, three AMBIF bonds have been issued. In November 2018, the first corporate bond based on AMBIF was issued in Cambodia under AMBIF and the first CGIF-guaranteed AMBIF bond was launched in the Philippines (Table A2.2).

Table A2.2: ASEAN+3 Multi-Currency Bond Issuance Framework Bond Issuance

No.	Issuer	Sector	Currency and Amount	Tenure	Issue Date
1	Mizuho Bank, Ltd.	Financials (Banking)	THB3 billion	3 years	28 Sep 2015
2	Hattha Kaksekar Limited	Financials (Consumer Finance)	KRW120 billion	3 years	14 Nov 2018
3	AEON Credit Services (Philippines) Inc. ^a	Financials (Consumer Finance)	PHP900 million	3 years	16 Nov 2018
			PHP100 million	5 years	16 Nov 2018
4	CJ Logistics Asia Pte. Ltd. ^a	Logistics	SGD70 million	5 years	26 Mar 2019

KRW = Korean won, PHP = Philippine peso, SGD = Singapore dollar, THB = Thai baht.

^a Guaranteed by the Credit Guarantee and Investment Facility.

Source: Asian Development Bank.

13. To share the experiences and good practices of ASEAN+3, non-ASEAN+3 officials can participate in ABMF as an observer. Since June 2018, the Ministry of Finance of Mongolia has participated in ABMF.

Task Force 4: Improving Related Infrastructure for the Bond Market (co-chaired by the Republic of Korea and the Philippines)

14. To implement the recommendations of the Group of Experts, CSIF was established in 2013 to discuss work plans and related processes for the improvement of cross-border settlement in the region, including the possibility of establishing a regional settlement intermediary. In April 2018, the Bank of Japan and the Hong Kong Monetary Authority announced the future creation of a delivery-versus-payment link between them in 2021. This was the first step to creating linkages among the central securities depositories (CSDs) and real-time gross settlement (RTGS) systems of the central banks in the region. To facilitate creation of CSD-RTGS linkages, the CSIF published *A Common Understanding on Cross-Border Business Continuity Planning and Cybersecurity*, in May 2018.

15. Task Force 4 also launched the Asian Prime Collateral Forum in 2017 to study the possible use of regional government bonds as collateral for cross-border transactions. As financial markets in the region are integrating, it is necessary to discuss LCY-to-LCY liquidity management to facilitate more cross-border transactions and improve the region's safety net.

Annex 3: Infrastructure Bonds

1. The need for as much as USD550 billion in infrastructure investment through 2020 across the economies of the Association of Southeast Asian Nations (ASEAN) far exceeds the amounts what might be financed through government budgets, which has led to increased interest in public–private partnerships (PPPs) or other vehicles to attract private investment. Institutional investors across the region would hold more local currency (LCY) bonds if the supply were greater, prompting the question of how to increase the use of LCY bonds to finance infrastructure investment.

2. Project financing, in which the project alone provides the cash flow and there is limited or no recourse to the project sponsors, is widely used in Malaysia but more limited in other economies across the region. Project bonds, which may be used to finance an entire project or as part of a financing package, bear a number of risks relating to the preparation, construction, and operational phases of the project, requiring specialized skills on the part of project sponsors to allow them to present an attractive investment, and on the part of investors to enable them to assess the risks of project bonds. Project bonds may be used at project commencement (greenfield stage) or may be issued to take out the initial financing, typically after the operational phase begins (brownfield stage).

A. Recent Experiences in the Region

3. LCY project bonds and *sukuk* are widely used in Malaysia. There are a few other examples across the region, and a more limited number of foreign currency project bonds. As is common with international experience, bank debt finances most private infrastructure investment across ASEAN.

4. Despite the dearth of project bonds, a significant portion of ASEAN LCY bonds are issued by infrastructure-related entities. They account for 20%, 25%, and 18% of the LCY corporate bond markets in the Philippines, Singapore, and Viet Nam, respectively, providing a vehicle for domestic institutional and retail investors to finance infrastructure investment. State-owned infrastructure-related companies rank among the largest corporate bond issuers in many economies across the region.

5. LCY bonds also provide indirect infrastructure financing. Commercial and specialized banks are among the largest bond issuers in most ASEAN economies. While typically driven by capital management considerations, bond funding can be used by banks for long-term loans. Public financing vehicles such as DanaInfra Nasional Berhad in Malaysia, local government financing vehicles in the People's Republic of China, and local government agencies and corporations in Japan are all major sources of infrastructure investment, and all tap the LCY bond markets for funding.

6. Common challenges across the region include the limited appetite for lower-rated (higher-risk) bonds. This may require larger equity investments by project sponsors or credit enhancement from a domestic, regional, or international credit guarantor. The cost of these options may contribute to the preference for bank debt as ASEAN banks typically will price aggressively for the business of well-established corporate or state-owned names. The small size of nonbank financial institutions limits the institutional investor market in many economies. Measures to promote the insurance, pension, and funds management sector are required to support the growth of LCY bond markets, particularly specialized issues such as high-yield debt and project bonds.

7. Many institutional investors across the region lack expertise in infrastructure investment. One solution is to partner with other investors. Ratings agencies in many economies also need to develop project finance expertise.
8. Accommodative prudential standards for bank lending can inhibit the growth of the bond market. Enforcing a single exposure limit in line with international standards can encourage infrastructure project sponsors to pursue bond financing and contribute to financial stability.
9. Infrastructure funds of various types have been used in a number of economies across the region. Some have been established in response to tax incentives, while others combine international expertise in infrastructure investment with significant fund commitment by domestic and international institutional investors.
10. Credit enhancement agencies have been established in several economies in addition to the regional Credit Guarantee and Investment Facility. Other direct policy interventions include government owned or sponsored entities to promote public-private partnerships (PPPs) and infrastructure finance, and fiscal incentives for infrastructure investment generally or project finance specifically. The challenge in many economies is the relatively small capacity of credit enhancement vehicles and other government initiatives relative to the needed infrastructure investment.

B. Lessons from Other Markets

11. Revenue bonds that securitize the cash flow from a government enterprise or tax receipts are widely used in the United States. These have a higher default rate than municipal bonds overall. They also have a fiscal cost due to the exemption of interest from federal income tax in the hands of investors, but do provide a vehicle for governments to finance specific projects.
12. The experience of Latin America, where the growth of domestic institutional investors was central to the development of bond markets more generally and project bonds specifically, offers insights applicable elsewhere. A robust foundation for PPPs and a well-developed nonbank finance sector are important preconditions. Peruvian Infrastructure Debt Trust Funds provide a vehicle for pension funds to pool expertise, a potentially useful model for other jurisdictions. Certificates of Capital Development—a Mexican structured product listed on the stock exchange to provide liquidity—provide another potential model.
13. The European Union Project Bond Initiative provides an alternative to the monoline insurance credit enhancement previously common in European infrastructure projects. The capacity of the Project Bond Initiative is small relative to the required infrastructure investment across the European Union, highlighting the capacity challenges that generally face government-sponsored initiatives.

C. Promoting Infrastructure Bond Financing

14. Experiences across ASEAN and around the world highlight the importance of two preconditions—a robust PPP framework and a well-developed LCY bond market—for project bond financing.
15. Beyond the basic preconditions for the domestic bond market—a modern legal framework with a disclosure-based regime; international standards for securities regulation and capital market oversight; and the financial markets infrastructure for bond pricing, trading, and clearing and settlement—the development of domestic institutional investors and the bond markets is inextricably linked. An appropriate framework for nonbank financial institutions is required.
16. Jurisdictions with well-developed bond markets generally have adopted full or at least partial funding for government pensions, together with a sound framework for private pensions. The prudent person approach to regulating investments can encourage pensions and life insurance companies to invest in a range of asset classes. The use of external funds managers by large pension funds and giving individuals the option to place part of their pension entitlement with approved external funds can stimulate demand for a broader range of instruments.

17. Tax neutrality between bonds and bank debt is crucial to the development of the bond market. Tax incentives to promote the bond market may be useful but they have to be carefully weighed against the fiscal cost and risk of promoting a market that is not sustainable in the absence of these incentives. Sound bank regulation, particularly enforcement of single exposure limits, can help to develop bond markets as a true alternative to bank financing. Even with the preconditions in place, project bond finance will not necessarily develop. Specific expertise is required on the part of issuers, domestic ratings agencies, and investors. For issuers, there is international expertise available that can, as in Malaysia, lead over time to the establishment of a domestic advisory business. Ratings agencies can draw on international partners or pool expertise. Institutional investors can develop the expertise in-house, pool their knowledge, or partner with international investors and fund managers. Large domestic institutional investors can play a catalytic role in developing expertise and ensuring the success of project bond issues. Projects sponsored by the government or government-related entities can play a pioneering role by including a domestic bond tranche in the financing package. Credit enhancement can also play a role in bringing project bonds to market at a price attractive to issuers and with a rating acceptable to generally conservative institutional investors.⁸⁴

⁸⁴ Adopted from Asian Development Bank. 2015. *Local Currency Bonds and Infrastructure Finance in ASEAN+3*. Manila.

Annex 4: Green Bonds

1. Green bond markets provide financing that can help support a global transition to a sustainable development path. Green bonds are debt securities whose proceeds are used to finance projects or assets with positive environmental benefits. The defining features of green bonds include the following: (i) the issuer commits to investing the proceeds in projects or assets meeting explicit eligibility criteria (often called the “green bond framework”); (ii) the proceeds are segregated from other funds available to the issuer; (iii) the issuer provides ongoing reporting on the use of the proceeds and, where possible, the environmental impact of the investments; and (iv) prior to issuance, the bond is often evaluated or certified by an independent external reviewer attesting to the veracity of its “green” claim.

2. Entities issue green bonds to improve their reputation and broaden their investor base. Issuing green bonds demonstrates a commitment to improving the environment. Green bonds are especially attractive to responsible investors who consider both financial and nonfinancial factors in their investment decision making process. These investors may not have previously purchased an issuer’s conventional bonds. Investors buy green bonds to align their portfolios with responsible investment mandates, as well as to earn a competitive rate of return. Governments promote green bond markets to increase the amount of long-term financing available to support national commitments under the Paris Agreement and the United Nation’s Sustainable Development Goals.

3. The first green bond was issued by the European Investment Bank in June 2007 and the market has grown rapidly since then. The size of the green bond market was about USD180 billion in 2017. Estimates vary because data providers use different inclusion criteria. Some unlabeled green bonds are included if the data provider believes the proceeds fund environmentally beneficial projects, and some labeled green bonds are excluded if the data provider does not believe the bond is funding projects with a positive environmental impact. Such classification discrepancies are common in financial markets.

A. A Primer on Green Bonds

4. Green bond markets have emerged largely in the absence of a formal public policy framework. Instead, the market has been guided by industry-developed norms and voluntary standards. In most economies, any issuer can call their bond green, although investors and other stakeholders will only accept them as such if they are issued in accordance with industry norms, the two most important ones being the Green Bond Principles (GBP) and the Climate Bonds Standard (CBI Standard). As of the middle of 2017, only the People’s Republic of China (PRC) and India had issued mandatory national green bond standards, though more economies were expected to follow suit.

5. The GBP are voluntary guidelines on the issuance of green bonds. They are overseen by the International Capital Market Association, an industry group. Compliance with the GBP requires issuers to (i) specify that proceeds will be used for environmentally beneficial projects and assets, (ii) set out a clear process for project evaluation and selection, (iii) keep the proceeds separate from other funds available to the issuer, and (iv) report regularly on the use of the proceeds and the environmental impact of funded projects and assets. The GBP also recommend that issuers obtain an external review to confirm alignment with the principles.

6. The largest green bond issuers are multilateral development banks and commercial banks. Green bonds have also been issued by national and subnational governments, public agencies, state-owned

enterprises, and nonfinancial corporations. The most common type of green bond is a general obligation bond, where the bond is backed by the overall creditworthiness of the issuing entity and not by the green assets it funds. Green bonds have also been structured as project bonds, revenue bonds, asset-backed securities, covered bonds, and *sukuk* (Islamic bonds).

7. Issuing green bonds entails higher administrative expenses than comparable conventional bonds. Like a conventional bond, an issuer must determine the size, currency, tenor, coupon, and legal structure of the issue, and comply with appropriate securities regulations. For green bonds, the issuer must also commit staff time to prepare a green bond framework setting out how the proceeds will be invested, manage the allocation of proceeds, and develop an appropriate reporting program. Prior to issuance, the issuer generally, but not necessarily, engages an external reviewer to confirm that the bond is aligned with the GBP or other international or national standards. After issuance, the issuer must provide regular reporting on the use of the proceeds and, increasingly, on the environmental impact of the projects and assets. Depending on the size, tenor, previous experience of the issuer, and extent of post-issuance reporting, the added cost of green bond issuance is between 0.1 and 7.0 basis points. While some issuers have been able to offset this cost by issuing a green bond at a lower yield relative to a conventional bond, the prevailing view among market participants is that there is no systematic difference between the yield on green bonds and comparable conventional bonds.

8. External reviews take several forms. The most common are second opinions, which is an assessment by an independent firm with environmental experience as to the credibility of an issuer's green bond framework. Such an assessment provides support for an issuer's claim that proceeds from the bond will fund projects and assets with positive environmental impacts, but they do not provide independent measurement of the expected or actual benefits. The cost of a second opinion is generally between USD15,000 and USD50,000, with the actual cost depending on the time required to complete the work, the scope of engagement, the location of issuer, any previous work with the issuer, and other business the external reviewer has with the issuer. Other types of external reviews are verification and certification, assurance, and green ratings.

9. Investors in green bonds can be divided between institutional investors and retail investors, asset owners and asset managers, foreign investors and domestic investors, and conventional investors and responsible investors. The distinction between conventional investors and responsible investors is an especially important one. Conventional investors are those whose investment decision making processes focus on financial factors, such as profitability, cash flow, and debt levels. This information is provided in the financial statements of entities issuing public securities. The decision making processes for responsible investors include both financial factors and nonfinancial factors, commonly referred to as environmental, social, and governance (ESG) factors. Environmental factors focus on an entity's environmental footprint such as carbon emissions; social factors deal with the treatment of employees, consumers, and communities; and governance factors address organizational structures. Information on ESG factors is available from some issuing entities and specialized research firms. Both conventional and responsible investors hold green bonds, but they are especially attractive to responsible investors because the proceeds from green bonds focus on projects and assets with positive environmental impacts.

10. A precise breakdown of who owns the outstanding stock of green bonds is not known. Placement details from green bond issuers indicate that they are largely held by institutional investors—including asset managers, pension plans, insurance companies, and banks—in proportions similar to conventional bonds. The main difference from conventional bonds is that green bonds are more likely to be held by investors with responsible investment mandates. Based on a small sample of issuer disclosures on investor type, about 45%–65% of green bonds appear to be placed with investors with responsible investment mandates. This is a much higher percentage than their respective share of globally managed assets, which is about 25%. Most of the green bonds held by responsible investors are in broad ESG mandates—green bond funds total only about USD1 billion.

11. Several green bond indexes have been created since 2014. The most widely used is the Bloomberg Barclays MSCI Green Bond Index, which comprises about 150 green bonds issued in multiple currencies. Three other widely used indexes are the S&P Green Bond Select Index, the Bank of America Merrill Lynch Green Bond Index, and the Solactive Green Bond Index. Chinese renminbi-denominated bonds are

explicitly excluded from the Bloomberg Barclays MSCI Index and the S&P Green Bond Select Index. The ChinaBond Green Bond Index Series and the Central University of Finance and Economics-CNI Green Bond Index Series provide measures of the PRC's green bond market.

12. Dedicated green bond listing boards have been established at a number of securities exchanges. The Luxembourg Stock Exchange and the London Stock Exchange have the largest number of green bond listings. The Singapore Exchange also lists green bonds. Both the Shanghai Stock Exchange and the Shenzhen Stock Exchange list green bonds on a pilot basis. Issuers of green bonds must meet the same listing requirements as conventional bonds, as well as additional requirements to confirm their green status, usually an external review confirming alignment with the GBP or other international or national standards. While a majority of green bonds are listed on at least one exchange, most trading occurs off exchange.

B. ASEAN+3 Experience with Local Currency Green Bonds

13. The PRC is unique among ASEAN+3 economies in that it has a large green bond market and national standards governing green bond issuance. The People's Bank of China published green bond guidelines in December 2015, which were followed by similar guidelines released by other regulatory agencies with responsibility for bond issuance. The guidelines are broadly similar, although those from the National Development and Reform Committee have wider eligibility rules; they require only 50% of the net proceeds be used for green projects, and they do not require the use of a second opinion. The committee's guidelines apply to nonbank state-owned enterprises. The PRC was the largest issuer of green bonds in 2016, totaling about USD36 billion. Through the end of June 2017, a further USD6.2 billion was issued, of which 95% was denominated in renminbi.

14. Market participants pointed to leadership by the Government of the PRC as critical to the development of the LCY green bond market. Regulators established a clear policy framework linked to national policy goals that signaled to market participants the importance of participating in the green bond market. Issuers and underwriters wanted to participate in a new financial market that was being endorsed by government leaders. Perhaps more importantly, regulators encouraged issuance by indicating that green bond issues would be approved more quickly than those for conventional bonds.

15. Green bond markets in other ASEAN+3 economies are at a much earlier stage of development⁸⁵:

- (i) Japan: USD2.2 billion, 6% in Japanese yen;
- (ii) Republic of Korea: USD1.7 billion, 0% in Korean won;
- (iii) Singapore: USD549 million, 12% in Singapore dollars;
- (iv) Philippines: USD200 million, 100% in Philippine pesos;
- (v) Malaysia: USD58 million, 100% in Malaysian ringgit; and
- (vi) Thailand: USD92 million, 100% in Thai baht.

16. The markets in the Philippines, Malaysia, and Thailand consist of a single issue each. There had been two issues in Singapore through the end of August 2017.

17. The Ministry of the Environment of Japan issued voluntary green bond guidelines in March 2017, which are aligned with the GBP. No other economy in the region has issued guidelines, although the ASEAN Capital Markets Forum issued regional guidelines in the fourth quarter of 2017.

18. There is a low level of awareness of green bonds in most ASEAN+3 economies. Many market participants are unfamiliar with green bonds, while those with some awareness often have only a cursory

⁸⁵ ADB. 2018. *Promoting Green Local Currency Bonds for Infrastructure Development in ASEAN+3*. Manila. <https://www.adb.org/publications/green-lcy-bonds-infrastructure-development-asean3>.

understanding of them. Market participants pointed to a lack of LCY green bond issues and the absence of investors with responsible investment mandates as reasons for the immaturity of green bond markets. The lack of a national policy framework in most markets was also seen as a concern, because issuers and investors in Asia appear less comfortable relying on industry norms than their counterparts in Europe and North America.

C. Promoting Green Bond Markets

19. A large number of policy tools are available to promote the development of green bond markets in ASEAN+3 economies. They can be divided into six general areas:

- (i) setting preconditions for LCY green bond markets,
- (ii) establishing a policy framework for green bonds,
- (iii) expanding the supply of green bonds,
- (iv) facilitating demand for green bonds,
- (v) promoting general market development, and
- (vi) supporting regional initiatives to develop green bond markets.

20. The overarching objective in promoting green bond markets is to increase investment in green projects and assets. Initiatives that simply favor one type of financing such as green bonds over alternatives will not achieve this objective even if they contribute to the development of green bond markets. Thus, efforts to increase the number of viable green projects brought to the market will have a greater impact than efforts to increase the supply of green bonds. Throughout ASEAN+3, the binding constraint is the supply of market-ready projects, not financing.

21. The preconditions for LCY bond markets and private financing of green projects and assets should be in place prior to considering direct interventions in support of green bonds. This requires the following:

- (i) continuing efforts to develop LCY bond markets;
- (ii) continuing efforts to address the main bottleneck in attracting private investment to green financing opportunities, bringing investable projects to market;
- (iii) considering creation of a national inventory of green projects; and
- (iv) considering measures to enhance the financial viability of green projects.

22. Once these preconditions have been established, suggested national policy priorities for ASEAN+3 governments include the following:

- (i) establishing a policy framework for green bonds by
 - (a) linking efforts to promote green bond markets into national strategies dealing with climate change and/or sustainable development, and
 - (b) adopting principles-based regulatory frameworks for green bonds with an inclusive definition;
- (ii) expanding the supply of and demand for green bonds by
 - (a) encouraging public entities to issue green bonds,
 - (b) encouraging public funds to invest in LCY green bonds,
 - (c) requiring issuers to report on ESG activities and measures,
 - (d) requiring institutional investors to report on ESG risk exposures and how they are being managed,

- (e) mandating knowledge of ESG analysis as a licensing requirement for investment managers,
 - (f) ensuring prudential requirements for financial institutions explicitly address climate change and other environmental risks,
 - (g) considering additional capital investment in existing credit enhancement vehicles to provide capacity to develop dedicated green portfolios,
 - (h) considering the potential benefits and costs of tax incentives for green projects in the context of national priorities and fiscal regimes, and
 - (i) supporting capacity building efforts in a targeted fashion;
- (iii) promoting general market development by
- (a) establishing a National Green Bond Development Committee (or a similar entity),
 - (b) providing support for awareness programs coordinated through a National Green Bond Development Committee (or a similar entity),
 - (c) supporting efforts by others to develop climate-aligned bond indexes that include both labeled and unlabeled green bonds, and
 - (d) supporting efforts to establish a national network of green bond investors and issuers; and
- (iv) supporting regional policy priorities by
- (a) developing a regional technical assistance facility for green bond issuance,
 - (b) providing specific coverage of green bonds on *AsianBondsOnline*,
 - (c) considering requesting the International Capital Market Association to present annual updates on the GBP and green bond market development globally to members of the ASEAN+3 Bond Market Forum,
 - (d) considering encouraging the Credit Guarantee and Investment Facility to allocate a portion of guarantee operations to green bonds,
 - (e) continuing efforts to work with market participants to address barriers to cross-border bond issuance and investment under the ASEAN+3 Bond Market Forum,
 - (f) encouraging regional and global public entities to issue LCY green bonds, and
 - (g) encouraging regional and global public funds to commit to investing in LCY green bonds.

23. There are additional policy options available that have at least some merit, but further consideration of them should be set aside for now as alternatives are likely to provide greater impact relative to the costs involved. Policies that should not be considered at this time include the following:

- (i) tax incentives or subsidies for issuers of green bonds,
- (ii) tax incentives for investors in green bonds,
- (iii) official assistance or financial support for national or regional green bond indexes,
- (iv) official assistance or financial support for national or regional LCY bond exchange-traded funds,
- (v) official support for a regional securitization vehicle, and
- (vi) official support for a regional network on green bonds.

24. Finally, there are policy options that are high-risk in terms of potential fiscal, market, and financial stability impacts, and thus should not be further considered. These include proposals to weaken prudential

standards or diverge from best practices in central bank reserve management, as the potential negative financial stability implications outweigh potential benefits.

25. The generally lower priority assigned to demand-oriented policies may seem counterintuitive given the generally low levels of knowledge and interest in green bonds among institutional investors in ASEAN+3 economies. On the face of it, it might seem that addressing these shortcomings would be important, as supply seldom creates its own demand. However, the situation in ASEAN+3 presents an unusual situation. Institutional investors in ASEAN+3 economies have strong demand for fixed-income securities, especially high-quality, higher-yielding corporate bonds. Because green bonds are similar in structure, term, and yield to conventional bonds, market participants indicated that green bonds could be easily placed with institutional investors. Green bonds are not popular with issuers because of the extra cost of issuance, not because of a perceived lack of demand.

26. The proper sequencing of policies is critical to the development of LCY green bond markets. A well-functioning LCY bond market is an essential precondition. Since many green investments are best structured as project bonds, an LCY infrastructure bond market is also beneficial. Given the absence of institutional investors with responsible investment mandates to guide issuers and underwriters in the structuring of green bonds, a comprehensive policy framework for green bonds is also needed to support the development of LCY green bond markets. Only after these factors are in place should governments pursue other policies to promote green bond markets. Priority should be given to supply-oriented policies for the reasons noted above. Some demand-oriented policies and market development initiatives could also help, but their potential impact is more modest and will take longer to have an effect. Regional initiatives promoting cross-border investments in green bonds and those promoting increased supply should be given priority.⁸⁶

⁸⁶ Adopted from Asian Development Bank. 2018. *Promoting Green Local Currency Bonds for Infrastructure Developments in ASEAN+3*. Manila.

Annex 5: Do Local Currency Bond Markets Promote Financial Stability in Developing Economies? Some Empirical Evidence

1. Currency and maturity mismatches are widely viewed as a primary source of financial vulnerability in developing economies. If an economy's financial liabilities are denominated in a foreign currency, such as the US dollar, but its financial assets are denominated in the domestic currency, then a sudden depreciation of the domestic currency damages its balance sheet, destabilizing the financial system and economy. If the maturity of financial liabilities is shorter than that of assets, the likelihood of a crisis further increases. In short, borrowing short-term in a foreign currency and lending long-term in domestic currency is a recipe for instability and even crisis. Such a double mismatch of currency and maturity was a contributing factor behind the devastating 1997/98 Asian financial crisis.

2. That painful experience highlighted the need for Asia's bank-centered financial system to develop LCY bond markets as a spare tire that would enhance financial resilience in the face of shocks. LCY bond markets can foster financial stability by mitigating currency and maturity mismatches because they can be a stable source of long-term finance in the domestic currency. LCY bond markets not only allow borrowers to access longer-term funding compared to bank loans, but also protect domestic borrowers from exchange rate risk. A logical implication is that LCY bond market development reduces the vulnerability of developing-economy financial markets to external shocks.

3. There are other potential benefits to LCY bond market development in developing economies. For example, vibrant LCY bond markets of varying maturities, in addition to mitigating the double mismatch problem, can increase the supply of Asian financial assets and thus help channel the region's ample savings into the region's own investments. This would help alleviate the chronic excess demand for US assets that can contribute to global imbalances. LCY bond markets can serve as an important source of long-term funding for long-term investments such as infrastructure and housing. Furthermore, LCY bond markets also contribute to a more developed financial system that effectively channels funds into productive uses and enables better risk sharing, encouraging entrepreneurial activity and promoting growth in the process.

4. The above arguments for LCY bond market development in developing economies are intuitively plausible. They are particularly appealing to Asian economies that were hit hard by the 1997/98 Asian financial crisis. LCY bond markets have grown rapidly not only in Asia but also in other developing economies. Despite the intuitive plausibility of the benefits of LCY bond market development, there is very limited empirical evidence of the actual benefits. To shed some light on the largely untested conventional wisdom, recent research by the Asian Development Bank empirically investigates the role of LCY bond markets in promoting financial stability in developing economies by mitigating currency and maturity mismatches.

5. The research analyzes and compares the financial vulnerability of developing economies during two episodes of financial stress: the global financial crisis and the so-called "taper tantrum." More precisely, the authors empirically assess the effect of LCY bond markets on financial vulnerability during those two shocks. Financial vulnerability is measured by exchange rate depreciation of the local currency against the US dollar. The underlying intuition is that other things being equal, more vulnerable economies will suffer sharper currency declines. For example, during the emerging-market foreign exchange turmoil of 2018, countries such as Argentina and Turkey with weak fundamentals—high inflation and sizable current account deficits—experienced sharp exchange rate depreciation.

6. Through econometric analysis of the data, the research seeks to answer the question of whether LCY bond markets help to mitigate exchange rate depreciation during periods of financial stress. But there are many other factors besides LCY bond markets that can influence the depreciation of emerging market currencies during periods of financial stress. Some examples include the exchange rate regime, inflation, gross domestic product growth, the current account deficit, and capital inflows. The analysis incorporates and controls for all such factors included in other similar studies. The central finding of the empirical analysis is that economies that experienced a greater expansion of their LCY bond market experienced a smaller depreciation in their exchange rate. That is, the evidence suggests that LCY bond market development can mitigate currency depreciation, which, in turn, suggests that LCY bond markets can promote financial stability in developing economies.

7. At a broader level, the analysis lends some empirical support to the popular but largely untested notion that LCY bond market development is an important and integral part of Asia's quest for a balanced, strong, and resilient financial system. Yet, there remains plenty of scope for further empirical research on the many proposed economic effects of LCY bond markets. For example, what is the role of an LCY bond market on infrastructure investment? Such research will further deepen and refine our understanding and knowledge of how an LCY bond market contributes to financial stability and economic growth in developing economies.⁸⁷

⁸⁷ This annex is based on D. Park, K. Shin, and S. Tian. 2018. Do Local Currency Bond Markets Enhance Financial Stability? *ADB Economics Working Paper No. 563*. Manila: Asian Development Bank. <https://www.adb.org/publications/local-currency-markets-financial-stability>.

Annex 6: Case Studies

The Objective of Case Studies

1. Every market has its own history and development trajectory, and a market's current state is historically path-dependent. Something successful in one market does not necessarily mean that the same approach would succeed in other markets. Unfortunately, there is no one-size-fits-all approach to bond market development. Policy makers and regulators must investigate and understand why and in what context a particular approach has become successful. For example, the development of a large corporate bond market in the United States (US) was inevitably influenced by the prohibition of interstate banking. Economies without such a prohibition tend to see the dominance of the banking sector in financial intermediation, though the degree of bank dominance may differ from economy to economy.

2. What is suitable and good for a bond market's development may depend on economic circumstances, the behavior of various market constituents, the legal and social institutional framework, and an incentive mechanism behind the actions of market players. The challenge of policy makers in emerging markets, given their limited experiences and knowledge, is that they need to find out what is the best for their markets. They neither can nor should follow the same path as developed markets. Also, they do not have the luxury to spend time to identify the best solution through experiences. As mentioned, there is no one-size-fits-all approach and every market has its own path dependency. However, with these caveats in mind, there still may be some lessons that can be drawn from the experiences of developed markets, which is the idea behind this annex. Hopefully, some useful lessons and ideas can be extracted from the development of bond markets in selected ASEAN+3 member economies and considered as useful case studies for bond market development in emerging economies.

A. Republic of Korea

I. Overview

3. Before the 1997/98 Asian financial crisis, the Korean bond market was small and less developed compared to those of advanced economies. In particular, the issuance and trading volume of government bonds were negligible and guaranteed corporate bonds dominated the bond market.

4. After the crisis, the Government of the Republic of Korea focused its efforts on developing the bond market, especially the government bond market. The government had to raise a large amount of money to overcome the crisis and restructure the financial sector by issuing government bonds rather than borrowing from the Bank of Korea. In this context, the Ministry of Economy and Finance (MOEF) implemented a variety of policies aiming to ensure the smooth issuance of government bonds at low interest rates and to enhance liquidity and transparency in the secondary market.

5. The financial market regulator and supervisory body continuously maintained their efforts to reform and develop the bond market infrastructures and market practices in collaboration with the Bank of Korea. The Korea Financial Investment Association (KOFIA) and Korea Exchange (KRX) developed and implemented their own systems to ensure effective and efficient functioning of the over-the-counter bond market and the exchange bond market, respectively, in line with the government policy initiatives.

6. Since 1998, the bond market has witnessed dramatic changes. The issuance and trading volume of Korea Treasury Bonds (KTBs) increased sharply. KTBs began to dominate the bond market, replacing the

previously dominant guaranteed corporate bond. Asset-backed bonds and bond-related derivatives were introduced and traded actively. Foreign investment in the bonds increased after regulations that restricted foreign investment in listed bonds were completely lifted in December 1997.

II. Key Policy Measures and Schemes Taken after the 1997/98 Asian Financial Crisis

a. Korea Treasury Bond Market

1. The Implementation of a Primary Dealer System

7. PDs are financial firms designated by the MOEF to perform vital functions in the Korea Treasury Bond (KTB) market, such as exclusively underwriting new KTBs and market-making in the secondary market.

8. The PD system was implemented in the Republic of Korea in July 1999 just after the 1997/98 Asian financial crisis to replace the existing underwriting syndicate. Before the crisis, the government bond market was sluggish and the volume of government bond issuances was relatively small. Under the compulsory underwriting syndicate regime, government bonds were issued at interest rates lower than the market rates, which provided no incentive for the secondary market to develop. However, the issuance of government bonds increased sharply, raising the need to improve the old syndicate regime. The fundamental purpose of the PD system is to facilitate smooth issuance of KTBs at lower interest rates and help improve liquidity in secondary markets through market-making by PDs.

9. When the PD system was implemented, 12 banks, 11 securities companies, and 1 merchant bank were designated as PDs of KTBs. In the initial days of implementation, the majority of PDs did not fulfill their role as market makers. Most PD banks were just eager to underwrite newly issued KTBs for their own portfolio purposes. Almost all PD securities companies were not actively involved in bond-dealing activities and did not have the capabilities and intentions to fulfill the market-making duties assigned to them as they did not have enough funding to hold the required volume of KTBs and had suffered huge losses from bond trading in the past. They generally only focused on bond brokerage.

10. The MOEF not only strengthened duties for PDs to bolster their market-making functions, but also offered privileges for PDs to engage in market-making. The Government of the Republic of Korea had steadily narrowed the bid–ask spread that PDs must offer in the KRX KTB market (government bond market) to improve price discovery and increase market liquidity. With such measures, fair prices for KTBs were believed to be formed among KTB investors and the likelihood of trades was heightened. The compulsory trading and holding volumes of KTBs for PDs was continuously increased as well. PDs were also granted special privileges to borrow from the MOEF at lower interest rates than the market rates.

11. As the KTB market developed substantially to the point that the issuance of KTBs itself was no longer an issue, the MOEF reintroduced preliminary PDs to enhance the market-oriented PD system in 2011. The average bid-to-cover ratio in competitive biddings of KTBs in 2010 was above 300%, easing the concerns of insufficient demand for KTBs. The new system allowed the promotion of preliminary PDs to PDs, and demotion of underperforming PDs to preliminary PDs.

12. After the 1997/98 Asian financial crisis, the issuance of KTBs increased rapidly, the share of outstanding KTBs among all outstanding bonds jumped, and their share of trading volume also increased sharply, which resulted in the KTB market's leading position in the Republic of Korea's bond market. The PD system in the Republic of Korea has evolved since its implementation in 1999 in accordance with the development of the KTB market. The system has made a substantial contribution to the smooth issuance of huge volume of KTBs without causing any market rate hikes over the last 19 years, even during the global financial crisis. In addition, this PD system has narrowed the bid–ask spread in the KTB market, which demonstrates increased market liquidity. PDs have been actively engaged in dealing in KTBs rather than only in brokerage of KTBs. This phenomenon has been more notable since the middle of the 2000s. Higher liquidity in the KTB market caused by the increased participation of PDs has attracted non-PDs to the KTB market, especially the KRX KTB market. As a result, transactions between PDs and non-PDs comprise the largest share of trading volume in the exchange market. In other domestic bond markets,

brokerage is still the typical practice. The PD system is considered to have made a significant contribution to the growth of KTB market in terms of quantity and quality.

2. Consolidation of Government Bonds and Introduction of Fungible Issuance of KTBs

13. To help increase the liquidity of government bonds, the Government of the Republic of Korea consolidated various types of government bonds into KTBs and then introduced their fungible issuance. Firstly, the MOEF set up the Public Debt Management Fund, which issued the unitary and standardized Public Debt Management Fund bond in 1993. Prior to then, various government bonds were issued under different accounts and funds within the central government. It resulted in many different types of unstandardized government bond issuance. Therefore, each type of government bond had small issuance amounts and trading volume, and there was less demand for government bonds, which led to a further decline in liquidity in the government securities market. In 1994, the Farm Land Bond, Agricultural Development Fund Bond, Housing Fund Bond, and Railroad Bond were consolidated into the Public Debt Management Fund Bond.

14. The name of the Public Debt Management Fund Bond was changed to KTB in 1994 and Grain Securities and KRW-denominated Foreign Exchange Stabilization Bond (FESB) were consolidated into KTBs on a step-by-step basis. The Government of the Republic of Korea currently issues four types of government bonds: KTBs, the foreign-currency-denominated FESB, Treasury bills, and the National Housing Bond. Of the government bonds, KTBs account for the largest share of issuance and trading volume.

15. The fungible issue system was implemented in May 2000 to boost KTB market liquidity. Under this system, the coupon rates and maturity dates of KTBs issued over a certain period of time are identical. Before the launch of fungible issuance, the maturity dates and coupon rates differed each time KTBs were issued. The issuance amount and trading volume of each type of KTB were too small. These resulted in too many KTB types and low liquidity in each type of KTB. In addition, whenever KTBs were newly issued, a new type of KTB was added and a benchmark (on-the-run) bond could serve for a very short period of time. The fungible issue system has helped resolve these problems and also contributed to stabilize the benchmark interest rate by increasing the size of each issue of KTBs.

16. When the fungible issue system was launched in 2000, the fungible issuance period was 3 months. In cases of KTB maturities of more than 3 years, an additional issue in 3 months should have the same maturity date and coupon rate as the previous issuance. In March 2003, the period of the KTB fungible issue was extended to 6 months from 3 months to increase the liquidity of KTBs. The coupon payment period was also extended to 6 months from 3 months. Along with the introduction of the fungible issue system, tax regulation was amended to impose a tax based on the coupon rate of government bonds.

17. After the implementation of the fungible issue system, the average issuance volume of each type of KTBs increased from KRW1.4 trillion KRW to KRW11.2 trillion in 2017.

Table A6.1: Types and Issuance Period of Korea Treasury Bonds

Maturity	No. of Annual Issuances	Month of New Issuance	Fungible Issuance Period
3-year	Twice a year	June, December	6 months (Jun–Nov, Dec–May of next year)
5-year	Twice a year	March, September	6 months (Mar–Aug, Sep–Feb of next year)
10-year	Twice a year	June, December	6 months (Jun–Nov, Dec–May of next year)
20-year	Once a year	September	1 year (Sep–Aug of next year)
30-year	Once a year	March	1 year (Mar–Feb of next year)
50-Year	The MOEF may decide issuance schedule in consideration of the market condition		
KTBi	Once every 2 years	June	2 years (Jun–May of the year after next year)

MOEF = Government of Korea, Ministry of Economy and Finance; KTBi = inflation-linked Korean government bond.
Source: Government of Korea, Ministry of Economy and Finance.

3. Gradual Introduction of Long-Term KTBs

18. The Government of the Republic of Korea steadily extended the maturity of KTBs and increased the share of long-term KTBs since the launch of 10-year KTBs in October 2000 in order to minimize refinancing risks and spread the burden of repayment. The 20-year KTB was introduced in January 2006 and the 30-year KTB in September 2012. In October 2016, the pilot issuance of a 50-year KTB was also successfully conducted by an underwriting syndicate. All types except the 50-year KTB are currently issued on a regular basis.

19. The MOEF gradually introduced the long-term KTBs in order to ensure smooth issuance in the market and not to decrease the liquidity of each long-term KTB. If every long-term KTB were to introduce, the issuance volume of each long-term KTB would be low, which lead to a liquidity shortage for long-term KTBs. The gradual introduction of long-term KTBs helped financial institutions and pension funds to absorb the increased issuance volume of long-term KTBs. Demand for long-term KTBs by pension funds, insurance companies, and banks continued to increase.

20. To enhance the liquidity of long-term KTBs, the fungible issue period was set for 1 year for the 20-year and 30-year KTBs. The 10-year KTB futures contract was introduced to provide a hedging tool against the risk of long-term KTBs. Long-term KTBs have been traded in the secondary market; the liquidity of 10-year KTBs has increased notably.

21. The average time to maturity has continuously increased since 1999 just before the introduction of the 10-year KTB. There was a sharp increase after the launch of the 30-year KTB in 2012. It was only 2.3 years at end-December 1999, rose to 5.6 years at end-December 2011, and stood at 9.1 years at end-December 2017. At end-December 2017, 3-year KTBs accounted for 9.3% of the total outstanding balance of KTBs, while 5-year KTBs made up 20.0%, 10-year KTBs 38.2%, 20-year KTBs 19.8%, 30-year KTBs 12.4% and 50-year KTBs 0.3%.

4. Change of KTB Auction

22. The KTBs are issued through competitive bidding, noncompetitive subscription, and auction participation by retail investors to PDs and/or preliminary PDs exclusively in principle. In the case of noncompetitive subscription, only PDs are allowed to underwrite certain limited volume of KTBs at the highest yield accepted in the competitive bidding up to 3 business days after the competitive bidding. Retail investors can underwrite KTBs at the highest yield accepted in the competitive bidding through PDs where the maximum bid amount for each investor is KRW1 billion.

23. The auction method and the method for determining the interest rate in the competitive bidding of the KTBs changed two times. When the PD system was launched in July 1997, the Government of the Republic of Korea adopted conventional auction in competitive bidding in which bidders who offer the lowest yields become winners up to the point the total amount reached the intended issue volume. Under this method, successful bidders purchased KTBs at the yield they submitted.

24. In August 2000, the MOEF changed the KTB auction technique from the conventional auction system to a Dutch auction system in which all successful bidders receive the same highest yield accepted. In the conventional auction, almost all bidders who were risk-averse did not actively participate in KTB biddings in order to avoid winners' curse and the risk involved in forecasting interest rates also discouraged active biddings. The bid-to-cover ratio for KTBs, however, was in a continuous downturn since 2002, showing that the average bid-to-cover ratio stood at 143% between 2006 and 2008, and their issuing interest rates were frequently lower than their distribution rates, causing winners to incur losses. The winners' losses could eventually push down the bid-to-cover ratio further.

25. To tackle these problems, the Government of the Republic of Korea moved to the differential pricing auction technique by combining the merits of conventional auctions and Dutch auctions. This technique aligns bidding interest rates from lowest to highest and divides all the accepted bid yields into different groups at intervals of, for example, 3 basis points in descending order. The highest cutoff rate of each group applies to all bidders in each group as a winning rate (the accepted bid yield). The coupon rate of each KTB issuance is calculated as follows:

- (i) calculate a weighted average of winning rates of newly issued KTBs, and
- (ii) find a maximum multiple of 0.125% that does not exceed the above-weighted average, which applies to all identical KTBs issued in a fungible issuance as the coupon rate.

26. Due to the change in the auction technique, the bid-to-cover ratio of KTBs, which had fallen steadily previously, began to rise sharply. It was just above 100% in early 2009 and then rose to 200% in September of the same year when this technique was implemented. It rose to over 300% in 2010 and has remained around 400% since then.

5. Establishment of KRX KTB

27. KRX set up the KRX KTB Market in March 1999 with support from the government to vitalize the KTB market and increase its transparency.

28. KRX KTB is an interdealer market where government bond dealers trade KTBs, Monetary Stabilization Bonds (MSBs), and Deposit Insurance Fund Bonds (DIFBs) in large amounts in a complete competitive bidding manner. KRX KTB has adopted the KRX Trading System (KTS) for government bonds as a specialized electronic platform for KTB trading.

29. Only financial investment firms and banks who are authorized to trade government bonds (so-called the government bond dealers) can participate in KRX KTB. Government bond dealers are PDs, preliminary PDs, and ordinary dealers who may participate in KRX KTB but cannot underwrite KTBs in the primary market. Institutional investors can participate in KRX KTB as entrusted participants through government bond dealers. Eligible bonds for trading in the KRX KTB include all listed MSBs and DIFBs.

30. KRX KTB has two types of quotations to support PDs' market-making quotations and market-taking quotations. Market-making quotations include both-sided, market-making quotations where bid and offer quotations are simultaneously placed by PDs to fulfill their market-making duties and one-sided market-making quotations where bid or offer quotations are placed by the government bond dealers (including ordinary dealers). One-sided, market-taking quotations are bid or offer quotations placed by the government bond dealers for the purpose of executing a trade with a market-making quotation. PDs market-making quotations apply to benchmark KTBs which are the most recently auctioned issues of a given maturity, the on-the-run issues designated as benchmarks by the MOEF. PDs are to submit at least 10 bid and offer quotations for each benchmark KTB in KRX KTB during the trading hours (exceptionally, five for 30-year KTB and KTBi respectively). In addition to PDs market-making, KRX introduced "Market-Making Members,"

who submit market making quotes for benchmark KTBs and also nonbenchmark KTBs (e.g., off-the-run KTBs) KTBs, in July 2015 to enhance liquidity of all KTBs.

31. Funds and bonds are settled through BOK-Wire+ of Bank of Korea (BOK) and SAFE+ of the Korea Securities Depository. The settlement date is the next day of trading date (T+1) and settlement must be completed by 4:00 p.m. on that day.

32. KTS is an electronic bond trading platform where government bond dealers can directly trade online. Dealers can simply install a free trading software program developed by KRX to access the platform and trade online. Bid and offers submitted by dealers are displayed on screen in real-time, as live quotes. Therefore, dealers can directly hit or lift those quotes. Also, quotes are centralized into an order book with price and time priority and completed anonymously on a competitive bidding basis.

33. The KTS facilitates a reliable and transparent KTB market and contributes to the discovery of a fair price that reflects market conditions. The KRX KTB helps create the transparent and liquid secondary market for KTBs and then boost demand for KTBs in the primary market. Bid-offer spreads for benchmark KTBs in the KRX KTB have steadily decreased, while trading volume in the KRX KTB has increased continuously and the percentage of KRX KTB trades as a share of all KTB trades jumped in recent years. As a result, the KRX KTB has become the main market for on-the-run KTBs, which calculate benchmark rates for the Republic of Korea's fixed-income market.

6. DVP and Provision of Intraday Liquidity

34. In the Republic of Korea, delivery-versus-payment (DVP) settlement of bonds is a system that links, in real-time, the transfer of bond ownership between trading parties' accounts at the Korea Securities Depository (KSD) with payment for the bonds made through the KSD's account at BOK through the SAFE of the KSD and the BOK-Wire+ of the Bank of Korea (BOK). The DVP method is used both in the KRX and OTC bond markets.

35. DVP settlement of bonds was implemented only in the OTC bond market in November 1999 in which the settlement should be completed on the trading day. Afterwards, this mechanism was extended to the KRX KTB and the settlement date changed from the trading day to the next day of trading day in the KRX KTB and in the OTC bond market. In the case of the OTC market, the free-of-payment method is used in special cases including the request from the trading parties.

36. The BOK, the KRX, and the KSD jointly prepared and implemented a series of improvement measures in 2011 and 2012 in order to mitigate settlement delays or gridlock in BOK-Wire+ and relieve the bottleneck occurring toward its closing time. The problems, which were caused by the shortage of settlement funds for financial investment companies, could be a source of systemic risk of overall payment and settlement systems and threaten the stability of financial system as a whole. They produced an action plan titled Strategies for Securities Market Settlement System Modernization in 2009. The changes in settlement procedures became effective for the stock market segment on 16 January 2012 and for the bond market segment on 20 February 2012.

37. One of the key features of the plan is the change in the settlement method for the KRX KTB. The previous method in which bonds were netted by multilaterally (DVP3) was replaced with one in which both bonds and funds are settled on a trade-day-by-trade basis after netting bonds and funds by members and items (DVP1). The beginning time of settlement during the day has been moved up from 3:00 p.m. to 9:00 a.m. by relaxation of the requirements for settlement.

38. The other key feature for bond market is provision of intraday liquidity from the BOK for settlement of government and other bonds. In order to improve the settlement system for the exchange-traded government bond market and encourage financial institutions to settle their transactions processed through BOK-Wire+ earlier during the day, the BOK has made arrangements for provision of intraday settlement liquidity through intraday repo transaction to the KRX and financial investment companies. This program is used the most by the KRX and KRX KTB. The intraday repo scheme combined with the earlier beginning

of the daily settlement is considered to have made a substantial contribution at BOK-Wire+ to the earlier completion of settlement.

7. Regular Issuance of KTBs

39. Just after the 1997/98 Asia financial crisis hit the Republic of Korea's economy, the Government of the Republic of Korea had to issue a large amount of KTBs (then Public Debt Management Fund bonds) to overcome the crisis and revitalize its economy. As the MOEF, however, did not announce the monthly KTB issuance plan in advance, every member of the KTB underwriting syndicate, and financial markets, as a whole faced the heavy burden of forecasting interest rates. Because the markets did not know the volume and maturity of new KTB issuance, bond yields (including KTBs in the secondary market) showed unstable movements before every KTB bidding. In order to tackle this problem, the MOEF started to issue KTBs on a monthly basis beginning in January 1999.

40. Currently, the MOEF announces annual and monthly KTB issuance plans in advance. In the case of an annual issuance plan, the government discloses it between the middle of December of the previous year and the middle of January of the current year. The annual KTB issuance plan usually includes policies regarding the KTB market and brief issuance plan summary. The KTB market policies generally consist of policy objectives, policy directions, policy measures, and implementation schedules. They also include the total issuance volume limit, net increase, and total redemption volume of KTBs. Guidelines for each share of short-term, mid-term, and long-term KTB issuance are also incorporated in the issuance plan.

41. The monthly issuance plan includes typically total planned issuance volume, planned issuance amount by maturity, each bidding date, and bidding time for every issuance, STRIPS, buybacks, and conversion offers. The monthly issuance plan is usually released on the third Thursday of the previous month.

b. Corporate Bond Market

(Book-building for nonguaranteed corporate bonds)

42. Due diligence and a book-building system for publicly offered nonguaranteed corporate bonds were introduced to improve transparency in the primary bond market in the Republic of Korea in 2012. A book-building system is similar to an auction system. It was aimed at capturing effective demand from institutional investors and determining a reasonable offer rate for a target bond issue. Since its introduction in April 2012, the system has undergone additional institutional improvements, becoming a fundamental part of the corporate bond issuance process. KOFIA has stipulated rules for mandatory book-building in offers for all its constituents.

43. Conducting a book-building process is mandatory when offering nonguaranteed corporate bonds to the public. The managing companies (lead manager[s]) of the proposed bond or note issuance may engage in a book-building exercise on behalf of the issuer to determine the potential interest rate, and to capture potential investor demand for the purchasing price, interest rate, and investment amounts, in order to ensure a realistic picture for the chances to place the bond or note issuance in the market. This process is included as an obligation under the lead managing company's contract with the issuer. The lead managing company is also mandated to record details regarding its pricing decisions based on the outcome of the book-building process; these details are to be included in the securities registration process.

44. Pursuant to the regulation issued by the Financial Supervisory Service, the issuer must sign a contract with a managing company or lead manager, which must include information concerning due diligence and intended book-building. Such lead management contracts shall be signed at least 10 business days before submission of the Securities Registration Statement and the contract must be reported to KOFIA within 5 business days of the contract signing date.

45. KOFIA monitors the book-building process, the underwriting activities of the primary market including that of the managing companies, as well as transaction details of the secondary market and the reporting of price quotes. When a KOFIA member company violates the regulations, KOFIA can impose restrictions

through the Self-Regulation Committee and impose a penalty on the member company, its executives, or its employees.

c. Market Infrastructures

1. Introduction of Mark-To-Market Valuation of Bonds

46. The Government of the Republic of Korea implemented first the mark-to-market (MTM) valuation of bonds in November 1998, after the 1997/98 Asian financial crisis to enhance investors' confidence in the trusted assets. Before the MTM was introduced, bonds were evaluated based on book value, which was a mathematical average of the principal and accrued interests during the period bond was held. As the book value failed to reflect any changes in the price or value of the bonds due to changes in market interest rates and/or credit ratings of those bonds, this led to a difference between the market price and book value. This could be problematic when it was sold before maturity or when issuing entity went bankrupt.

47. This was a major problem after the 1997/98 Asian financial crisis since many bond issuing companies went bankrupt and/or faced deteriorations in their credit ratings and market interest rates jumped. In order to tackle this problem, the government tried to change the evaluation method to MTM, which was not feasible then due to lack of liquidity in the secondary market, unavailability of reliable data on market yields and/or fair prices of bonds. MTM refers to evaluating the changing bond price using the market or fair price.

48. When this system was launched in November 1998, it applied only to collective investment properties. Afterward, this scheme extended to other financial institutions. To this end, KOFIA, formerly the Korean Securities Dealers Association, began to collect data on bond yields (by type and credit ratings) from 10 securities companies and disclose the mark-to-market base yield in November 1998. To better reflect various elements like liquidity premiums in bond pricing, the Government of the Republic of Korea authorized the establishment of three private bond pricing agencies—Korean Asset Pricing, KIS Pricing, and NICE Pricing Services, Inc.—in June 2000. (FN Pricing was additionally set up in September 2011). After valuations by bond pricing agencies become mandatory in 2004, KOFIA stopped its MTM efforts reporting and changed its mark-to-market base yield by types of bonds, to yield-to-maturity, and market yield, which is a type of reference yield KOFIA discloses. Currently, KOFIA monitors the valuation price of each bond pricing agency, as per Regulations on the Operations and Business of a Financial Investment Company, to check the fairness of pricing and prevent the possible involvement of back-scratching alliances between the bond pricing agencies and their clients. The monitoring results are reported to each pricing agency and to the Financial Supervisory Service. And these results are also posted at KOFIA's Bond Information Service each quarter.

49. Currently, bonds are marked to market differently depending on the type of financial institutions and the type of accounts concerned. In the case of bonds held by financial institutions themselves, for trading securities in the balance sheet, the MTM valuation is reflected in profit and losses for the current term in the income statement. Available-for-sale securities in the balance sheet are also marked to market, but rather than being reflected in the income statement. They are included under the category of accumulated other comprehensive income in balance sheet. Held-to-maturity securities are evaluated based on their book values. When bonds held by financial institutions are marked to market, the use of yields disclosed by the KOFIA or bond pricing agencies is required. For collective investment properties managed by bank trusts or asset management companies, the final yields in the bond market or the rates provided by two or more bond pricing agencies are used.

50. MTM valuation is considered to help vitalize the secondary market. Under the MTM scheme with the disclosure of the fair prices of all issues, the trading of off-the-run issues became rather active. In addition, as the price of bonds and value of funds holding bonds were changing every day, financial institutions started trading bonds proactively, rather than holding them until their maturities. As well, this scheme has contributed to the enhanced transparency of collective investment fund management. It has also prompted the rational valuation of investment performance and enabled financial institutions to manage their risks more effectively.

2. Introduction of K-Bond

51. In 2010, KOFIA established and launched Freebond in line with the Government of the Republic of Korea plans to revamp the secondary bond market. Since then, as the market participants increased, the number of users in Freebond increased more than twofold, the demand for the system improvement also increased. In September 2017, KOFIA developed K-Bond.

52. K-Bond is a platform that enables financial investment companies and key market participants to search quotations and negotiate prices with counterparties, thus facilitating bond trading and brokerage in the OTC bond market. Here “market participants” refer to brokers, dealers, managers, and traders who specialize in bond trading. Market participants must apply to and receive approval from KOFIA in order to use K-Bond.

53. K-Bond is largely divided into two parts: the trading board (T-Board) and a messenger service. The T-Board provides market participants with real-time quotation, 15-minute transaction, corporate bond book-building information. The K-Bond-exclusive messenger system replaces private messenger for bond trading and on top of basic online messenger services, offers an array of functions conducive for bond trading, such as group-chat, 1:N chat, and 1-on-1 chatroom layout saving.

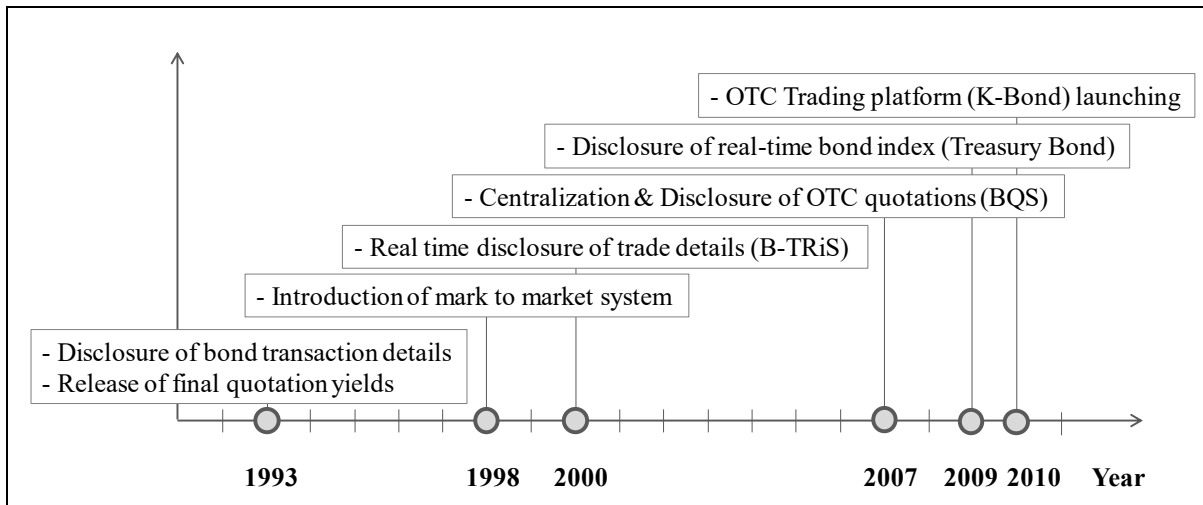
3. The Role of KOFIA in Ensuring Transparency in the OTC Bond Market

54. The Government of the Republic of Korea has made continuous efforts to enhance transparency in the bond market since the early 1990s. It strengthened its role after the 1997/98 Asian financial crisis in both the OTC market and the exchange market. In line with government policy initiatives, KOFIA has implemented various schemes for the OTC market, while KRX has carried out its equivalent job for the exchange market.

55. The Government of the Republic of Korea, KOFIA, and KRX believe that a certain degree of trade transparency is needed for the bond market to function effectively and efficiently as transparency in the secondary market enables more efficient price discovery, promotes competitive price quotes, reduces transaction costs and, facilitates informed decision making for market participants. They have strived to enhance both pre- and post-trade transparency in terms of the amount, timeliness, and accuracy of information available to market participants.

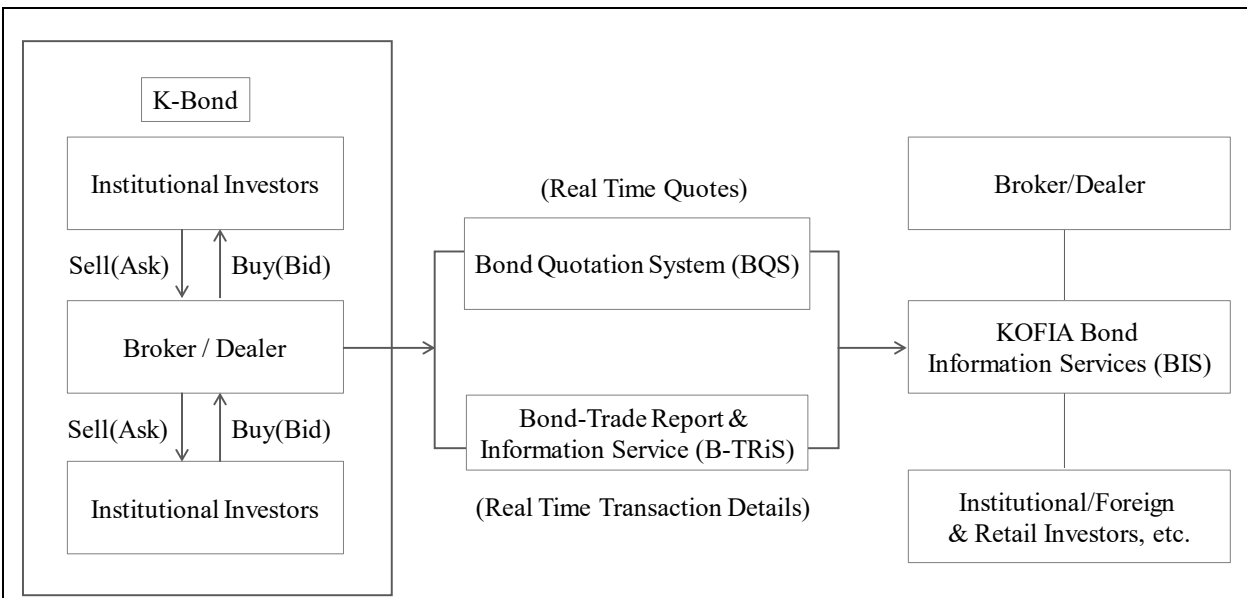
56. In order to increase transparency in the OTC bond market, KOFIA introduced a set of requirements for financial investment companies to disclose bond transaction details and final quotation yields in 1993. At the beginning of the implementation, all information was released on a daily basis after the OTC bond market had closed. However, after Bond-Trade Report and Information Service (B-TRiS) was introduced in 2000, real-time release of information became possible. Subsequently, other real-time reporting and disclosure systems were implemented, and a dedicated bond trading platform was launched, which helped increase transparency in the secondary market.

Figure A6.1: Level of Transparency Over Time



BQS = Bond Quotation System, B-TRiS = Bond-Trade Report and Information Service, OTC = over-the-counter.
Source: Korea Financial Investment Association.

Figure A6.2: Structure of OTC Bond Market Information Collection and Disclosure



Source: Korea Financial Investment Association.

(1) Disclosure of OTC Trade Execution Details on a Real-Time Basis

57. After securities firms trade bonds in the OTC market, they must report to KOFIA the details of the transaction within 15 minutes, and then KOFIA discloses this information on its website.

58. The disclosure mandate was strengthened in 2000 to enhance post-trade transparency in the secondary market. Information subject to disclosure included the yields and volumes of trades. Encouraging bond-related derivatives trade was another reason to introduce this mandate. Previously, the details of a transaction were reported to KOFIA after 3:00 p.m. when the OTC market closed. Under the system, transaction details could not serve as market information in a timely manner, undermining the price discovery function, which hindered the development of bond-related derivatives.

59. Under the disclosure requirement introduced in 2000, the trade execution details had to be submitted within 30 minutes. The following year, the deadline for reporting was reduced to within 5 minutes, and then settled to within 15 minutes in 2002.

60. In order to increase the accuracy of reporting, KOFIA established B-TRiS, which enables management of data between KOFIA and reporting financial investment companies. Currently, B-TRiS and K-Bond are connected, and as soon as a bond transaction is completed in the OTC market, all trade details are transmitted immediately to the B-TRiS and the KOFIA BIS automatically.

61. The 15-minute rule has not only enhanced market transparency, but also reduced the cost of seeking out price-related information. Furthermore, it has expedited the speed of information dissemination as information on issues, trading volume, yields, and investor categorization codes are provided on a real-time basis.

(2) Centralization and Disclosure of OTC Quotation Information

62. KOFIA launched the Bond Quotation System in 2007 to enhance pre-trade transparency and liquidity in the secondary market.

63. At the time of the implementation, most OTC bond trades were negotiated using private instant messenger services. While private instant messengers contributed to a reduction in bid–ask spreads and increased liquidity, they worked as an entry barrier to new participants including foreign investors. The Government of the Republic of Korea announced the introduction of the disclosure of OTC quotation information in 2006.

64. KOFIA requires financial investment firms (including banks and merchant banks) as well as inter-bank dealers to report, in real time, information on every quotation in relation to OTC trading or brokering of OTC bond trades via a dedicated bond trading system called K-Bond (previously FreeBond) to the KOFIA without delay. The quote information includes quote time, issue name of bond, order type, quoted yield and quantity. Any OTC traded bond whose quoted amount is less than KRW5 billion is not subject to the requirement.

65. All OTC quotes reported are disclosed on a real-time basis. KOFIA evaluates reported quotes from securities companies periodically. This scheme helped develop real-time bond market indexes.

(3) Disclosure of Final Quotation Yields and Base Yields.

66. KOFIA posts the final quotation yields of designated bonds whose remaining time to maturities are predetermined for each type of bond twice a working day on its Bond Information Service. The final quotation yield refers to the arithmetic mean of finally executed yields or quotation yields collected from financial investment companies designated by KOFIA.

67. KOFIA collects final quotes as of 11:30 a.m. and 4:00 p.m. from the designated securities companies and discloses their arithmetic mean at 12 noon and 4:30 p.m. the same day every business day.

68. KOFIA also discloses base yields for the designated bonds that are collected from bond pricing companies. Bond pricing companies must report to KOFIA reference yields for the designed bonds. Each type of designated bonds is again categorized by its credit rating and remaining time to maturity. The base yields are used for marking-to-market and for deriving the final settlement price for 3-year, 5-year, and 10-year interest rate futures.

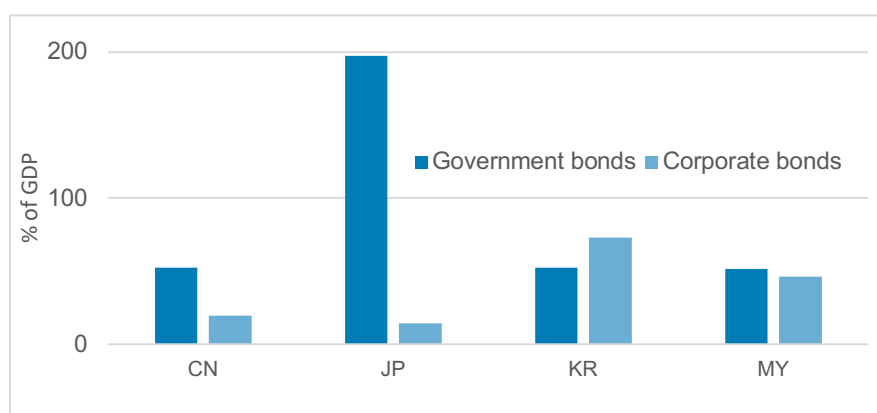
(4) Operation of Bond Information Service

69. The KOFIA Bond Information Service provides information to the public on bonds and notes registered or traded in the OTC market. The information includes quotation yields, issuance and trading data, real-time transaction details, real-time bond market indexes, mark-to-market benchmark yields, and Qualified Institutional Buyer bond issue. The information is available in English as well.

B. Japan

I. Overview of the Japanese Bond Market

Figure A6.3: Size of Japan's Local Currency Bond Market



CN = People's Republic of China, JP = Japan, KR = Republic of Korea, MY = Malaysia.
Source: *AsianBondsOnline*.

70. A unique characteristic of the Japanese bond market is the massive size of the government bond segment and the relatively limited size of the corporate segment. The amount of Japanese Government Bonds (JGBs) outstanding as a share of gross domestic product (GDP) is close to 200% (Figure A6.3). For comparison, the GDP share of the corporate bond segment is less than 15%, which is smaller than the respective GDP shares of the corporate bond markets of the People's Republic of China, the Republic of Korea, and Malaysia. While the size of Japan's government bond market as a share of GDP appears to be unsustainable, it continues to grow without serious disruption. In exploring why such massive absorption has been possible, there may be a lesson on successfully channeling savings into the government bond market.

71. Though the corporate bond market in Japan is limited in term of its share of the economy, it has a long history of development. The creation of the corporate bond market at an early stage of the Japanese capital market's development contributed to the establishment of railways, electric power, and telecom companies. This can provide some useful lessons for corporate bond market development elsewhere.

a. Government Bonds

72. JGBs can be divided into two main categories: General Bonds and Fiscal Investment and Loan Program Bonds (FILP Bonds) (Table A6.2). While the government mainly relies on tax revenue to redeem General Bonds, the redemption and interest payments of FILP Bonds occur through the repayment of loans of FILP agencies. Both General Bonds and FILP Bonds are JGBs, and are therefore issued with the same interest rates and maturities.

Table A6.2: Categories of Japanese Government Bonds

JGBs	General Bonds	Construction Bonds
		Special Deficit-Financing Bonds
		Reconstruction Bonds
		Refunding Bonds
	Fiscal Investment and Loan Program Bonds (FILP Bonds)	

Source: Government of Japan, Ministry of Finance. 2018. *Debt Management Report 2018*. Tokyo.

73. General Bonds consist of Construction Bonds, Special Deficit-Financing Bonds, Reconstruction Bonds, and Refunding Bonds. Construction Bonds and Special Deficit-Financing Bonds are issued under the General Account and the revenue from their issuance is reported as the government revenue of the General Account. Reconstruction Bonds are issued under the Special Account for Reconstruction from the Great East Japan Earthquake. Refunding Bonds are issued under the Special Account of Government Debt Consolidation Fund and the revenue from their issuance is reported as the government revenue of each Special Account.⁸⁸

74. JGBs are currently being issued in one of six categories: short-term (1 year); medium-term (2 years and 5 years); long-term (10 years); super long-term (20 years, 30 years, and 40 years); inflation-indexed bonds (10 years); and JGBs for retail investors (3-year fixed rate, 5-year fixed rate, and 10-year floating rate).

75. While most bonds are offered through competitive auction, a noncompetitive auction is also available. The price at a noncompetitive auction is set to the weighted average of accepted prices of the price of a competitive auction to ensure the participation of small financial institutions that lack the capacity to join a competitive auction. In 2018, about 5% of JGBs were sold through noncompetitive auction.

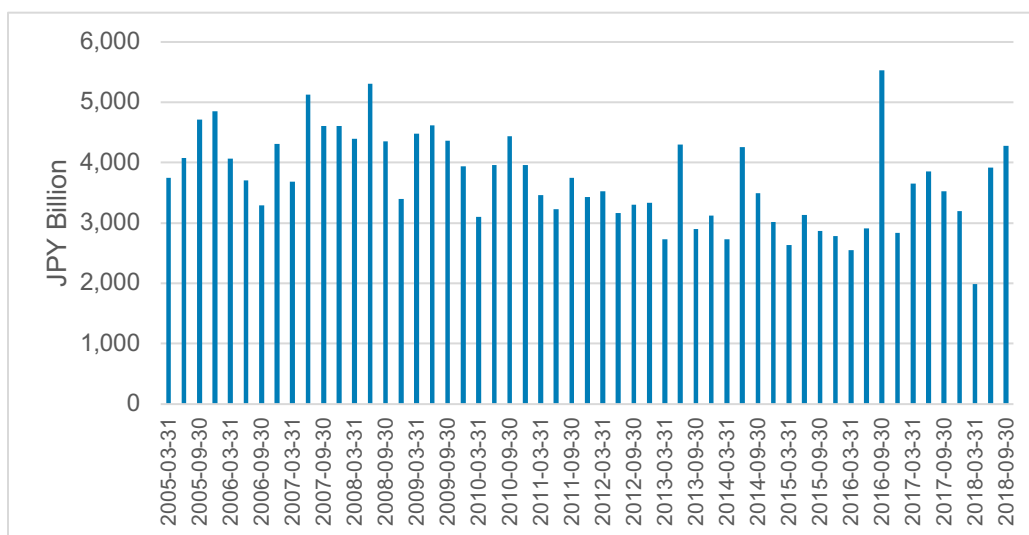
b. Corporate Bonds

76. In the Japanese corporate bond market, issuers are limited to large companies such as electric power and telecom firms, and Japan Rail Group companies. In addition to nonfinancial enterprises, banks and consumer finance companies also issue corporate bonds in accordance with the Companies Act (No. 86 of 2006). Bank debentures are debt securities issued by certain banking institutions—JA Bank, Shoko Chukin Bank, and Shinkin Central Bank—under special laws. They play a fundraising role as an alternative to deposits and are principally issued as either 5-year interest-bearing or 1-year discounted debentures.

77. Having undergone various systemic reforms, the corporate bond market in Japan has developed into a free and efficient market that plays an important role in corporate financing (Figure A6.4). While the global financial crisis significantly impacted the Japanese economy, the corporate bond market demonstrated a quick recovery and expansion. The growth of the market was also negatively impacted by the Great East Japan Earthquake in 2011. But signs of recovery are visible in the growth of the professional bond market, the TOKYO PRO-BOND Market (TPBM), and in nonresident bonds.

⁸⁸ Government of Japan, Ministry of Finance of Japan. 2018. *Debt Management Report 2018*. Tokyo.

Figure A6.4: Corporate Bond Issuance



Source: AsianBondsOnline.

78. Foreign bonds are defined as debt securities issued in Japan by non-Japanese resident issuers. Those denominated in Japanese yen are separately classified as samurai bonds and subject to Japanese regulations. Nonresident bond profiles listed on TPBM can be included among JPY-denominated foreign bonds, but are not called samurai bonds since samurai bond issuers are required to observe full disclosure in Japanese, while an issuer profile listed on TPBM only need to observe Tokyo Stock Exchange disclosure requirements in English.

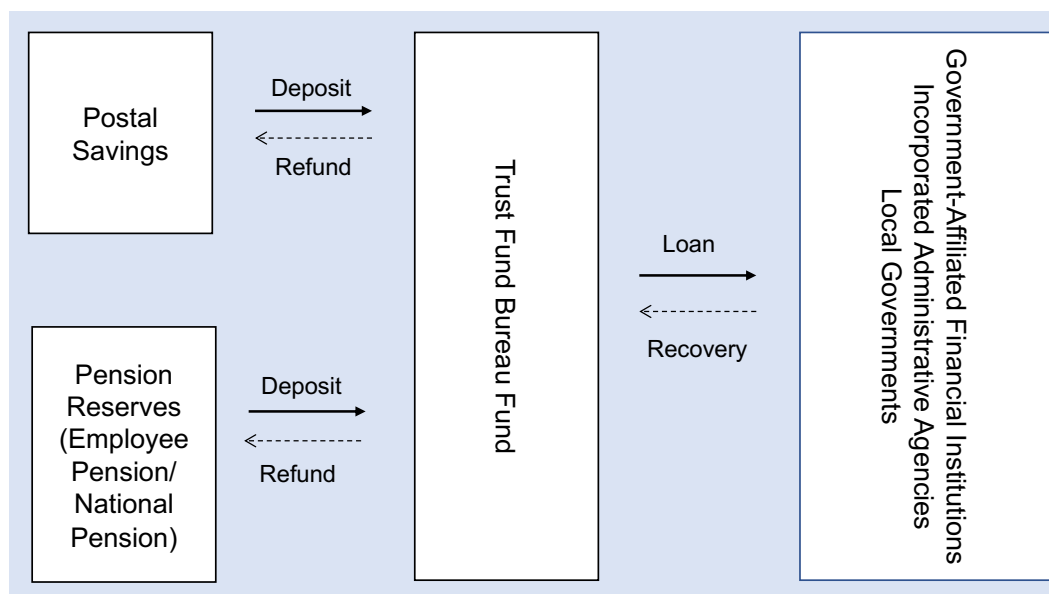
II. History of the Japanese Government Bond Market in the Postwar Period

a. Reconstruction after World War II: 1945–1974

79. After the end of World War II in 1945, the Japanese government strictly followed a balanced budget policy. The first JGB in the post war era was not issued until 1965 thanks to the budget surplus driven by high annual rates of economic growth. Article 4 of the Japanese Public Finance Act (No. 34 of 1947) does not allow bond issuance for general expenditure. But, as an exception, bonds can be issued for public construction or if approved by the Diet. Article 5 of the act prohibits the Bank of Japan (BOJ) from engaging in direct underwriting, except with special cause and within the amount approved by the Diet.

80. Under its balanced budget regime, the Government of Japan can support large infrastructure investments through the FILP, which is mainly financed by the Trust Fund Bureau Fund managed by the Ministry of Finance (Figure A6.5). Sources for the trust fund include postal savings and contributions to the national pension system and the employees' pension insurance scheme. Funding through Japanese postal savings was particularly large and contributed to the rapid accumulation of national savings. In the 1980s, postal savings accounted about 10% of total national savings.

Figure A6.5: Japan's Fiscal Investment and Loan Program



Source: Government of Japan, Ministry of Finance of Japan. 2018. *Debt Management Report 2018*. Tokyo.

81. The government could not balance the budget amid the recession that followed the Tokyo Olympic Games in 1965, issuing Special Deficit-Financing Bonds for the first time in response. Since then, Construction Bonds have been issued every year, but Special Deficit-Financing Bonds were not issued again until 1974.

82. At the inception of JGB issuance in 1965, there were two types of issuing methods: (i) syndicated underwriting by financial institutions to allot JGBs at a fixed price, and (ii) underwriting by the Trust Fund Bureau Fund. Auctions by major financial institutions were introduced in 1978, but syndicated underwriting continued until 2006, though the share of the syndication declined significantly.

83. Under syndicated underwriting by financial institutions, the BOJ, as the agent of the government, managed subscription contracts with over 2,000 financial institutions, including local banks and a large number of small cooperatives all over Japan.

84. Until the middle of the 1970s, the JGB market was heavily controlled by the government. In general, the financial system was controlled, including the banking system, which had fixed interest rates set by the BOJ. Likewise, the distribution of JGBs among financial institutions, as well as their price, was controlled by the government. The government prohibited financial institutions from selling the underwritten bonds in the secondary market. Thus, banks could sell JGBs only to the BOJ through JGB purchase operations.

b. Market-Friendly Reforms to Absorb Issuance: 1975–1993

85. The situation changed in the latter half of 1970s due to the rapid increase in the fiscal deficit caused by increasing expenditures on social welfare and economic stimulus in response to the first oil shock crisis in 1973/74, which was accompanied by a shortfall in tax revenue. In addition, the Japanese economy gradually matured, with the average annual growth rate shifting downward. As a result, JGB issuance increased rapidly. This inevitably forced the government to change its policy to be more market-friendly, and to relax various controls over the JGB market. Initially, banks were allowed to sell JGBs only to the BOJ, but the resale of JGBs in the market was allowed in 1977, which rapidly increased the volume of JGB market transactions. In order to facilitate JGB absorption, over-the-counter sales of JGBs by banks were allowed in 1983 and JGB dealing by banks was permitted in 1984. In addition, the emergence of a secondary market led to the introduction of an auction system in 1978 as it became impossible for the

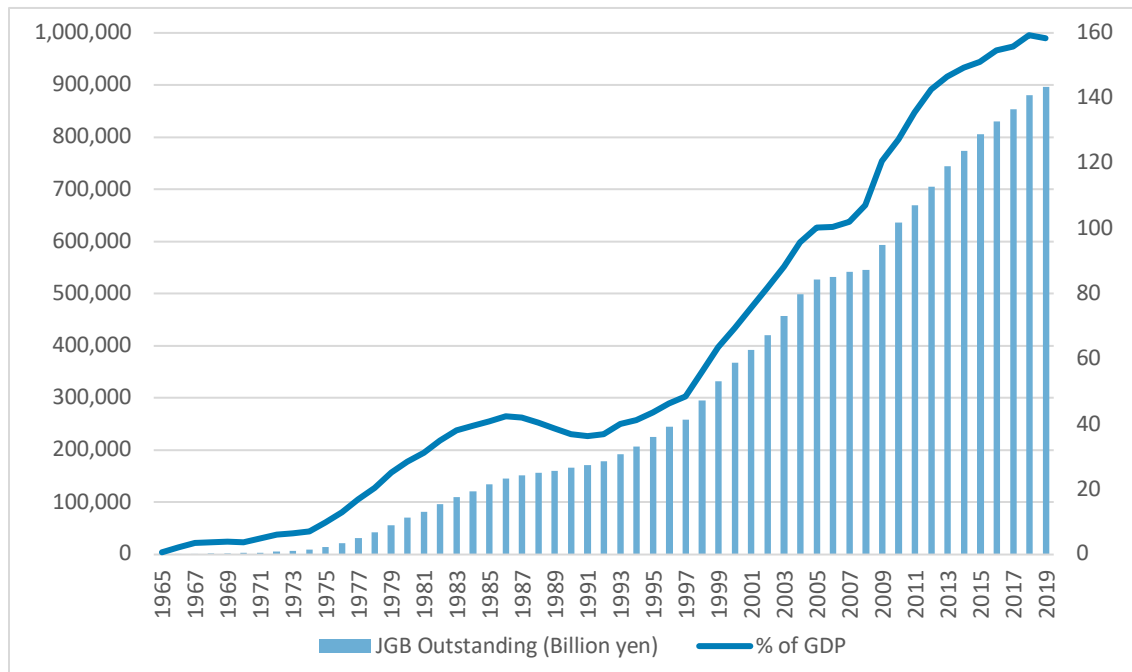
government to control prices. To absorb large issuances, the government had to meet market demand for various types of bonds such as discount bonds in 1977 and short-term bonds in 1986.

86. To cope with growing financial deficits and JGB issuance, the government pursued fiscal consolidation to limit the issuance of JGBs, which led to the decline of JGB issuance in the latter half of the 1980s. Between 1991 and 1993, the issuances of Special Deficit-Financing Bonds fell to zero thanks to the introduction of a consumption tax in 1989 and an increase in tax revenue driven by the booming economy of the late 1980s and early 1990s.

c. Additional Reforms to Accommodate Massive Issuance: 1994–Present

87. After the bursting of the economic bubble in the early 1990s, the Japanese economy faced a prolonged recession, which led to massive JGB issuance to support extensive fiscal expenditures in order to stimulate the economy (Figure A6.6). In addition, the aging Japanese population put upward pressure on social security expenditures. The pace of deficit increases was much faster in the 1990s than in the 1970s, and JGB issuance in terms of GDP surpassed 150%, the highest among all developed markets.

Figure A6.6: Japanese Government Bonds Outstanding



JGB = Japanese government bond; GDP = gross domestic product.

Source: Government of Japan, Ministry of Finance of Japan. 2018. *Debt Management Report 2018*. Tokyo.

88. To absorb such massive issuance volume, the government needed to make greater efforts to sell its bonds. In 2002, the government started engaging in regular communication with market players, and also started disclosing market information in English to attract foreign investors. New types of bonds were introduced to meet investor demands. In 2002, the government started issuing retail JGB bonds, which were designed to avoid the loss of principal; the minimum interest rate was set at 0.05% to ensure a return. In 2003, the government issued the first inflation-linked 10-year bonds. In 2004, the JGB Market Special Participants Scheme was introduced, which was based on the so-called primary dealer system. To increase market liquidity, liquidity enhancement auctions and buyback operations were held more frequently.

III. History of the Japanese Corporate Bond Market

89. As the Japanese experiences shows, a corporate bond market does not always develop out of the existence of a government bond market and as a substitute for bank lending. The US has a large corporate bond market because interstate banking was previously banned. Developing a corporate bond market is not easy in an economy where a banking system has already developed. Japan's case shows that the banking system and corporate bond market can be developed simultaneously at an initial stage. Before World War II, railways and electronic power companies issued bonds as their main source of funding. Banks' supremacy over the corporate bond market was established during war-time due to the strong guidance of the government. Such supremacy and the dominance of indirect finance was reinforced by strong BOJ control in the postwar recovery period. However, financial liberalization since 1980 promoted the corporate bond market, allowing it to become larger, deeper, more efficient, and international.

a. The Birth of the Japanese Corporate Bond Market: 1890–1933

90. The Japanese corporate bond market was formed through the processes of capitalism. In order to finance industrialization in the private sector, the government first issued JGBs and then established national banks in 1870s. It also opened the securities exchange in 1878, together with legislating the Commercial Code in 1890 and the principal law concerning jointstock companies and corporate bonds. Though the Commercial Code did not clearly distinguish between stocks and corporate bonds, the first corporate bond was issued in 1890 by the Osaka Railway Company. At the initial stage of market development, corporate bonds were mainly issued by railway companies seeking large amounts of long-term funding and by textiles companies, which comprised the largest industry in Japan at that time. The bonds were mainly bought by stockholders and other persons related to the issuing companies. After 1897, several specialized banks to support industrialization were established and started issuing bank debentures. Until the beginning of the 20th century, Japanese banks were often affiliated with or an actual part of a particular industry group or conglomerate. Thus, bank lending was often concentrated among a group companies with a special interest. On the other hand, the corporate bond system gradually developed with the reforms of the Commercial Code (1893, 1899, 1911) and the enactment of the Secured Bond Trust Act (Act No. 52 of 1905). Until World War I, foreign currency bonds were also issued. Issuance increased not only among railways and textiles companies, but also from electronic power companies, shipping companies, and the manufacturers of ships.

91. The Japanese corporate bond market grew along with the development of Japanese industry. After World War I, industrial development shifted to the heavy and chemicals industries, which led to an increase in large companies' issuance of corporate bonds. The market was not heavily regulated and controlled, and almost 80% of the total issuance of bonds comprised nonsecured corporate bonds.

92. However, the market situation reversed after a series of crises. The Showa Financial Crisis in 1927 and the Great Depression triggered by Black Tuesday in the US in 1929 led Japan into the Showa Depression in 1930/31 during which time many corporate bonds defaulted. This led to the reform of the Secured Bond Trust Act in 1933 and the Bonds Purification Campaign by banks. As a result of the campaign, corporate bonds had to be secured in principle and the redemption of bonds had to be guaranteed, which established the status of the bond trustee business.

b. Banks Dominance in War-Time Policy: 1933–1945

93. The issuance of bond recovered after the Showa Depression with an increase in secured bonds. In 1934, secured bonds reached nearly 70% of all the corporate bonds. At the same time, competition among bond trustees led to consolidation among them. By 1936, the syndicated underwriting system was established, in which many public and corporate bonds were underwritten by the syndication of major banks and trusts, not by securities firms.

94. With Japan pursuing a war-time economic system in the 1930s, the Temporally Funding Adjustment Act (No. 86 of 1937, abolished in 1948) was enacted, allowing the government to control the entire financial market, including corporate bonds. In 1938, the Commercial Code was reformed to clarify the authority of

bond trustee companies and establish banks' supremacy in the corporate bond market. The Bonds Registration Act (No. 11 of 1942, abolished in 2002) was enacted to register bonds at banks.

c. Bank of Japan's Control in the Postwar Recovery Period: 1945–1954

95. To efficiently allocate scarce funds to industrial recovery during the postwar period, the Japanese government had to control the economy. The BOJ also followed this policy and controlled financial intermediation. The Bond Issuance Council was established in 1947 under which the BOJ controlled issuance. The Bond Issuance Council was reorganized in 1949 as the Bond Issuance Roundtable and the Bond Issuance Meeting, which determined details of bond issuance such as issuing amounts and conditions. In 1949, the BOJ Eligible Collateral Pre-Evaluation System was introduced to treat bonds as the equivalent of JGBs if the BOJ qualified them as adequate to act as collateral for banks' borrowings from the BOJ. When banks bought newly issued bank debentures and corporate bonds, the BOJ performed a unique conditional operation where the BOJ bought the banks' JGBs within the limit of their buying amounts of bank debenture and corporate bonds. This ensured smooth absorption of debentures and bonds by banks. Issuing bonds was permitted only among the large companies that qualified under the BOJ Eligible Collateral Pre-Evaluation System. Thus, corporate bonds were used to supplement banks' indirect finance.

d. Rapid Economic Growth and Banks' Continued Dominance: 1955–1974

96. From 1955 to 1974, Japan enjoyed rapid economic growth. The establishment of indirect finance during the postwar recovery was strengthened by the controlled low-interest-rate financial policy. The share of bank loans in financial intermediation in 1955–1965 was around 70%, and bank debentures issued by specialized banks as a substitute to deposits comprised 60%–70% of the entire bond market. On the other hand, corporate bonds issued by nonfinancial institutions as a share of the market decreased. Though the BOJ Eligible Collateral Pre-Evaluation System was abolished in 1955 and other controlling measures were also abolished, the corporate bond market remained small.

97. Since 1970, bond issuance conditions have gradually been deregulated; a longer maturity duration of 10 years was first allowed in 1972, in addition to existing 7-year maturities, and the allowed issuance volume was expanded 2.5 times in 1974. Issuance volumes were fully liberalized in 1975. In the 1970s, bond issuance increased mainly among electric power companies. These bonds were sold to retail investors who were accumulating financial wealth and have a preference for higher interest rates than were being offered on bank deposits. The first convertible corporate bond was issued in 1966, and the first nonsecured convertible corporate bond was issued in 1973.

e. Financial Liberalization and Increased Foreign Issuance: 1975–1984

98. Japan experienced financial liberalization from 1975 to 1984. As Japan faced slower economic growth after the first oil shock crisis in 1973/74, the issuance of JGB increased rapidly to support the economy through extensive public expenditures. Such large issuances changed the bond market's structure, with JGBs becoming the main component of the Japanese bond market. This shift triggered financial liberalization. The first sale of certificates of deposit in 1979 prompted further financial liberalization, which led to corporate bond issuance being determined by the market rate. Nonresident bond issuance in the Japanese bond market also increased. By lifting the ban on euro-yen bond issuance by nonresidents, the first euro-yen bond from a nonresident was issued in 1977. The first nonsecured samurai bond was issued in 1979. Due to the remaining inflexibilities in the domestic market, Japanese companies continued to seek issuing opportunities in the offshore market. Overseas issuance by Japanese companies exceeded domestic issuance in 1979, and the first euro-yen bond by a Japanese company was issued in 1980.

99. Since 1980, financial liberalization has rapidly progressed, aided by reform of the Foreign Exchange and Foreign Trade Act (No. 228 of 1949). After liberalization, capital could move freely and Japanese companies expanded their corporate financing by issuing stocks and bonds rather than through increased bank borrowings, which resulted in a more flexible domestic corporate bond system. Convertible bonds became fully nonsecured in 1979, and the first nonsecured normal bond was issued in 1985 along with the

adoption of adequacy standards for nonsecured bond issuance. The first shogun bond (foreign-currency-denominated domestic bond) was issued in 1985.

f. Booming Economy and After: 1985–Present

100. In 1985–1989, Japan experienced an economic bubble that led to increased overseas bond issuance by Japanese companies. To cope, globalization, liberalization, and investor protections were targeted under market reforms in 1986. As a result, the first credit rating agency was established in 1985; the market-making of corporate bonds started in 1986; more flexible issuance procedures, such as reverse inquiry, were introduced in 1987; and issuance through shelf-registration was introduced in 1988. However, domestic issuance remained low because overseas market issuance remained easier.

101. After the bursting of the economic bubble, the Government of Japan continued with deregulation to create a more efficient, international, and sound capital market. The strict firewall between banks and securities companies, which was modeled after the Glass–Steagall Act in the US, was abolished. The Japanese corporate bond market became more flexible and efficient through deregulation such as the abolishment of corporate bond issuance limits and the trustee company system (1993), abolishment of eligibility standards for corporate bond issuance and deregulation of bond covenants (1996), and electronic registration of corporate bond certificates (2006). The credibility of corporate financial reporting improved with strengthened accounting standards and audit system reform. The above actions also increased the attractiveness of corporate bonds as financial instruments among investors.

102. Over the past 2 decades, various impediments were removed. In 2008, the Financial Services Agency revised the Financial Instruments and Exchange Act, 2006 as a part of its plan to enhance the competitiveness of Japan’s financial and capital markets. The Japanese corporate bond market became a free and efficient market that plays an important role in corporate financing. In the aftermath of the global financial crisis, the corporate bond market generally demonstrated a good recovery and expansion. The Great East Japan Earthquake in 2011 paused the market’s development, but a recovery occurred in the professional bond market (TPBM) and in the nonresident bond market. In addition, the withholding tax rate for nonresidents was reduced to zero in 2010. This could be seen as the culmination of market reforms.

IV. Lessons from the Japanese Experience

103. There are several interesting lessons from the history of the Japanese bond market’s development. After careful examination and with a caveat that these lessons may be historically path-dependent, several examples are highlighted below.

104. First, a government needs to think how to expand the investor base at the government bond market’s initial stage of development. JGBs were widely distributed among financial institutions throughout Japan via an allotment by syndicated underwriting. Massive issuance of JGBs was absorbed by Japanese financial institutions without serious disruption. This was possible through syndicated underwriting and allotment to all financial institutions, which created the foundation of a large investor base. Of course, there is a counterargument that the allotment pushes out private sector loans; besides, there may be a risk of mispricing because the government always wants to sell at as low a yield as possible. However, government bonds are the prime collateral that support various financial transactions. Particularly, given the current financial regulatory regime, sufficient collateral ensures access to liquidity through the interbank market as well as operations by the central bank. In developing markets, government bonds are often absorbed by major financial institutions and not distributed to small financial institutions. Such skewed allocation of government bonds leads to vulnerability as the investor base is limited. The limited investor base creates the risk of herd behavior and of overshooting market movements. Auction and primary dealer systems are normally regarded as indispensable building blocks for the government bond market’s development. However, mere implementation of a primary dealer system at a very early stage of the market’s development carries risk. The idea of introducing government bond auctions is based on the assumption that all primary dealers can trade fairly and distribute the bonds widely and efficiently throughout the market. But, in reality, this is not easy to achieve. In addition, the limited number of primary dealers creates the risk of collusion and bid-rigging. If the assumption fails, the result leads to rent-seeking among the dealers, thus distorting the market. To avoid collusion and bid-rigging, the government can introduce

many primary dealers, but it would reduce the merits of being nominated as a primary dealer; therefore, they may not commit to market-marking as would be expected of primary dealers.

105. To balance the merits of syndicated underwriting and auction by primary dealers, one may be able to consider a hybrid: the government can sell government bonds partially to primary dealers and distribute the rest to other financial institutions at the price determined by the auction. In addition, if the government can ensure the return from the government bond is higher than the average deposit rate, it will be seen as a good investment opportunity with zero credit risk. Besides, as long as the mandated underwriting portion is limited to a small percentage of total assets, financial institutions can easily absorb the allotted amount; hence, this will not crowd out private sector loans.

106. Second, in addition to wider distribution to various financial institutions, the government should consider distributing government bonds to retail individuals more widely, maybe together with the development of contractual savings. One of the reasons why the Government of Japan can undertake massive issuance is the existence of the Trust Fund Bureau, which is backed by huge postal savings. Japanese postal savings provide convenient, easy access for ordinary persons to make deposits and accumulate wealth through savings. In return, these funds have been channeled into government bonds and infrastructure investments. Since government bonds should be the most trusted assets in an economy, investment opportunities in government bonds should be widely distributed, including among small individual savers. In developing markets, interest rates on deposits are much lower than the return from government bonds; thus, only banks can enjoy such an investment opportunity. Given the current state of IT and mobile technology, this investment opportunity can be widely distributed to small individual retail investors via mobile phone application.

107. Third, the history of the Japanese corporate bond market tells us that it did not have to wait for the development of the government bond market. Of course, it would be much easier to develop a corporate bond market based on the development of the government bond segment. Especially, given that the current school of thought is based on the pricing theory that a corporate bond yield is based on the risk-free rate, which is the government bond yield, plus credit risk and other risk premium. As long as a corporate bond is priced based on this formula, the existence of a government bond yield curve is a prerequisite. However, the Japanese experiences shows that a corporate bond market can be developed at the very early stage of financial market development. Corporate bonds can be priced based on corporate loans. If the funding cost of a corporate bond is much higher than that of a bank loan, nobody will issue a bond. However, as history also shows, a corporate bond market would be vulnerable to a shock without a proper benchmark to reference with. There is a high risk of creating a crisis without a proper pricing mechanism. However, if a corporate bond market is accompanied by prudential requirements and close monitoring, it can be developed without the presence of government bonds. For example, publicly available credit information, ideally from the financial authorities to ensure the quality of the information, and some kind of a guarantee mechanism to supplement credit information can create a foundation to develop the market. Also, the market should be launched with bond issuances from highly creditworthy companies.

108. Fourth, to develop a corporate bond market, some kind of coordination mechanism to assess corporate credit may be necessary. Unlike the US, the function of a credit rating agency may not be sufficient, particularly in a situation where banks have more information on debtors. Market-based underwriting is based on an assumption that necessary information is available in the market. But if the condition is not met, the market will fail. Thus, some kind of coordination by a public authority like the central bank to establish a credit database to establish the foundation of credit assessment is necessary. Besides, at the early stage of market development, the central bank itself may need to be a provider of credit information. If a bond is eligible as central bank collateral, it will send a signal that the bond is investable. At the early stage of market development when establishment of a bond rating agency is not scalable and viable, the central bank can be a credit information provider to support the development of the corporate bond market.

109. Lastly, market intervention by the government and central bank may be useful, but it should come with a sunset clause. Such intervention is justifiable only at the early stage of a market's development. The intervention must be abolished, and the market must be liberalized as it develops. If the intervention continues even after the market develops, it will distort the market. As the liberalization of the Japanese

market was long delayed, massive issuance in the offshore market took place to avoid regulation and market intervention. The experience of Japan shows the risk of becoming a victim of one's own success. Policy makers always need to bear in mind potential risks even after the successful implementation of policies.

C. Indonesia

110. Indonesia took a more authorities-led approach in response to the severe losses in the banking sector during the 1997/98 Asian financial crisis. Several financial institutions were closed or taken over by the government as a precondition for getting a financial assistance package from the International Monetary Fund. The first government bond was issued in 1999 as payment for the shares bought by the government to ailing banks, which were known as recapitalization (recap) bonds. The recap bonds began trading on the secondary market in 2000 and grew significantly from IDR32 trillion in 2000 to around IDR712 trillion in 2011. The financial crisis also led to the establishment of the Indonesian Bank Restructuring Agency in 1998, which was mandated to segregate bad assets and recapitalize viable banks. Government bonds were issued and directly placed to Bank Indonesia for the purpose of financing the recapitalization of banks. Most of these bonds were nontradable and index-linked.

111. The Ministry of Finance established a debt management unit in 2001 with responsibility for managing the government bond portfolio. In 2002, the government securities law was issued as the basis for a legal framework for the issuance of government securities.

112. To further enhance the development of the government bond market and serve the government's decentralization program, the Law on Fiscal Balance Between Central Government and Regional Government was enacted in 2004 (Law 33/2004). The law allowed local governments to borrow from the public by issuing local government bonds (municipal bonds). The central government does not guarantee local government bonds so as to promote market-based financing. In 29 December 2017, there were two OJK rules enacted as guidance for local government to issue municipal bonds:

- (i) Act No. 61/POJK.04/2017 regarding Documentation Requirements on Municipal Bonds/Sukuk issuance; and
- (ii) Act No. 62/POJK.04/2017 regarding Formats and Content of Prospectus and Short Prospectus for Municipal Bonds/Sukuk issuance.

113. To manage all government debt, including foreign loans, and to develop Islamic finance instruments, the debt management unit was transformed into a debt management office in 2006 by merging the Directorate of External Funds and Directorate of Government Bonds Management. In 2011, the Ministry of Finance entered into a memorandum of understanding with the Ministry of State Owned Enterprises requiring state-owned enterprises to act as stand-by purchasers of government bonds in the event of sudden capital outflows. Under the scheme, a bond stabilization framework was created to help protect the economy in case of sudden capital flight.

114. In accordance with the mandate of Act No. 21 of the Financial Services Authority, 2011, Otoritas Jasa Keuangan (OJK) was established as the single regulatory authority for financial and capital markets in Indonesia, effective 31 December 2012. As of 1 January 2013, OJK effectively took over the remit of the previous Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) for capital markets and of the Ministry of Finance for nonbank financial industry supervision. The functions of banking supervision and regulation were effectively transferred from Bank Indonesia to OJK on 1 January 2014. Responding to its mandate for the integrated regulation and supervision of the financial sector, including the bond market, OJK established in 2014 a national team for bond market development that consists of OJK as chair plus Bank Indonesia, the Ministry of Finance, and self-regulatory organizations such as the Indonesian Stock Exchange and Indonesia Bond Pricing Agency. The team focuses not only on government bond market development, but also on the corporate bond market. It has facilitated regulators in formulating policies and coordinating, while addressing cross-cutting issues to increase liquidity in the bond market

(e.g., taxation issues). Some of the main recommendations that have been executed include the establishment of a Bond Index in 2014 and a Global Master Repurchase Agreement in 2016.

115. Given Indonesia's early stage of bond market development, OJK issued a regulation in January 2016 (No. 1/POJK.05/2016) requiring institutional investors such as pension and insurance funds to invest in government bonds. The regulation was subsequently revised to also include bonds issued by state-owned enterprises and their subsidiaries. It is expected that the investment obligations will catalyze the bond market by familiarizing institutional investors with government bonds. The urgency is due to the fact that the majority of institutional investor assets, which should be natural buyers of long-term assets such as bonds, are heavily focused on short-term instruments, indicating a mismatch in the financial sector.

116. Since the Government of Indonesia issued foreign-currency-denominated government securities for the first time in 2004, all payments of principal and interest for both conventional and Islamic foreign-currency-denominated government bonds are made free and clear of withholding taxes. This policy is stipulated in the Budget Law and followed by Ministry of Finance regulations every year. For fiscal year 2016, the regulation was published in June 2016 with effectiveness for January–December 2016.

117. To promote a level of playing field for Bond/Sukuk market players, OJK enacted Act No. 9/POJK.04/2019 regarding Intermediaries for Bond/Sukuk Market Regulation; regulation on Bond/Sukuk market platforms (is being finalized in 2019); and Bond/Sukuk Taxation reform (would follow suit in 2019).

Retail Bonds

118. The retail bonds and sukuk framework was first introduced in 2010 to encourage more retail participation in the Indonesia bond and sukuk market as well as to increase investment opportunities for individuals. This initiative also furthered in 2019 as a means to gradually lower the foreign bond holding proportion in Government Bond.

D. Malaysia

119. The Malaysian bond market has a relatively long history dating back to the pre-crisis era. It has developed on a step-by-step basis over time, attaining a level of depth and diversity exceeding that of most other bond markets in the region.

120. The development dates to the 1960s and 1970s when the first Malaysia Government Securities (MGS) were issued to meet the investment needs of the Employees Provident Fund (EPF), banks, and insurance companies. The EPF, an agency under the Ministry of Finance, was initially required to invest at least 50% of its funds in any single year in MGS. The Government of Malaysia issued MGS to finance public sector investment during the 1970s and early 1980s. In the late 1980s, MGS were used to finance deficits and repay some of the government's external loans.⁸⁹ Since then, the issuance of MGS has slowed partly due to a reduction in the borrowing program as well as the government's initiative to promote private-sector-led investments.⁹⁰ As a result, the development of debt securities in Malaysia has been largely achieved through the growth of corporate bonds.

121. A primary dealer (PD) system was implemented by Bank Negara Malaysia (BNM) in 1989 to promote development of the primary and secondary markets. PDs were given privileges such as accepting repos of less than 1 month from noninterbank customers. However, this privilege was removed and replaced with the privilege of participating as both borrower and lender in the newly launched Securities Borrowing and Lending Program under Real-Time and Gross Settlement System, and participating in repo and reverse repo transactions for the purpose of hedging activities.

⁸⁹ D. S. Harun. 2002. The Development of Debt Markets in Malaysia. *BIS Papers No. 11*. Basel: Bank for International Settlements.

⁹⁰ Footnote 79.

122. In 1999, the Government of Malaysia established the National Bond Market Committee (NBMC) to provide policy direction and coordinate a regulatory framework for the development of the Malaysian bond market. The NBMC was chaired by Secretary General of Treasury, Ministry of Finance and comprised senior representatives from BNM, Securities Commission Malaysia, Economic Planning Unit, Companies Commission of Malaysia, and Bursa Malaysia. One of the key recommendations of the NBMC was the introduction of program issuance of MGS. The purpose of regular and frequent issuance of MGS was to allow the market to use MGS as a benchmark and to develop a yield curve. The schedule of MGS auctions began in March 2000. The NBMC also suggested the prescribed percentage for the EPF to invest in MGS be reduced to 30% because the issuance of MGS was insufficient to meet the EPF's investment needs, which has greatly distorted bond market liquidity and the development of the Malaysian bond market.

123. In 2006, BNM launched Bond Info Hub, a one-stop center detailing all bond-related information in Malaysia. Bond Info Hub is the primary source of information on the Malaysian bond market for the global investment community. In addition to being a key initiative to promote the domestic bond market, Bond Info Hub acts as a conduit to correct misconceptions, especially among foreign investors, about the state of market development in Malaysia. Also in 2006, Securities Commission Malaysia issued Guidelines on the Registration of Bond Pricing Agencies to complement the government's objective of building more efficient and liquid conventional bond and *sukuk* (Islamic bond) markets.

124. In 2013, Bursa Malaysia Securities introduced the rules to facilitate exchange-traded bonds and *sukuk* to be listed and traded on Bursa Securities to provide access to wider group of investors. The rules were part of a project under the National Key Economic Areas aimed at offering more choices for investors seeking products that yield stable returns with capital protection.

Unrated Bonds

125. Malaysia has removed the mandatory bond ratings starting 1 January 2015. The amended guidelines also saw the transferability and tradability of unrated bonds and *sukuk* where previously, unrated bonds were issued through private placements and were not tradable. Since then, the unrated bonds space has grown to MYR86 billion as of 31 Dec 2018. This shows the increasing appetite for unrated bonds in line with the maturity of the Malaysian bond market.

Retail Bonds

126. The retail bonds and *sukuk* framework was first introduced in 2013 in line with Securities Commission Malaysia's Capital Market Masterplan 2. This framework aims to encourage more retail participation in the Malaysia bond and *sukuk* market as well as to increase investment opportunities for individuals. In October 2018, Malaysia further liberalized the retail space by simplifying disclosures for issuers, expanding the range of bonds to be offered and enabling retail participation in the wholesale market, traditionally only accessible to institutional investors and high net worth individuals. This liberalization is supported by the launch of the centralized information platform Bond + Sukuk Information Exchange Malaysia (BIX Malaysia).

Green Bonds

127. Malaysia has put forward a framework for sustainable and responsible investments (SRI) issued in 2014 to encourage sustainable finances. Additionally, through the ASEAN Capital Market Forum, Malaysia played a key role in establishing the ASEAN Green Bonds Standards in November 2017. This is a voluntary set of guidelines that promote transparency and standardization in the green bond market. To further fuel the green agenda, the World Bank, Bank Negara Malaysia and the Securities Commission Malaysia formed a Technical Working Group to accelerate Malaysia's green finance ambition. The result is the issuance of the world's first green *sukuk* under the SRI *sukuk* framework. With more green bonds expected to be issued, Malaysia is well on its way to achieving its aspiration of making Malaysia a green technology hub by 2030.

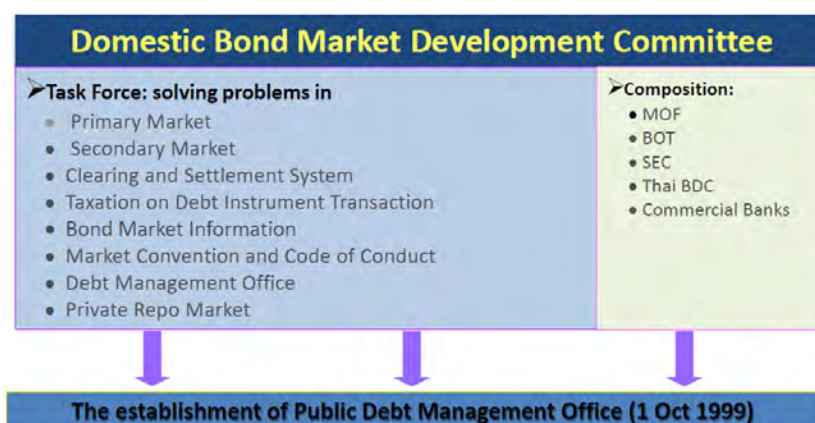
E. Thailand

128. The 1997/98 Asian financial crisis forced Thailand to let the baht float, which led to more than a 50% depreciation of the currency. The depreciation brought down many businesses with foreign exchange exposures, causing massive losses to banks and finance companies. To finance these losses and ensure the systemic stability of the banking and financial system, the Ministry of Finance issued an unprecedented amount of government bonds and government-guaranteed bonds.

129. Government bonds issued in 1998–1999 amounted to THB500 billion, or the equivalent of 10% of gross domestic product at that time. Since the domestic bond market had not been developed yet, Thailand's financial system relied on commercial bank loans. The Financial Institution Development Fund, which is housed in the Bank of Thailand (BOT), stepped in to absorb the losses.

130. The Ministry of Finance examined how to develop the bond market as an alternative funding source by establishing the Domestic Bond Market Development Committee to encourage stakeholders in the public and private sectors to participate in the formulation of a domestic bond market strategy. The committee comprised representatives of the BOT; Ministry of Finance; Securities and Exchange Commission, Thailand; Thai Bond Dealing Center; and commercial banks. The committee established eight task forces to resolve problems in their respective areas. The Ministry of Finance worked intensively to develop legislation for the establishment of the Public Debt Management Office in 1999. Figure A6.7 shows the structure of the committee and its relevant task forces.

Figure A6.7: Thailand's Domestic Bond Market Development Committee



BDC = Bond Dealers Club, BOT = Bank of Thailand, MOF = Ministry of Finance, SEC = Securities and Exchange Commission.

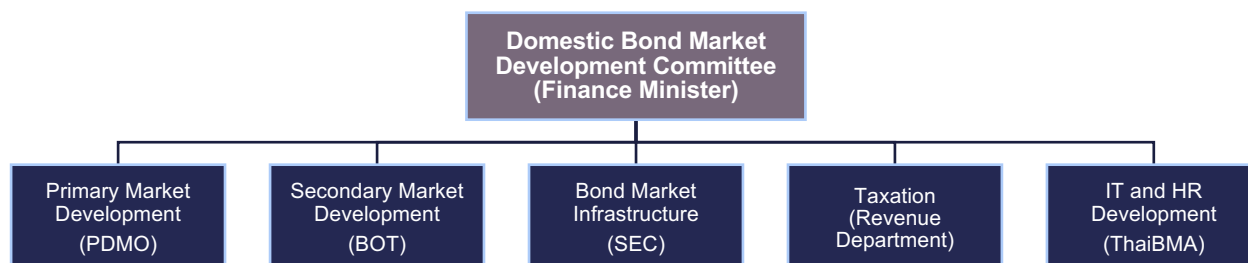
Source: Government of Thailand, Public Debt Management Office.

131. The Ministry of Finance developed its first Domestic Bond Market Development Plan, 2000–2004, resulting in notable changes in bond types, market infrastructure, and operation of the market for debt instruments, including publication of an issuance schedule and establishment of the secondary market's interest rate yield curve that has served as a benchmark for maturities of up to 20 years. A delivery-versus-payment system was also introduced and real-time gross settlement (RTGS) was implemented through the BOT's BAHTNET system. Other relevant reforms included the introduction of a PD system and private repo markets.

132. Following the implementation of the second Domestic Bond Market Development Plan, 2005–2014, the Domestic Bond Market Development Steering Committee was established. It is chaired by the Minister of Finance and solicits the participation of the BOT Governor; Secretary–General of the Securities and Exchange Commission, Thailand; President of the Stock Exchange of Thailand, President of the Thai Bond Market Association (ThaiBMA); and key market participants.

133. Five subcommittees were also established: (i) Primary Market Development, (ii) Secondary Market Development, (iii) Bond Market Infrastructure, (iv) Taxation, and (v) Information Technology and Human Resources Development. As implementation has progressed, the committee reviewed and updated the road map and addressed new challenges. Figure A6.8 shows the structure of the Steering Committee.

Figure A6. 8: Domestic Bond Market Development Steering Committee, 2005–2014



BOT = Bank of Thailand, PDMO = Public Debt Management Office, SEC = Securities and Exchange Commission, ThaiBMA = Thai Bond Market Association.

Source: Government of Thailand, Public Debt Management Office.

134. The Public Debt Management Act B.E. 2548 (A.D. 2005) was amended to allow the Ministry of Finance to issue bonds for restructuring and socioeconomic development in addition to financing the budget deficit. To promote liquidity in secondary market, the BOT established the bond lending unit and the collateral management unit to maintain market participants' confidence in short-sales transactions. The BOT also upgraded the BAHTNET payments system to BAHTNET II, which could support both large value interbank payments in RTGS and the registration and transfer of government securities. As a large volume of government bonds were introduced to the market, the BOT guided banks to use RTGS-capable BAHTNET II to reduce systemic risk as the trading volume accelerated. Subsequently, the custody function for government bonds was transferred to the Thailand Securities Depository Co., Ltd., a wholly owned subsidiary of the Stock Exchange of Thailand, while the BOT's BAHTNET system was still made available to investors.

135. The Thai Bond Dealing Center, which operated an electronic bond trading system, was reformed as ThaiBMA in September 2005 and formally recognized as a self-regulatory organization by the Securities and Exchange Commission, Thailand. Since then, ThaiBMA has assumed responsibility for market monitoring and surveillance to ensure compliance with relevant regulations, fairness, and efficiency. It has played important roles in establishing ethics and code of conduct, developing market convention and standards, and becoming the bond information center and bond pricing agency. Members of ThaiBMA include banks and securities firms that have securities dealing license granted by the Securities and Exchange Commission, Thailand.

136. In 2006, the Steering Committee determined that trading system should be centered at the Stock Exchange of Thailand while ThaiBMA would focus on its functions as a self-regulatory organization and bond information center.

137. As the government bond market was further established, the Steering Committee revised its road map to focus increasingly on the corporate bond market. Consequently, the Securities and Exchange Commission, Thailand began taking a more central role in promoting the corporate bond market.

F. Viet Nam

138. Viet Nam developed an approach to tackle bond market development challenges in a concerted manner even though it was not impacted by the 1997/98 Asian financial crisis on the same scale as other

economies in the region. By the middle of the 2000s, the Ministry of Finance recognized the need to develop a bond market, starting with the government bond market, because it anticipated Viet Nam's graduation from concessional resources of multilateral development banks and bilateral donors in the foreseeable future. It saw a need to diversify funding sources and reduce the reliance on foreign currency finances and risks associated with them. As a result, the Vietnamese bond market is mainly dominated by government bonds, while commercial banks are the largest investor group in the bond market.

139. The Government of Viet Nam issued the first US dollar bond in the international market in 2005. In parallel, the Ministry of Finance started regularly issuing domestic government bonds while consolidating domestic and external debt management functions to create a comprehensive public debt management capacity. It also started regularly publishing an issuance calendar and public debt statistics. The growing availability of LCY government bonds facilitated mobilization of LCY deposits by banks and de-dollarization of the economy.

140. To support the government's attempt to reform Viet Nam's financial markets, the Vietnam Bond Market Forum was formed in November 2006 to promote bond market liquidity through dissemination of market information and standardization of commercial activities among local and international commercial banks, securities companies, fund management companies, and insurance companies. The Viet Nam Bond Market Forum was later transformed into the Viet Nam Bond Market Association in 2009 following approval by the Ministry of Interior.

141. In 2009, the Hanoi Stock Exchange was designated as the central trading venue of domestic government bonds with around 30 market participants, including major commercial banks and securities companies. In 2013, the Hanoi Stock Exchange started publishing a benchmark yield curve. The Ministry of Finance developed and issued a road map in February 2013 and announced its intention to expand the bond market to 38% of gross domestic product by 2020. Due to the institutional nature of its government, however, the Ministry of Finance could not form an interagency committee with the State Bank of Vietnam. Instead, the ministry's road map assigned its various responsible departments and the State Securities Commission to work with the central bank and other stakeholders in carrying out their respective tasks.

142. In 2013, the Ministry of Finance issued the first comprehensive strategy for bond market development covering both government and corporate bonds. Viet Nam's government bond market is now taking a critical step to move the money side of bond trade settlement from a commercial bank to the central bank in accordance with international standards.

143. Viet Nam expects to fully graduate from the World Bank's International Development Association and be classified as an International Bank for Reconstruction and Development (IBRD) IBRD-only Country in 2017, and to graduate from the Asian Development Bank's Asian Development Fund and be classified as an Ordinary Capital Resources Only Country in 2019. The Government of Viet Nam is now reviewing a possible revision of its strategy to take domestic bond market development to the next stage.

Annex 7: Bankruptcy and Insolvency Laws in ASEAN+3

Economy	Bankruptcy and Insolvency Law
People's Republic of China (PRC)	<p>According to Article 7(2) of the Law of the People's Republic of China on Enterprise Bankruptcy (Enterprise Bankruptcy Law), the creditor shall be entitled to ask the debtor to go into bankruptcy.</p> <p>The Enterprise Bankruptcy Law in the PRC is basic and other relevant additional provisions exist for financial institutions, mainly focused on the debtor-creditor relationship.</p> <p>1. Bankruptcy provisions</p> <p>In the PRC, the bankruptcy provisions mainly consist of the Enterprise Bankruptcy Law, Company Law, Securities Law, Commercial Bank Law, and other relevant laws and regulations. Among them, the Enterprise Bankruptcy Law is the special law regulating bankruptcy. If an enterprise legal person cannot repay due debts and its assets are insufficient to pay off all the debt or it apparently lacks solvency, it should clean up its debt according to the Enterprise Bankruptcy Law.</p> <p>After an enterprise is declared bankrupt in accordance with the Enterprise Bankruptcy Law, its collateral property does not belong to the estate, but constitutes repayment of its secured debt, and the remaining assets are included in the estate.</p> <p>2. Settlement of the insolvent assets</p> <p>Settlement of the insolvent assets are effected in the following order:</p> <p>(a) Expenses for bankruptcy proceedings including litigation costs involved in a bankruptcy case; expenses for management, realization and distribution of the debtor's assets; and expense involved in the administrator's performance of these duties and paid for his remuneration and expenses for the employees recruited.</p> <p>(b) Community debts including debts generated when the bankruptcy custodian or debtor requests the opposite party concerned to perform a contract that is not fulfilled completely by both parties concerned; debts generated from the custodial management of the debtor's assets; debts generated from improper gains; the labor cost for the continuance of business operation, social insurance premiums, as well as other debts as incurred therefrom; debts generated from the damage that occurs during the performance of functions and duties by a bankruptcy custodian or other relevant personnel; and debts generated from any damage due to the debtor's assets.</p> <p>(c) The wages, subsidies for medical treatment and disability and comfort, and compensatory funds as owed by a debtor, the fundamental old-age insurance premiums, fundamental medical insurance premiums that shall have been transferred into the employees' personal accounts, as well as the compensation for the employees as prescribed by relevant laws and administrative regulations.</p> <p>(d) The social insurance premiums other than those as prescribed in the aforesaid provisions and tax fees as defaulted by the bankruptcy.</p> <p>(e) The common credits of bankruptcy. Where the insolvent assets are not enough to meet the requirements for liquidation in a same sequence, it shall be distributed in light of the proportion.</p> <p>After the recent financial crisis, and based on lessons learned from the risk of the bankruptcy of large financial institutions, the PRC is developing its Financial Institution Bankruptcy</p>

Economy	Bankruptcy and Insolvency Law
	Management Regulations, which aim to find the resolution of the problem of large financial institutions that are too big to fail. ⁹¹
Hong Kong, China	<p>Any bond issuers declaring bankruptcy are subject to the relevant rules set out in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (CWUMPO). In the case of Hong Kong, China, the Bankruptcy Ordinance (Chapter 6 of the Laws of Hong Kong) generally only applies to individuals.</p> <p>The ranking of a bond among an issuer's overall debt is determined by taking into account the terms and conditions set out in the prospectus, offer documents, term sheets or similar documents, as well as Section 38 (Priority of Debts) of the Bankruptcy Ordinance and Section 265 of the CWUMPO.</p> <p>The insolvency law in Hong Kong, China is contained in the CWUMPO, the Bankruptcy Ordinance, and the Companies (Winding-up) Rules. It is based on the laws of the United Kingdom prior to the introduction of the Cork Report. Like the regimes in Australia and New Zealand, which are also based on the laws of the United Kingdom, it is generally creditor-friendly.</p> <p>Out-of-court restructuring, schemes of arrangement, compulsory liquidations, creditors' voluntary liquidations, and receiverships are available under the insolvency law. No corporate rescue procedure is currently available.⁹²</p>
Indonesia	<p>Law No. 37 of 2004 on bankruptcy and suspension of payment states that a decision to declare bankruptcy must meet the following conditions:</p> <p>(i) a debtor has two or more creditors and is unable to fulfill its obligations on at least one debt on maturity date and its payables; or</p> <p>(ii) a debtor has been declared bankrupt by court decisions, either upon its own application or upon the request of one or more creditors.</p> <p>In case the debtors are banks, securities companies, the stock exchange or clearing and guarantee institution, or the central securities depository, a bankruptcy petition could only be requested by the Financial Services Authority (OJK). In contrast, if debtors are insurance companies, reinsurance companies, pension funds, or state-owned enterprises involved in the public interest, only the Minister of Finance can request a bankruptcy petition.</p> <p>According to Article 85 of the Capital Market Law, the party requesting a bankruptcy petition to the court toward an issuer has to report it to OJK and the stock exchange where the issuer's securities are listed as soon as possible and no later than 2 working days from the date the request for bankruptcy is submitted. According to the original Bapepam-LK Rule Number X.K.5: Disclosure of Information regarding Issuers or Public Company with Respect to Bankruptcy, which remains in force, an issuer who fails or is not able to avoid failure to fulfill its obligations toward a nonaffiliated creditor has to submit a report concerning its condition to both OJK and the stock exchange where its securities are listed as soon as possible, no later than the second working day since the issuer has failed or not been able to avoid failure to fulfill its obligations.</p> <p>The report has to include details about the outstanding debt, including the amount of principal and interest, loan terms, name of creditors, purpose of the debt incurred, and any reasons for the failure or inability to avoid failure. In the event the issuer or public company is submitted to the court for a declaration of bankruptcy, the issuer or public company must submit a report regarding the matter to OJK and the stock exchange(s) where its securities are listed as soon as possible, but not later than 2 working days from the time the issuer or public company learns of the petition for a declaration of bankruptcy. The stock exchange shall publish the information that the issuer or public company is subject to the request for a declaration of bankruptcy from the court within the same day the information is received by the stock exchange. Any expense arising from such declaration of bankruptcy, including the appointment of receivers, becomes the responsibility of the issuer.⁹³</p>

⁹¹ ADB. 2012. *ASEAN+3 Bond Market Forum (ABMF) Phase 1 Report*. Manila.

⁹² ADB. 2016. *ASEAN+3 Bond Market Guide—Hong Kong, China*. Manila.

⁹³ ADB. 2017. *ASEAN+3 Bond Market Guide—Indonesia*. Manila.

Economy	Bankruptcy and Insolvency Law
<p>Japan</p>	<p>There are four statutory insolvency proceedings that apply to Japanese corporations. Each can be categorized into one of two general types, depending on whether the aim of the proceedings is to liquidate the company (Liquidation-Type Proceedings) or rehabilitate the company (Rehabilitation-Type Proceedings):</p> <ul style="list-style-type: none"> (1) Liquidation-Type Proceedings <ul style="list-style-type: none"> (a) Bankruptcy proceedings (<i>hasan</i>) under the Bankruptcy Act (b) Special liquidation proceedings (<i>tokubetsu seisan</i>) under the Companies Act (2) Rehabilitation-Type Proceedings <ul style="list-style-type: none"> (a) Corporate reorganization proceedings (<i>kaisha kosei</i>) under the Corporate Reorganization Act (b) Civil rehabilitation proceedings (<i>minji saisei</i>) under the Civil Rehabilitation Act <p>At the time of the filing of the application for or the commencement of any of those insolvency proceedings or both, depending on the language of the default clause of the relevant bonds, the bonds will be accelerated. If a commissioned company for bondholders has been appointed for the bonds, the commissioned company will act for the benefit of the bondholders as creditors of the issuer in the proceedings. If no commissioned company has been appointed, individual bondholders will be expected to act for themselves in the proceedings.</p> <p>As an alternative to commencing one of the four types of statutory insolvency proceedings above, a Japanese corporation in financial distress may seek to negotiate an out-of-court restructuring of the corporation with its creditors. In the course of such negotiations, a bondholders' meeting may determine the amendment to the terms and conditions of the bonds, such as installment repayment of principal amount or reduction of the interest rate, though a court approval will be required to have the decision of the meeting take effect. The statutory bondholders' meeting system set out in the Companies Act is applicable only to bonds issued by Japanese corporate issuers under Japanese law.⁹⁴</p>
<p>Republic of Korea</p>	<p>This section provides a brief history of the evolution of the legal frameworks for bankruptcy and insolvency in the Republic of Korea.</p> <p>1. Formalization of Workout Arrangement</p> <p>The principles on bankruptcy in the Republic of Korea were adopted from the German legal system, as introduced by Japan. The principles on rehabilitation were largely modeled on United States federal law, such as Chapter 11 protections.</p> <p>In June 1998, almost all Korean financial institutions entered into the Financial Institutions Arrangement for Facilitating Corporate Restructuring (known as the Master Workout Arrangement), introducing an informal workout system into the Korean insolvency regime. The Government of the Republic of Korea subsequently enacted the Corporate Restructuring Promotion Act (CRPA), which replaced the Master Workout Arrangement with the aim of facilitating and expediting informal workouts. The act, effective from September 2001 until the end of 2005, was the basic law governing out-of-court, informal corporate rescue procedures.</p> <p>2. Consolidation of the Legal Frameworks</p> <p>On 21 March 2005, the Government of the Republic of Korea promulgated the Act on Rehabilitation and Bankruptcy of Debtors, also known as the Unified Insolvency Law, which came into force in April 2006.</p> <p>The law consolidated the previous Korea Company Reorganization Act, Composition Act, Bankruptcy Act, and Act on Rehabilitation of Individual Debtors in order to establish systematic procedures for the rehabilitation and liquidation of insolvent companies and individuals. In consolidating these statutes, the law abolished the composition procedure and established a rehabilitation procedure which modified and improved the previous reorganization procedure. As a result, the law provided for two corporate insolvency procedures: bankruptcy and rehabilitation. In the application of the Act on Rehabilitation and Bankruptcy of Debtors, nonresidents shall have the same status as that of Korean companies and individuals.</p>

⁹⁴ ADB. 2016. *ASEAN+3 Bond Market Guide—Japan*. Manila.

Economy	Bankruptcy and Insolvency Law
	<p>As a response to difficulties in reaching agreement between creditors and a lack of professionalism in the management of insolvent companies, the government introduced the corporate restructuring vehicle in October 2000. The corporate restructuring company was also introduced in May 1999 to promote corporate restructuring of insolvent companies and to address financial institutions' nonperforming loans.</p> <p>The primary role of the corporate restructuring company is to obtain managerial control of an insolvent company and enhance its corporate value through vigorous restructuring. The insolvent company is eventually sold, within 8 years of the date of acquisition, in order for the corporate restructuring company to realize capital gains.</p> <p>3. Current Framework and Practices</p> <p>The latest CRPA, which came into effect on 18 March 2016, is the fifth revised version of the original CRPA enacted in 2001. The subordinate regulations to the new CRPA, the Presidential Decree and the Rules on Supervision of Financial Institutions to Promote Corporate Restructuring, came into effect on 29 April 2016 and 3 May 2016, respectively.⁹⁵</p>
Malaysia	<p>Malaysia's procedures on bankruptcy were established under the Companies Act, 1965; Bankruptcy Act, 1967; and their respective rules and amendments. The Companies Act, 1965 contains provisions for insolvency, rehabilitation, appointment of receivers, and winding up procedures for companies. Specific laws governing industries may also have provisions governing the insolvency of a company (e.g., the Banking and Financial Institutions Act, 1989 for banks). The Bankruptcy Act, 1967 covers bankruptcy provisions for individuals.⁹⁶</p>
Philippines	<p>The Financial Rehabilitation and Insolvency Act (FRIA) and the Civil Code govern bankruptcy procedures in the Philippines. FRIA was passed into law on 18 July 2010, in the process repealing the Insolvency Law, which was enacted in 1909. FRIA provides for three different modes of rehabilitating an insolvent corporate debtor: (i) court-supervised rehabilitation, (ii) prenegotiated rehabilitation, and (iii) out-of-court or informal restructuring or rehabilitation.</p> <p>In a court-supervised rehabilitation proceeding, the court appoints a receiver and determines which claims against the debtor are valid. A rehabilitation plan is to be agreed upon by the debtor and creditors representing more than 50% of the claims of each class of creditors. If the plan is not finalized or approved by the court, the debtor will be liquidated. During the pendency of the proceedings, all claims against the debtor are suspended, and taxes, as well as fees due from the debtor to the government, are deemed waived. The amount of debt reduced or forgiven will not be subject to tax.</p> <p>In a prenegotiated rehabilitation, a debtor seeks court approval of a rehabilitation plan it previously contracted with creditors, representing at least two-thirds of its total liabilities, and at least 67% and 75% of its secured and unsecured obligations, respectively. Claims against the debtor are suspended while the proceedings are pending in court.</p> <p>In an out-of-court restructuring, the debtor and creditors—representing at least 85% of the debtor's total liabilities, at least 67% of its secured obligations, and 75% of its unsecured obligations—agree on a restructuring or rehabilitation plan. This plan becomes binding on the contracting parties, as well as on other creditors of the debtor. During negotiations, creditors holding more than 50% of the total claims may approve a standstill of up to 120 days.</p> <p>FRIA does not cover banks and insurance companies as other laws and regulations govern these entities. However, it provides for the liquidation of insolvent juridical debtors. The debtor can initiate voluntary liquidation through a verified petition or a verified motion in court-supervised or prenegotiated rehabilitation proceedings. Rehabilitation proceedings may also be transformed into liquidation proceedings in the following situations:</p> <ul style="list-style-type: none"> (i) when the rehabilitation court finds that the debtor is insolvent and there is no substantial likelihood for the debtor to be successfully rehabilitated, (ii) when the rehabilitation plan is not confirmed by the rehabilitation court within 1 year from filing of the petition, (iii) when the rehabilitation proceedings are terminated due to failure or dismissal of the rehabilitation petition for reasons other than technical grounds, or

⁹⁵ ADB. 2018. *ASEAN+3 Bond Market Guide—Republic of Korea*. Manila.

⁹⁶ ADB. 2016. *ASEAN+3 Bond Market Guide—Malaysia*. Manila.

Economy	Bankruptcy and Insolvency Law
	<p>(iv) at any time upon the recommendation of the rehabilitation receiver that the rehabilitation of the debtor is not feasible.</p> <p>Involuntary liquidation is initiated by three or more creditors whose aggregate claims amount to at least PHP1 million or at least 25% of the subscribed capital stock or partners' contribution, whichever is higher, or through a verified petition or motion in court-supervised or prenegotiated rehabilitation proceedings.</p> <p>FRIA has special provisions for the liquidation of a securities market participant. It recognizes the power of a regulatory agency or an SRO to liquidate trade-related claims of clients or customers of a securities market participant, which, for purposes of investor protection, are deemed to have absolute priority over all other claims of whatever nature or kind insofar as trade-related assets are concerned. Trade-related assets include cash, securities, trading rights, and other assets owned and used by a securities market participant in the ordinary course of its business.</p> <p>FRIA requires that the liquidation plan and its implementation shall ensure that the concurrence and preference of credits, as enumerated in the Civil Code and other relevant laws, shall be observed, unless a preferred creditor voluntarily waives his preferred right. Credits for services rendered by employees or laborers to the debtor shall enjoy first preference under Article 2244 of the Civil Code, unless the claims constitute legal liens under Articles 2241 or 2242 of the Civil Code.⁹⁷</p>
Singapore	<p>Singapore has a well-established, comprehensive corporate bankruptcy and insolvency statutory framework, which is largely set forth in the Companies Act. The corporate bankruptcy and insolvency laws primarily stem from English and Australian sources, and remain similar in many respects to the legislation of those jurisdictions. However, the Companies Act only sets out the insolvency framework for Singapore-incorporated issuers and the insolvency law applicable to a bond or note issuer depends on the jurisdiction of incorporation of such issuer, which may not be Singapore.⁹⁸</p>
Thailand	<p>The Civil and Commercial Code and the Bankruptcy Act cover basic bondholder rights. The Civil and Commercial Code covers the principles and rules for civil law for business and individuals. Obligations, contracts, mortgages, and other forms of loan security also fall under the Civil and Commercial Code, as well as liquidation procedures for insolvent debtors. Under the Bankruptcy Act, creditors, including bondholders, can file a petition with the Bankruptcy Court for a rehabilitation or bankruptcy proceeding against a debtor's business. Indenture agreements in bond issues can also specify a bondholder representative. The bondholder representative oversees bondholder rights, including the filing of claims and demand of payments from the issuer or guarantors. Bondholders can sue and claim damages from the bondholder representative in case it acts in bad faith or causes damages to bondholders. Foreign bondholders have rights similar to Thai bondholders. Bond documents (e.g., Prospectus, term sheets, or indenture agreements) may also contain covenants and relevant default clauses specific to the bond issue to provide additional protection for bondholders.⁹⁹</p> <p>According to the Bankruptcy Act B.E. 2483, 1940, except in the case of a secured bond, corporate bondholders shall be treated as ordinary creditors. In addition, under the Securities and Exchange Act and the Trust Act, if the issuer of corporate bonds sets up a reserve account or sinking fund in the form of a trust, bondholders shall have bankruptcy remoteness and, ultimately, rights to that trust property. When the company goes bankrupt, corporate bondholders shall have the right to the property of the company and receive performance of an obligation due to them according to the following prioritization: (i) bondholders for which the issuer has set up a reserve account or sinking fund in the form of a trust, (ii) secured creditors, and (iii) unsecured creditors.¹⁰⁰</p>
Viet Nam	<p>In Viet Nam, the bankruptcy of a corporate bond issuer has not occurred yet. If it were to happen, the Bankruptcy Law 2004 would be applied.</p>

⁹⁷ ADB. 2017. *ASEAN+3 Bond Market Guide—Philippines*. Manila

⁹⁸ ADB. 2016. *ASEAN+3 Bond Market Guide—Singapore*. Manila

⁹⁹ ADB. 2016. *ASEAN+3 Bond Market Guide—Thailand*. Manila.

¹⁰⁰ Footnote 89.

Economy	Bankruptcy and Insolvency Law
	<p><i>The Asia-Pacific Restructuring and Insolvency Guide 2006</i> provides details on the restructuring and insolvency frameworks of Asia-Pacific economies. According to this guide, prior to October 2004, the legal framework for bankruptcy in Viet Nam consisted of the Law on Business Bankruptcy dated 30 December 1993, the Decree on Business Bankruptcy dated 23 December 1994, and various subordinate legal instruments (collectively referred to as the “old Bankruptcy Law”).</p> <p>The old Bankruptcy Law was generally considered to be deficient and by 2002, the courts had received only 151 petitions, with a mere 46 of these resulting in a declaration of bankruptcy. The old Bankruptcy Law was replaced by the Bankruptcy Law dated 15 June 2004, which came into effect on 15 October 2004, and the Resolution of the Judges’ Council of the Supreme People’s Court guiding the implementation of the Bankruptcy Law dated 28 April 2005 (collectively referred to as the “Bankruptcy Law”).</p> <p>The Bankruptcy Law applies to enterprises and cooperatives established in accordance with Vietnamese law. The list of enterprises covered is extensive and includes state-owned enterprises, enterprises belonging to social and political organizations, limited liability companies, joint stock companies, partnerships, private enterprises, and foreign-invested enterprises. The Bankruptcy Law does not apply to individuals or certain small business entities such as registered family and household businesses. The law stipulates that additional regulations will be issued to address the insolvency of enterprises in certain specific sectors, including: (i) national defense and security; (ii) finance, banking and insurance; and (iii) other sectors directly providing public utility products and services.</p> <p>To date, however, such detailed laws have not been issued. Voluntary liquidation and restructuring are addressed by separate legal frameworks depending on the type of enterprise. An enterprise experiencing financial difficulties may consider restructuring or terminating its operations in accordance with the relevant legislation.</p> <p>Chapter VII of the Law on Enterprises, which governs limited liability companies, joint stock companies, partnerships and private enterprises, deals with the dissolution and reorganization of enterprises and allows for the division, separation, consolidation, merger and conversion of enterprises.</p> <p>The Law on Foreign Investment governs the dissolution, division, demerger, consolidation and conversion of foreign-invested enterprises.</p> <p>Both the Law on Enterprises and the Law on Foreign Investment were replaced by a unified Law on Enterprises which was passed on 29 November 2005 and became effective on 1 July 2006, and which contains similar provisions.</p> <p>Chapter VII of the Law on State-Owned Enterprises deals with the reorganization and dissolution of state-owned enterprises.¹⁰¹</p>
Cambodia	<p>The Law on Bankruptcy and Insolvency came into effect on 8 December 2007 and was designed to provide collective, orderly, and fair satisfaction of creditor claims from debtor properties and, where appropriate, the rehabilitation of the debtor’s business. The Law on Bankruptcy and Insolvency, 2007 applies to the assets of all individuals and legal entities conducting business in Cambodia.</p> <p>Bankruptcy and insolvency provisions and procedures related specifically to the issuance and servicing of debt securities are expected to evolve in time in line with the development of the Cambodian bond market.</p> <p>The Securities and Exchange Commission of Cambodia is in the process of drafting the Anukret on Rehabilitation and Liquidation in the Securities Sector, which is expected to be ready for publication by the end of 2017.¹⁰²</p>
Lao People’s Democratic Republic	<p>The Law on Bankruptcy of Enterprises, also known as the Bankruptcy Law, was adopted by the National Assembly in October 1994 and promulgated by the President in November 1994. It stipulates the comprehensive treatment of a bankrupt enterprise, covering bankruptcy petition, control of assets under the Asset Supervision Committee assigned by the court, meetings of creditors, reorganization of enterprises, liquidation of assets, and distribution of</p>

¹⁰¹ ADB. 2012. *ABMF Phase 1 Report*. Manila.

¹⁰² ADB. 2018. *ASEAN+3 Bond Market Guide—Cambodia*. Manila.

Economy	Bankruptcy and Insolvency Law
	<p>assets. According to Article 15 of the law, the Asset Supervision Committee comprises creditor and debtor representatives, court and financial authority employees, as well as workers' representatives of the debtor enterprise. The rights and duties of the Asset Supervision Committee are set out in Article 18 and include the determination of the debtor's assets and liabilities and the debts owed to each creditor. The Asset Supervision Committee is liable to the court regarding the performance of its duties.</p> <p>With regard to provisions relating to the bankruptcy of securities market participants, the Law on Securities stipulates the dissolution of a securities company (Article 71) and the dissolution of an asset management company (Article 77), while the dissolution or treatment of other securities market participants relative to bankruptcy follows the Bankruptcy Law.</p> <p>The use of clauses on bankruptcy or insolvency in disclosure and other documentation related specifically to the issuance and servicing of debt securities is expected to evolve in line with the development of the Lao PDR bond market.¹⁰³</p>
Myanmar	<p>Provisions in Part V of the existing Companies Act, 1914 are concerned with the winding up of companies and contain comprehensive bankruptcy and insolvency prescriptions. However, these are expected to be reviewed and revised once the New Myanmar Company Law and the corresponding Rules have been promulgated.</p> <p>Provisions for bankruptcy and compulsory liquidation of banks and nonbank financial institutions are contained in the Financial Institutions Law, which also promotes equal access of resident and nonresident creditors to a universal pool of assets of a bank or nonbank financial institution in the process of liquidation that had engaged in cross-border activities.¹⁰⁴</p>
Brunei Darussalam	<p>The bankruptcy and insolvency framework can be found in the Companies Act (Chapter 39) and the Insolvency Order 2016 (S1/2016).¹⁰⁵</p>

¹⁰³ ADB. 2017. *ASEAN+3 Bond Market Guide—Lao PDR*. Manila.

¹⁰⁴ ADB. 2018. *ASEAN+3 Bond Market Guide—Myanmar*. Manila.

¹⁰⁵ ADB. 2017. *ASEAN+3 Bond Market Guide—Brunei Darussalam*. Manila.

Annex 8: Definition of Default in ASEAN+3

Economy	Terms of Events of Default	Declaration of Default
<p>People's Republic of China (PRC)</p>	<p>In the PRC, there is no legal definition of default. Generally speaking, the market works on the basis that bonds approved by all competent authorities have a lower chance of default. However, the concept of event of default in market practice is increasingly seen as a case of missed payment. Therefore, close monitoring of the market development may be necessary.</p> <p><u>Constituting an event of default</u></p> <p>As far as recognition of an event of default is concerned, bond issue documentation may not have a definition or sufficient detail. The People's Bank of China has general rules on default in Inter-Bank Bond Market instruments, but cover limited security types. A typical definition is as follows: If an issuer cannot pay 90 days after the maturity of the bond, it may constitute an event of default.</p> <p><u>Payment default in the Exchange market/Inter-bank Bond Market</u></p> <p>(a) Participant default. An event of participant default is either the default in payment of any sum payable to the China Securities Depository and Clearing Corporation (CSDCC) or China Central Depository & Clearing Co., Ltd. (CCDC), or the default in delivery of securities to the CSDCC or CCDC.</p> <p>(b) Participant-versus-investor default: An event of participant-versus-investor default is either a client default in any of the payment obligations due to the clearing participant (in the case of the Exchange market) or a client default in delivery obligations owed to the clearing participant (in the case of the Exchange market).</p> <p>The clearing participant (in the case of the Exchange market) should recognize and declare an event of default. No case of default of bonds has taken place in the Inter-Bank Bond Market yet, and there are no known cases of default for corporate bonds.</p> <p><u>Covenants or provisions related to default in issue documentation.</u></p>	<p>The declaration of default remains at the determination of investors, through bondholder meetings.</p> <p><u>Timing of default</u></p> <p>However, a necessary distinction may be made on the timing of default, i.e. no payment is made on the payment date (during the 24 hours of payment day, it is constituted as "default"), or no payment during business hours of the payment day (i.e., by market close, it is "accidental default"). Usually, default happens at the end of the day.</p>

Economy	Terms of Events of Default	Declaration of Default
	<p>A cross-default clause is increasingly being introduced in issue documentation, and an acceleration clause is more likely to be included in issue documentation these days. Banks can offset debts against assets of the same account holder; offset (of liabilities versus assets) is permitted by law. A <i>pari passu</i> clause is not used. An issuer is the debtor on a specific issue. This is true in particular for subordinate debt.¹⁰⁶</p>	
<p>Hong Kong, China</p>	<p>Events of default are a matter of negotiation but, generally, cover nonpayment of principal or interest by the issuer; noncompliance with obligations under the bond instruments; nonpayment of other indebtedness of the issuer or guarantor when due; and the occurrence of certain specified events, for example, change of control, commencement of proceedings against the issuer, passing of an effective resolution for the winding up, administration or dissolution of the issuer or guarantor.</p> <p>Events of default are usually found in the trust deed, fiscal agency agreement, or deed of covenant (executed by the issuer and guarantor).¹⁰⁷</p>	<p><u>Fiscal Agent Structure</u></p> <p>Noteholders may give written notice to the issuer to declare that the notes would become forthwith due and payable. This direct right is contained in a deed of covenant.</p> <p><u>Trustee Structure</u></p> <p>The trustee may, at its discretion, give notice of default by:</p> <ul style="list-style-type: none"> (i) Declaring the notes immediately due and repayable (with a certified opinion that the event is materially prejudicial to the interests of the holders of the notes); or (ii) If so directed in writing by the holders of at least 25% in principal amount of the notes, or by an extraordinary resolution of the holders of the notes, declaring all the notes immediately due and repayable. <p>The trustee may institute proceedings against the issuer to enforce repayment of the principal of the notes with accrued interest and to enforce the provisions of the trust deed. However, the noteholders are not entitled to proceed directly against the issuer unless the trustee fails to do so within a reasonable period and such failure is continuing. The noteholders' interests are represented by the trustee.</p> <p><u>Event of Default</u></p> <p>The default may happen at any time during the day.¹⁰⁸</p>
<p>Indonesia</p>	<p>The event of default is a condition where the Issuers can be declared default.</p> <p>Pursuant to prevailing Bapepam-LK Regulation, the Trustee Contract shall contain a list of events of default, among others:</p> <ol style="list-style-type: none"> 1. The issuer does not pay the principal and interest of the debt securities and <i>sukuk</i> on its maturity; 	<p>Bapepam-LK regulation requires that the procedure to declare default be clearly stated on the Trustee Contract.</p> <p>Bapepam-LK Rule No. VI.C.4 also requires a Contract of Debt Securities Trustee to contain a clear procedure to solve the event of default or state a default. Usually, when an event of default occurs, the trustee would require the issuer to take corrective</p>

¹⁰⁶ ADB. 2012. *ABMF Phase 1 Report*. Manila.

¹⁰⁷ Footnote 96.

¹⁰⁸ Footnote 96.

Economy	Terms of Events of Default	Declaration of Default
	<ol style="list-style-type: none"> 2. The actual condition about the collateral or the issuer status and its management is different from the information and explanation provided by the Issuer. 3. The issuer has been declared in default in relation to credit agreement by one or more of its creditors (cross default). For instance, cross-default is possible, and clauses are used in contracts; grace periods may apply. 4. Suspension of payment (moratorium) of the issuer is declared, and 5. The issuer does not perform other obligations stated in the trustee contract.¹⁰⁹ 	<p>action to solve the problem in a specific time period. If the issuer does not take the necessary corrective actions, the trustee may invite all bondholders and conduct a general meeting of bondholders to seek clarification from the issuer regarding the failure.</p> <p>If the meeting does not accept the issuer's explanation and clarification, the meeting may:</p> <ul style="list-style-type: none"> restructure the debt; or declare default status to the Issuer. set another bondholders meeting to decide whether the default will be noticed or not.
Japan	<p>The Commercial Code of Japan stipulates the event of default. In relation to this, under the New Companies Act adopted in June 2005 (enforced in May 2006), a commissioned company for bondholders and its liability and power have been expanded</p>	
Republic of Korea	<p>When an event of default occurs to the issuer, which is one of the major details of an entrustment contract based on relevant provisions in the contract, the trustee announces this information to the trust and Bond Information Service (BIS through www.kofiabond.or.kr) operated by the Korea Financial Investment Association, which enables notification to all the investors.¹¹⁰</p>	
Malaysia	<p>The events of default are usually negotiated terms but the Trust Deed Guidelines issued by the Securities Commission provide for the minimum content requirements for such trust deed. The trust deed and the terms and conditions of debentures must provide for, but should not be limited to, the following:</p> <p>a list of all events, the occurrence of any of which would entitle or oblige the trustee to declare the debentures immediately due and repayable (to the extent appropriate and subject to any materiality thresholds and provision for remedy or period of grace which may be negotiated) including the following:</p> <ol style="list-style-type: none"> a. where there is any default in payment of any principal, premium or interest or profit under the debentures or <i>sukuk</i>; b. where a winding up order has been made against the issuer; c. where a resolution to wind up the issuer has been passed; 	<p>The trust deed and the terms and conditions of debentures must provide for, but should not be limited to, the powers of the trustee in any of the events described in paragraph (i) include:</p> <ol style="list-style-type: none"> a. the powers of the trustee to declare the debentures or <i>Sukuk</i> immediately due and payable at its discretion; b. the powers of the trustee to declare the debentures or <i>Sukuk</i> immediately due and payable as directed by a special resolution; c. the powers of the trustee to enforce the provisions of the trust deed; d. the circumstances under which the trustee shall be bound to enforce the provisions of the trust deed; and

¹⁰⁹ Footnote 96.¹¹⁰ Footnote 96.

Economy	Terms of Events of Default	Declaration of Default
	<ul style="list-style-type: none"> d. where a scheme of arrangement under section 176 of the Companies Act 1965 has been instituted against the issuer; e. where a receiver has been appointed over the whole or a substantial part of the assets of the issuer; f. where there is a breach by the issuer of any term or condition in the debentures or <i>sukuk</i> or provision of the trust deed or of any other document relating to the issue, offer or invitation in respect of the debentures or <i>sukuk</i>; g. where any other indebtedness of the issuer becomes due and payable prior to its stated maturity or where the security created for any other indebtedness becomes enforceable; h. where there is a revocation, withholding, invalidation or modification of a license, authorization or approval that impairs or prejudices the issuer's ability to comply with the terms and conditions of the debentures or <i>sukuk</i>, or the provisions of the trust deed or any other document relating to the issue, offer or invitation in respect of the debentures or <i>sukuk</i>.¹¹¹ 	<ul style="list-style-type: none"> e. the circumstances under which the holders of the debentures or Sukuk are entitled to pursue their rights and remedies.
Philippines	<p>The following descriptions are taken from a sample prospectus of corporate bonds in the Philippines and have been generalized for reference.</p> <ul style="list-style-type: none"> a. Event of Default. The Issuer shall be considered in default under the Bonds and the Trust Indenture or Trust agreement in case any of the defined events (exhibit the examples of the items, each an "Event of Default") shall occur and is continuing: <ul style="list-style-type: none"> - Nonpayment default - Insolvency default - Cross-default - Winding-up proceedings - Representation and warranty default - Covenant default - Breach of obligations default - Expropriation default - Judgment default - Writ and similar process default - Closure default 	

¹¹¹ Footnote 96.

Economy	Terms of Events of Default	Declaration of Default
	<ul style="list-style-type: none"> - Validity default - Change of control default <p>b. Consequences of Default. If any one or more of the Events of Default shall occur and be continuing after the lapse of the period given to the Issuer within which to cure such Event of Default under the Trust Indenture or Trust Agreement, if any, or upon the occurrence of such Event of Default for which no cure period is provided,</p> <p>(i) the Trustee, upon the written direction of the Majority Bondholders, by notice in writing delivered to the Issuer, or (ii) the Majority Bondholders, by notice in writing delivered to the Issuer and the Trustee, or (iii) the Trustee, in its discretion, in case of a Non-Payment or Insolvency Default, may declare the Issuer in default and declare the principal of the Bonds then outstanding, together with all interest accrued and unpaid thereon and all amounts due thereunder, to be due and payable not later than (for instance) 5 Business Days (the periods provided in the Trust Agreement and in these Terms and Conditions) from the receipt of the declaration of default (“Default Payment Date”) with copy to the Paying Agent, who shall then prepare a payment report in accordance with the Registry and Paying Agency Agreement. Thereupon, the Issuer shall pay in accordance with the Registry and Paying Agency Agreement.¹¹²</p>	
Singapore	The events of default are usually negotiated terms in the Indenture or Trust Deed. ¹¹³	
Thailand	<p>Generally, an event of default will be stipulated in the terms and conditions of the debenture. Under Thai law, the terms and conditions are deemed to be an agreement between the debenture issuer and the debenture holder. The following are examples of “events of default” that are normally stipulated in the terms and conditions of a debenture:</p> <ol style="list-style-type: none"> 1. Nonpayment. If the Issuer makes a default in the payment of any principal, premium or interest due in respect of the Bonds. 2. Breach of Other Obligation. If the Issuer does not perform or comply with one or 	

¹¹² Footnote 96.¹¹³ Footnote 96.

Economy	Terms of Events of Default	Declaration of Default
	<p>more of its other obligations under the Bonds, the Trust Deed or Terms and Conditions.</p> <ol style="list-style-type: none"> <li data-bbox="448 327 967 491">3. Insolvency. If the Issuer or any of its group entities becomes insolvent or bankrupt, or is unable to pay its debts, stops, suspends or threatens to stop or suspend payment of all or a material part of its debts, by Court order. <li data-bbox="448 506 967 722">4. Enforcement Proceeding. If a distress, attachment, execution, seizure before judgment or other legal process is levied, enforced or sued out on or against any material part of the property, assets or turnover of the Issuer or any of its group entities and is not discharged or stayed within 60 days. <li data-bbox="448 737 967 848">5. Winding-up. If an order is made or an effective resolution passed for the winding-up or dissolution or administration of the Issuer or any of its group entities. <li data-bbox="448 863 967 1079">6. Security Enforced. If an encumbrancer takes possession or an administrative or other receiver or an administrator or other similar officer is appointed of the whole or any substantial part of the property, assets or turnover of the Issuer or any of its group entities and is not discharged within 60 days. <p>The debenture holder and/or debenture holder representative (Trustee) will normally recognize and declare the default. The declaration of event of default will be made in accordance with the terms and conditions of the debentures. Thai law is silent as to whether the default will happen during the day or at the end of the day. However, in practice, the default will immediately occur when the debenture holder and/or debenture holder representative (Trustee) declares an event of default. The precedent of a default of debentures normally occurs on the grounds that the debenture issuer fails to pay interest and to repay the principal to the debenture holder when due.¹¹⁴</p>	
Viet Nam	<p>Bond Settlement Default. Settlement default in domestic bond transactions traded on an exchange has not occurred yet. If a default occurs in securities or cash settlement, the principles and resolution sequence set out in the settlement regulations of the Vietnam Securities Depository apply. In Viet Nam, there has been no precedent of a default of a corporate issuer on interest and principal payments. However, a bondholder is a creditor of the issuer so, if it happens, the Bankruptcy Law</p>	

¹¹⁴ Footnote 96.

Economy	Terms of Events of Default	Declaration of Default
	(No. 2112004/QHII) will be applied, and issuer is required to announce the bankruptcy status. ¹¹⁵	
Cambodia	<p>The Prakas on Accreditation of Bondholders Representative includes a definition of default. According to Article 2.1 of the <i>prakas</i>, “[d]efault refers to any events that cause the issuer to be unable to fulfill the debt payment obligation including principle and/or interest as prescribed in the terms and conditions of the debt securities.”</p> <p>In addition, the Prakas on the Public Offering of Debt Securities prescribed that definitions of possible events of default are to be included in the disclosure document provided to potential investors at the time of the public offering.¹¹⁶</p>	In the event of default, the bondholders representative is required to notify the bondholders and also report the event to the Securities and Exchange Commission of Cambodia. ¹¹⁷
Lao People’s Democratic Republic	The Regulation on Issuance of Corporate Bonds is silent on the definition of and manner in which provisions on an event of default should be specified. Instead, descriptions of event(s) of default are contained in the terms and conditions of the bond in the prospectus. ¹¹⁸	
Myanmar	In the absence of a corporate bond market in Myanmar, the need to define events of default and possible cross-default provisions has not yet arisen. However, the market expects such prescriptions in laws and regulations to be introduced in line with the development of the bond and securities market, likely starting with provisions in the New Myanmar Company Law. ¹¹⁹	
Brunei Darussalam	Generally, the descriptions of events of default are negotiated and described in the bond documentation or prospectus, or in the case of a Trust Deed, in the trust instrument. ¹²⁰	

¹¹⁵ Footnote 96.

¹¹⁶ ADB. 2018. *ASEAN+3 Bond Market Guide—Cambodia*. Manila.

¹¹⁷ Footnote 106.

¹¹⁸ ADB. 2017. *ASEAN+3 Bond Market Guide—Lao People’s Democratic Republic*. Manila.

¹¹⁹ ADB. 2018. *ASEAN+3 Bond Market Guide—Myanmar*. Manila.

¹²⁰ ADB. 2017. *ASEAN+3 Bond Market Guide—Brunei Darussalam*. Manila.

Annex 9: Credit Guarantee and Investment Facility

1. The Credit Guarantee and Investment Facility (CGIF) was established by the Association of Southeast Asian Nations plus the People's Republic of China, Japan, and Republic of Korea (ASEAN+3), together with the Asian Development Bank (ADB), on 12 November 2010 under the Asian Bond Markets Initiative (ABMI), which aims to develop and strengthen local currency (LCY) bond markets in the ASEAN+3 region. CGIF is a key activity of Task Force 1 of ABMI, which promotes the issuance (supply) of LCY bonds in the region. Increased issuances of LCY bonds will aid in promoting deep and liquid LCY bond markets in the ASEAN+3 region, which in turn will help foster economic development, build the resilience of the region's financial markets, and prevent disruptions to the international financial order.

2. To support this goal, CGIF provides guarantees to LCY corporate bonds issued by creditworthy companies in ASEAN+3 member economies. It aims to help these companies secure long-term LCY financing to reduce their dependency on short-term foreign currency borrowing and address currency and maturity mismatches. Facilitating the access of creditworthy companies to LCY bond markets and pushing the issuance of debt securities with longer-term maturities that match the gestation of investment projects also contributes to the more efficient allocation of savings within the ASEAN+3 region.

3. CGIF was established as a trust fund of ADB and enjoys ADB's privileges and immunities as an international organization. However, CGIF is operationally independent from ADB, with CGIF's Meeting of Contributors as its highest decision making organ, and CGIF's own Board of Directors, as well as its management team and staff, separate from that of ADB. Credit rating agencies rate CGIF as an entity independent from ADB. CGIF's is currently rated AA by Standard and Poor's in the global rating scales and AAA by domestic rating agencies in ASEAN economies in their national rating scales. LCY corporate bonds guaranteed by CGIF enjoy the high credit standing of CGIF as a guarantor, enabling them to access investors who might otherwise find it difficult to invest in bonds that lack CGIF's guaranteed support.

4. In May 2012, CGIF commenced its guarantee operations. CGIF's Board of Directors approved its first guarantee underwriting proposal in September 2012 and CGIF's inaugural guarantee was issued in April 2013 in the Thai baht bond market. Since then, CGIF has actively built up its guarantee portfolio and project pipeline.

5. When CGIF started its guarantee operations, its initial guarantee capacity was limited to USD700 million given the USD700 million in capital provided by its contributors (shareholders) without any leverage. This resulted in an ability to support only a very small number of bond issuers despite its ambitious mandate. As the guarantee capacity limitation constrained CGIF's business development, its contributors decided in November 2013 to increase CGIF's guarantee capacity to USD1.75 billion by increasing the leverage ratio from 1:1 to 2.5:1. However, this increase was also found to be insufficient and CGIF contributors agreed in December 2017 to again increase CGIF's guarantee capacity to USD3.0 billion by increasing its capital to USD1.2 billion. This capital increase implementation is underway with plans for completion by 2023.

6. By the end of 2018, CGIF's Board of Directors has approved 33 guarantee underwriting proposals amounting to a total of USD3.1 billion equivalent in ASEAN local currencies. From these approved proposals, 31 guarantees with a cumulative total of USD1.6 billion equivalent had been issued by the end of March 2019 to support bonds issued by 22 companies, including 3 guarantees issued in the first quarter

of 2019. Among these, five guaranteed bonds have been successfully redeemed in accordance with their original scheduled maturities by the issuers. CGIF has yet to pay a claim on any of its guarantee obligations to date. The history of CGIF guarantee approvals, issuances, and redemptions is shown in Table A9.1.

Table A9.1: Guarantee Approvals, Issuances and Redemptions

	2012	2013	2014	2015	2016	2017	2018
Guaranteed Approvals	1	5	3	5	5	5	9
Amount (USD million)	140	558	290	584	475	355	713
Guaranteed Issuances	–	2	5	1	8	3	9
Amount (USD million)	–	123	371	137	409	73	303
Guaranteed Redemptions	–	–	–	–	2	3	–
Amount (USD million)	–	–	–	–	123	135	–

Source: Credit Guarantee and Investment Facility.

7. The geographical composition of the 31 guarantees issued so far in terms of the economy of bond issuers and markets where, or currencies in which, bonds were issued is shown in Table A9.2. CGIF guarantees have supported bonds issued by companies from nine out of thirteen ASEAN+3 member economies.

Table A9.2: Issued Guarantees by Economy and Currency (USD million equivalent)

Economy	Currency					Total
	IDR	PHP	SGD	THB	VND	
Indonesia	59		214			273
Lao PDR			48			48
Malaysia				78		78
Myanmar				70		70
Philippines		149				149
Singapore			74			74
Thailand			137	127		264
Viet Nam					532	532
People's Rep. of China				98		98
Korea			52			52
Total	59	149	525	373	532	1,638

IDR = Indonesian rupiah, Lao PDR = Lao People's Democratic Republic, PHP = Philippine peso, SGD = Singapore dollar, THB = Thai baht, VND = Vietnamese dong.

Source: Credit Guarantee and Investment Facility.

8. CGIF guarantees were issued in five out of the six LCY corporate bond markets that currently operate in ASEAN member economies (Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam). While the main focus of CGIF's guarantee operations are these six LCY corporate bond markets, CGIF has also intensified its efforts to kick-start bond markets in Brunei Darussalam, Cambodia, the Lao People's

Democratic Republic (Lao PDR), and Myanmar, and has identified possible pilot transactions for inaugural bond issuances to create LCY corporate bond markets in Cambodia and the Lao PDR in collaboration with other multilateral development banks such as ADB on the regulatory front.

9. CGIF guarantees have achieved notable developmental impact in LCY corporate bond markets across ASEAN:

- a. **Supporting first-time issuers in tapping the domestic bond market.** Many creditworthy companies in ASEAN still find it difficult to tap their domestic bond markets because institutional bond investors in these markets tend to have conservative investment policies with high thresholds for rating requirements (rating cliff) or are reluctant to invest in companies or business that they are not familiar with. CGIF guarantees have helped ASEAN companies overcome these barriers and tap their domestic bond markets for the first time. Examples include PT Mitra Pinasthika Mustika Finance (MPM Finance), a growing auto-finance company in Indonesia; Fullerton Healthcare Corporation Ltd., a Singaporean company with an innovative healthcare business model; and Mobile World Investment Corporation, a leading retailer of mobile phones and consumer electronics in Viet Nam. CGIF also helped bridge socially critical financing activities in the bond market by supporting the first bond issuance of ASA Foundation, a leading microfinance lender in the Philippines that serves 1.3 million underserved women entrepreneurs. Many CGIF-supported, first-time issuers have gone on to issue additional bonds on their own, demonstrating CGIF's critical role in enabling access and investor familiarity through the use of guarantees.
- b. **Enabling access to long-term funds.** CGIF guarantees have helped ASEAN companies raise long-term funds to match their investment needs when such long-term funds are otherwise not easily available in the market. With CGIF guarantee support, Masan Consumer Holding, a leading company in the food and beverage business in Viet Nam, issued an unprecedented 10-year fixed-rate corporate bond in the Vietnamese dong bond market as the first such issuance by a private sector company in the economy. This was followed by the successful issuance of multi-tenor bonds of 5 years and 10 years in the LCY bond market by Vingroup Joint Stock Company, Viet Nam's largest listed real estate company, which provided a matching funding source for the long-term digestion period of the company's real estate investments.
- c. **Supporting cross-border transactions.** Despite the progress of economic integration in the ASEAN+3 region and the expansion of ASEAN+3 companies into neighboring economies, cross-border bond issuances by ASEAN+3 companies are still very rare. Cross-border LCY bond issuances in other ASEAN markets are particularly useful when the depth of the domestic bond market is insufficient to meet the company's funding needs or there are very limited funding options in the domestic market. They also help the local operations of ASEAN+3 companies to raise bonds in matching currencies in the economy they have invested in. CGIF's guarantee has enabled Kolao Holdings, one of the largest private conglomerates in the Lao PDR to reach key institutional bond investors in the Singapore dollar bond market, a first time for a Lao PDR-based company. CGIF also helped PT Profesional Telekomunikasi Indonesia (Protelindo), the largest independent owner and operator of towers for wireless operators in Indonesia, to raise 10-year bonds in the Singaporean dollar bond market to match the long-term nature of its tower assets and lease revenues, when such long-term bonds were difficult to sell in its home market. With CGIF's guarantee support, KNM Group Berhad, a leading global manufacturer of process equipment and processing units from Malaysia, managed to tap the Thai baht bond market to fund the construction and operations of the company's first bio-ethanol plant in Thailand. CGIF also supported Yoma Strategic Holdings Ltd., a leading business group with a diversified business portfolio in Myanmar, to issue 5-year bonds in the Thai baht bond market as the first Myanmar-based company tapping a foreign bond market.
- d. **Broadening the investor base.** For prospective bond issuers in ASEAN's LCY corporate bond markets, the universe of potential bond investors is limited because domestic institutional bond investors require high credit ratings (rating cliff) and foreign investors are constrained by their economy-risk exposure policies. CGIF's innovative partial guarantee helped Siamgas and Petrochemicals Public Company Limited, a leading trader of liquefied petroleum gas and related

petroleum products in Thailand, to reach conservative institutional investors by raising the bond's credit rating just enough to the level required by these investors. CGIF also helped PT BCA Finance, a leading auto-finance company in Indonesia, to issue bonds specifically targeting Japanese institutional investors that were willing to take currency risks in Indonesia rupiah bonds but could not purchase such bonds without CGIF guarantees due to restrictions on investing in lower-rated economies. CGIF's guarantee support to Refrigeration Electrical Engineering Corporate, a diversified business group in Viet Nam, enabled the company to issue 10-year fixed rate Vietnamese dong bonds to institutional investors. The company's previous bonds had been placed only with banks under traditional terms such as floating rates and mortising repayments. CGIF-guaranteed bonds provided long-term funds with more suitable funding terms for the company.

- e. **Introduction of new debt instruments.** In ASEAN's LCY bond markets, the available types of debt instruments are limited and there is a lack of investment opportunities in a wide range of debt instruments that are available in more matured markets—such as project bonds, securitization bonds, and green bonds—despite their importance as vital funding tools to meet critical investment needs in the region. CGIF has been actively promoting the introduction of these new types of debt instruments in the ASEAN's LCY bond markets. A good example is the first project finance bonds issued in Philippine peso by AP Renewables Inc., a subsidiary of the Aboitiz Power Corporation, for the Tiwi-MakBan geothermal energy facilities in Philippines. ADB provided a partial guarantee for this bond that was made possible by CGIF's first loss risk participation in ADB's guarantee. This issue was also the first climate bond in Asia certified by the Climate Bonds Initiative, and has won numerous international awards. CGIF also supported AEON Credit Service (Philippines) Inc. to tap the Philippine peso bond market to fund AEON's financial services, including the popular tricycle loans, to contribute to the financial inclusion of previously unbanked populations in the Philippines. This transaction was not only the company's first bond issuance but also the first debt issue in Philippine peso under the ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF). With CGIF's guarantee support, the first AMBIF bonds in the Singapore dollar bond market was also issued by CJ Logistics Asia Pte. Ltd., a Singaporean subsidiary of CJ Logistics, a leading logistics company in Korea with strong regional operations in ASEAN. CGIF is currently working on other AMBIF bond transactions to promote AMBIF bonds in ASEAN bond markets.

10. CGIF's strong track record in ASEAN's LCY corporate bond markets proves that credit enhancement provided by official guarantee programs can contribute to the increased supply of LCY corporate bonds in these markets and widen or even create the investor base in these markets. This can be seen in CGIF's involvement in the development of the Vietnamese dong corporate bond market. Before CGIF issued its first guarantee in 2014, the corporate bond market in Viet Nam was dominated by bonds issued by banks or state-owned enterprises, while banks dominated as investors. Institutional bond investors such as insurance companies only invested in government bonds or bonds issued by state-owned enterprises with possible government support for these enterprises, and were reluctant to invest in corporate bonds issued by private companies because these investors did not have the internal capacity to assess the creditworthiness of these private companies.

11. CGIF's guaranteed bonds, first issued in December 2014 in the Vietnamese dong bond market, have enabled these institutional bond investors to invest for the first time in corporate bonds issued by private companies. As these institutional investors become more accustomed to investing in corporate bonds and built up internal capacity, some of them have started investing in corporate bonds issued by private companies without CGIF guarantees, especially those that have become familiar with such bonds through earlier CGIF guarantees. This is a good example of how CGIF's guarantee operations have contributed to the creation of the crucial investor base needed for the further development of ASEAN's LCY corporate bond markets. Today, the Vietnamese dong bond market is significantly more vibrant than it was prior to 2014 when CGIF first guaranteed bonds in Viet Nam.

12. CGIF is confident that it will be able to support the development of new markets that have not yet issued (or are just starting to issue) LCY corporate bonds such Brunei Darussalam, Cambodia, Myanmar,

and the Lao PDR. CGIF is working with regulators in these economies to consider pilot issues of LCY corporate bonds, which it believes will be accomplished in the near future.

13. Table A9.3 lists CGIF's guaranteed transactions from April 2013 to March 2019.

Table A9.3: Guarantees Issued by the Credit Guarantee and Investment Facility (2013–2019)

Bond Issuer	Issue Date	Issue r Economy	Issuin g Currency	Tenure	CGIF Guarantee %	Guarantee Size (LCY million)	Guara ntee Size (USD million equiv.) ^{a/}
Noble Group Limited ^{b/}	26 Apr 2013	CHN	THB	3 years	100%	2,850	98
PT BCA Finance ^{c/}	4 Dec 2013	IND	IDR	3 years	100%	300,000	25
PT BCA Finance ^{c/}	18 Mar 2014	IND	IDR	3 years	100%	120,000	11
Kolao Holdings ^{d/}	21 Aug 2014	LAO	SGD	3 years	100%	60	48
PT Profesional Telekomunikasi Indonesia	27 Nov 2014	IND	SGD	10 years	100%	180	138
Masan Consumer Holdings	5 Dec 2014	VNM	VND	10 years	100%	2,100,000	98
PT Astra Sedaya Finance ^{e/}	18 Dec 2014	IND	SGD	3 years	100%	100	76
IVL Singapore Pte. Ltd	7 Oct 2015	THA	SGD	10 years	100%	195	137
Vingroup JSC	18 Feb 2016	VNM	VND	5 years	100%	1,950,000	87
Vingroup JSC	18 Feb 2016	VNM	VND	10 years	100%	1,050,000	47
AP Renewables, Inc.	8 Mar 2016	PHL	PHP	10 years	-	4,687	100
PT Mitra Pinasthika Mustika Finance	11 Mar 2016	IND	IND	3 years	100%	140,000	11
PT Mitra Pinasthika Mustika Finance	28 Apr 2016	IND	IND	3 years	100%	160,000	12
Fullerton Healthcare	7 Jul 2016	SGP	SGD	5 years	100%	50	37
Fullerton Healthcare	7 Jul 2016	SGP	SGD	7 years	100%	50	37
KNM Group Berhad	18 Nov 2016	MYS	THB	5 years	100%	2,870	78
ASA Philippines	10 Feb 2017	PHL	PHP	5 years	75%	750	15
ASA Philippines	28 Jun 2017	PHL	PHP	5 years	75%	375	7.5
ASA Philippines	10 Jan 2018	PHL	PHP	5 years	75%	375	7.5
Mobile World Investment Corporation	17 Nov 2017	VNM	VND	5 years	100%	1,135	50

Annex 9: Credit Guarantee and Investment Facility

Siamgas and Petrochemicals Public Company Ltd	28 Feb 2018	THL	THB	5 years	85%	1,700	54
Siamgas and Petrochemicals Public Company Ltd	7 Dec 2018	THL	THB	5 years	70%	1,400	40
The Pan Group SJC	10 Sep 2018	VNM	VND	5 years	100%	1,135	49
Hoan My Medical Corporation	5 Oct 2018	VNM	VND	5 years	100%	930	40
Hoan My Medical Corporation	5 Oct 2018	VNM	VND	7 years	100%	1,400	60
AEON Credit Services (Philippines) Inc.	16 Nov 2018	PHL	PHP	3 years	100%	900	17
AEON Credit Services (Philippines) Inc.	16 Nov 2018	PHL	PHP	5 years	100%	100	2
Boonthavorn Ceramic 2000 Co., Ltd.	17 Dec 2018	THL	THB	5 years	50%	1,000	30
Yoma Strategic Holdings Ltd.	25 Jan 2019	MMR	THB	5 years	100%	2,200	70
Refrigeration Electrical Engineering Corporation	28 Jan 2019	VNM	VND	10 years	100%	2,318,000	100
CJ Logistics Asia Pte. Ltd.	25 Mar 2019	KOR	SGD	5 years	100% ^{f/}	70	52

CHN = People's Republic of China, KOR = Republic of Korea, IDR = Indonesian rupiah, IND = Indonesia, LAO = Lao People's Democratic Republic, MMR = Myanmar, MYS = Malaysia, PHL = Philippines, PHP = Philippine peso, SGD = Singapore dollar, THA = Thailand, THB = Thai baht, VND = Vietnamese dong, VNM = Viet Nam,

^{a/} Based on the exchange rate of bond issuance dates except for AP Renewables, Inc.

^{b/} The bond was redeemed in April 2016 upon its maturity.

^{c/} The bonds were successfully redeemed in December 2016 and March 2017 upon their maturities.

^{d/} The bond was successfully redeemed in August 2017 upon its maturity.

^{e/} The bond was successfully redeemed in December 2017 upon its maturity.

^{f/} 50% risk sharing with the Export-Import Bank of Korea.

Annex 10: How to Formulate the ASEAN+3 Multi-Currency Bond Issuance Framework Market

A. The Most Suitable Professional Market (or Market Segment)

1. In ASEAN+3 Bond Market Forum (ABMF) discussions on a common denominator as the basis for an ASEAN+3 Multi-Currency Bond Issuance Framework (AMBIF) Market, Sub-Forum 1 (SF1) members eventually realized that the drivers effectively defining a market as a professional market differed significantly across the region's jurisdictions. While the emphasis was on professional investors in some markets, specific legislation existed for private placement or other exempt regimes in other markets.

2. In fact, several jurisdictions featured more than one market or market segment with different drivers for the qualification of professional. While market practice in an individual economy is the ultimate driver of what type of professional market or approach should be applied and which one would be most utilized, no single such regime or approach was sufficiently suitable to serve as the defining link to connect ASEAN+3 member economies in the spirit of the proposed common bond issuance framework.

3. ABMF SF1 concluded that it might be more practical to identify what was termed the most suitable professional market (or market segment) in each economy. This would require breaking down the respective characteristics that made a market (or market segment) professional and defining which of these individual features and functions were intended to be included in an AMBIF proposal, such as eligible market participants, and required limitations or restrictions.

4. A key lesson learned from the ABMF Phase 2 market visits and discussions was that market drivers differed across bond markets in ASEAN+3 member economies. For example, private placement concepts differed quite substantially by market. Therefore, SF1 has focused on the similarities among existing market features. At the same time, SF1 has not sought to unify market features and terminology across economies.

B. AMBIF Investors as the Essential Basis for the AMBIF Components

5. Through discussions involving the Asian Development Bank (ADB) Secretariat and ABMF SF1 members and experts, AMBIF Investors became the basis for the AMBIF Elements as defined in Chapter IV of the ABMF Phase 2 Report (section E below, including Table A10.1: AMBIF Elements and Brief Description). AMBIF Investors are a critical component of AMBIF as proposed by ABMF. The following investor types are proposed as AMBIF Investors: banks, broker-dealers and securities houses, government entities, insurance companies, investment advisory businesses, provident funds, and pension funds. Foreign investors are to be included to the extent they are eligible to participate under the above investor types.

C. ASEAN+3 Multi-Currency Bond Issuance Framework Market

6. Based on SF1 research, ABMF members decided to nominate professional markets in the region as being populated by professional investors, including private placement markets or regimes positively

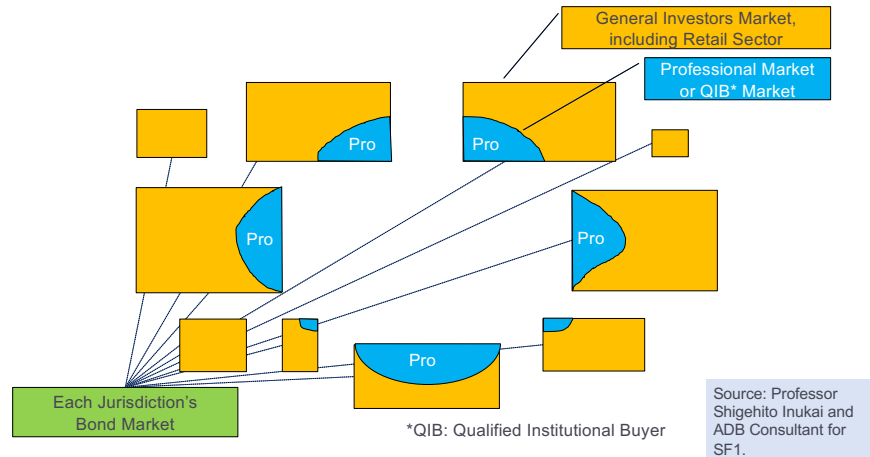
recognized by regulators that allowed limited disclosure to professional investors and waived the full disclosure requirements typically applicable to ordinary public offerings across jurisdictions. However, in the interest of allowing the largest possible number of ASEAN+3 economies to participate in AMBIF, the definition of an AMBIF Market was not based on a single professional market concept, but instead represents the most suitable professional market or market segment in each economy. The resulting AMBIF Markets carry strong selling restriction mechanisms to support the regulatory mandate to protect nonprofessional investors. The intention was to create an intraregional professional bond market populated only by professional investors, issuers, and intermediaries in the belief that regulatory bodies' concerns over investor protection could be better mitigated in professional markets than in retail markets.

D. The Way to Connecting the Markets

7. Nevertheless, ABMF SF1 came to the conclusion that the key to AMBIF's future success lay in connecting the region's economies using markets or market segments similar enough so as to not pose a challenge to defining the characteristics of AMBIF as a common platform. The principle behind this conclusion is illustrated in Figures A10.1, A10.2, and A10.3. Each figure represents a step in the process toward the realization of a common AMBIF Market.

8. In the initial step illustrated in Figure A10.1, it was important to identify the professional markets or market segments that already existed in individual ASEAN+3 economies.

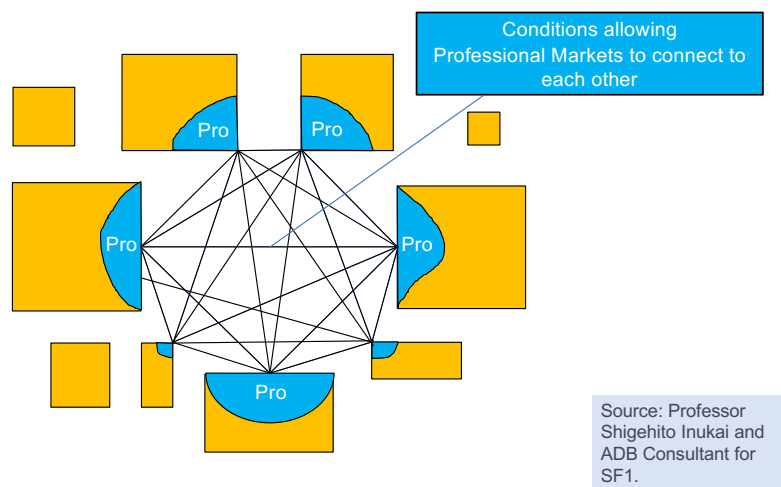
Figure A10.1: Identifying Each Economy's Professional Market(s)



Source: Prof. Shigehito Inukai, Waseda University.

9. Figure A10.2 illustrates the second step of the process, in which ABMF SF1 members set out to study and identify possible professional market elements that could enable connections to be made between the region's markets.

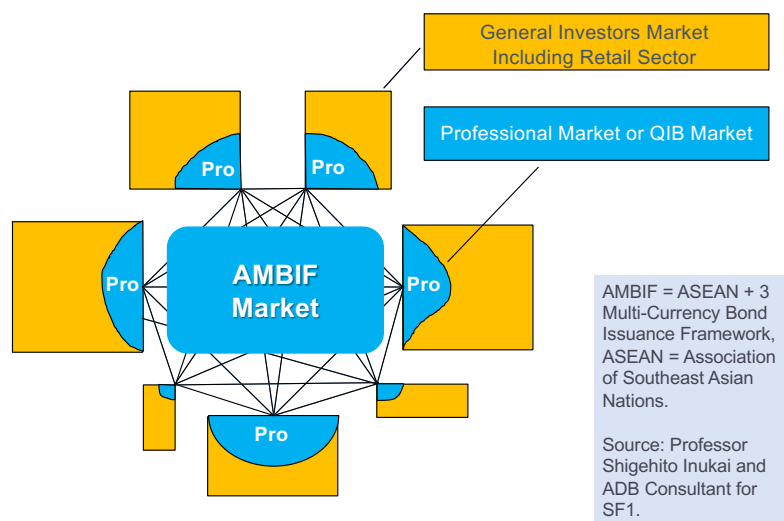
Figure A10.2: Identifying Professional Market Elements



Source: Prof. Shigehito Inukai, Waseda University.

10. Figure A10.3 illustrates how a professional bond issuance framework could be created by combining the identified professional markets using the suitable professional market elements.

Figure A10.3: Combining Professional Market Elements to Arrive at ASEAN+3 Multi-Currency Bond Issuance Framework



ASEAN = Association of Southeast Asian Nations; ASEAN+3 = ASEAN plus the People's Republic of China, Japan, and the Republic of Korea; AMBIF = ASEAN+3 Multi-Currency Bond Issuance Framework; QIB = qualified institutional buyer.

Source: Prof. Shigehito Inukai, Waseda University.

11. The intention is to create an intraregional professional bond market populated by regional professional investors, issuers, and intermediaries. Appropriate handling of the selling and transfer restrictions for ring-fencing of said market is mandatory for the protection of nonprofessional investors.

E. Elements of the ASEAN+3 Multi-Currency Bond Issuance Framework

Table A10.1: Elements and Brief Description of the ASEAN+3 Multi-Currency Bond Issuance Framework

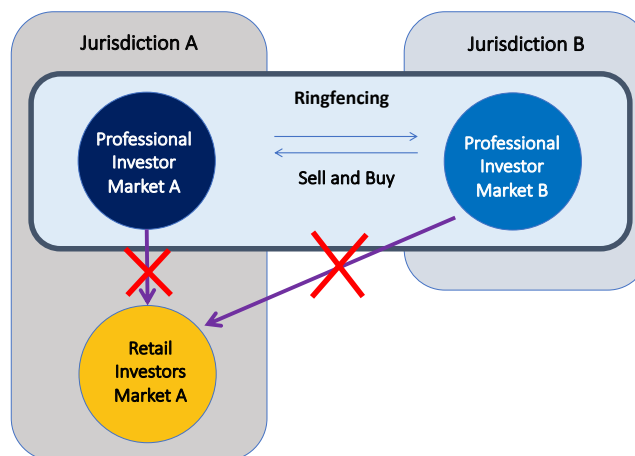
AMBIF Elements	Brief Description
1. Domestic Settlement	Bonds and notes are settled at a national CSD in ASEAN+3 markets.
2. Harmonized Documents for Submission (Single Submission Form: SSF)	A common approach to submit information as input for regulatory process(es) where approval or consent is required. Appropriate disclosure information based on an ADRB* recommendation needs to be included.
3. Registration or profile listing at ASEAN+3 (Place of continuous disclosure)	Information on bonds, notes, and issuers needs to be disclosed continuously in ASEAN+3 markets. Registration or a listing authority function is required to ensure continuous and quality disclosure.
4. Currency	The denomination of an issue is generally expected to be in the domestic currency of each ASEAN+3 market.
5. Scope of Issuers	Resident of ASEAN+3
6. Scope of Investors	Professional investors defined in accordance with applicable laws and regulations, or market practice, in each ASEAN+3 market

ADRB = AMBIF Documentation Recommendation Board; AMBIF = ASEAN+3 Multi-Currency Bond Issuance Framework; ASEAN+3 = Association of Southeast Asian Nations plus the People's Republic of China, Japan, and the Republic of Korea; CSD = central securities depository.

Source: AMBIF = ASEAN+3 Multi-Currency Bond Issuance Framework Sub-Forum 1.

12. As the AMBIF Market grows, it will be necessary to ensure the restriction of selling or transferring debt instruments to nonprofessional (retail) investors at all times. Such selling and transfer restrictions need not only be observed in the home market of an intermediary or market participant, which is represented as Jurisdiction A in Figure A10.4, but also in the host jurisdictions (Jurisdiction B). Similarly, for every individual market issuance, the selling and transfer restrictions shall be reflected specifically in the information memorandum, offering circular, or program information; the underwriting or subscription agreement; and other necessary issuing document categories.

Figure A10.4: Selling and Transfer Restrictions in an Intraregional Professional Market



Source: ASEAN+3 Multi-Currency Bond Issuance Framework Sub-Forum 1.

Good Practices for Developing a Local Currency Bond Market

Lessons from the ASEAN+3 Asian Bond Markets Initiative

Local currency bond markets in ASEAN+3 play an important role in diversifying financial intermediary channels and mitigating the impacts of financial crises. They also have the potential to help mobilize developing Asia's savings to meet the region's enormous infrastructure investment needs. Drawing extensively on knowledge generated by the ASEAN+3 Bond Market Forum, this publication provides a comprehensive picture of how to create and develop local currency bond markets in the region. It looks at the essential building blocks and the enabling environment for these markets, as well as the roles of government, relevant authorities, and market participants.

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members—49 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