

**FOR  
INFORMATION**

EBS/20/4

January 28, 2020

To: Members of the Executive Board

From: The Secretary

Subject: **Staff Note for the G20 International Financial Architecture Working Group—Recent Developments on Local Currency Bond Markets in Emerging Economies**

Board Action:	Executive Directors' <b>information</b>
Prepared By:	The staffs of the Fund and the World Bank
Additional Information:	The attached note has been prepared for the G20 International Financial Working Group meeting in Riyadh, Saudi Arabia on January 31, 2020.
Publication:	Yes, after Tuesday, February 4, 2020
Questions:	Mr. Jonasson, MCM (ext. 39339)





January 28, 2020

## STAFF NOTE FOR THE G20 INTERNATIONAL FINANCIAL ARCHITECTURE WORKING GROUP (IFAWG)—RECENT DEVELOPMENTS ON LOCAL CURRENCY BOND MARKETS IN EMERGING ECONOMIES

### EXECUTIVE SUMMARY

**At the Cannes Summit in 2011, the G20 launched an initiative to prepare an action plan for the development of local currency bond markets (LCBMs).** Since then, the IMF and the World Bank have produced brief joint notes that take stock of recent LCBM developments. This Note summarizes key trends and developments in LCBMs since June 2018 and reports on the work of international organizations in promoting LCBMs.

**Emerging Market (EM) LCBMs have continued their growth, with significant issuance of local currency debt.** The total stock of EM debt securities rose by USD 2.2 trillion to USD 25.9 trillion in 2018. The share of EM debt in local currency stood at 85 percent in 2018 (USD 22.4 trillion). LCBMs continued to be dominated by Asia, with increasing market growth in China. Regional growth is also apparent in the Middle East, while a few markets Africa are maturing.

**Many emerging (EM) and low-income countries (LICs) continue to rely on external issuance, or on foreign investors to purchase local-currency denominated debt, for government financing.** Issuance of Eurobonds has continued at high levels, as sovereigns have continued to take advantage of the low global interest rate environment. Holdings of EM local currency government bonds by foreign investors declined slightly in 2018, to around 19 percent on average.

**Liquidity in many EM government bond markets has improved reflecting progress in LCBM development and in many cases a broadening of the investor base.** Inclusion in global bond market indices has helped to improve government bond market liquidity and attract various types of new investors across markets. However, bid-ask spreads for EMs generally remain higher than those in advanced economies (AEs) and many EM countries continue to point to limited secondary bond market liquidity as a challenge.

**Existing LCBM development initiatives, such as the IMF-World Bank Debt Management Facility and the World Bank Group Joint Capital Markets Development (J-CAP) Program, have been broadened.** In addition to efforts in strengthening the development frameworks for Money Market Development, the IMF

and the World Bank are currently preparing a Guidance Note on developing LCBMs for emerging markets and developing economies (EMDEs). The Note will provide a framework that can be applied to strengthen the foundations of LCBMs, and to address common challenges and impediments to devising and implementing appropriate policy actions.

**Corporate bond markets have thus far played a limited role in mobilizing financing in EMDEs, although their growth has been strong.** Financial institutions remain the major issuers with non-financial corporations relying on bank financing. Selectivity among countries where corporate bond market development should be pursued remains important.

**Countries seeking to attract foreign investors' participation in LCBM may take some proactive measures.** In addition to standard market development practices, countries can improve hard and soft market infrastructure, establish hedging markets, strengthen market liquidity and pursue inclusion in global bond indices. Countries considering attracting foreign investors should strive to maintain a stable macroeconomic environment and support prudent capital account liberalization. Further, a good system for monitoring foreign investor flows and holdings, including by amount and maturity, would be important.

**New financial technologies offer scope for lowering intermediation costs and facilitating investor participation.** Lower transaction cost for intermediaries can make investor participation in less developed markets more likely. Issuers have started to take advantage of new technologies, such as the Blockchain Bonds. However, technological improvements alone are unlikely to substantially change the type of instruments used by debt managers.

## CONTENTS

<b>Abbreviations and Acronyms</b>	<b>4</b>
<b>INTRODUCTION</b>	<b>5</b>
<b>CURRENT DEVELOPMENTS IN LCBMs IN EMERGING MARKET ECONOMIES</b>	<b>5</b>
A. Overview of Trends in LCBMs	5
B. Key Developments in LCBMs	12
<b>WORK OF INTERNATIONAL ORGANIZATIONS IN DEVELOPING LCBM</b>	<b>14</b>
A. Upgrading the Framework for Developing Sovereign LCBMs	14
B. Developing Corporate Bond Markets	19
C. Technical Assistance by IOs and Local Currency Debt Issuance by IFIs	21
<b>THE ROLES OF FOREIGN INVESTOR PARTICIPATION AND FINTECH IN LCBM DEVELOPMENT</b>	<b>25</b>
A. Foreign Investors' Participation	25
B. Scope, Issues, and Challenges in Applying Fintech to LCBM Development	28
<b>BOXES</b>	
1. A Money Market Development Framework	24
2. Blockchain Bonds—Experience of the WBG	30
<b>FIGURES</b>	
1. Developments in EM Local Currency Debt	10
2. Recent Developments in Nonresident Holdings of EM Government Debt Securities	12
<b>TABLE</b>	
1. Emerging Market Debt Overview 2011–18	7

## Abbreviations and Acronyms

ADB	Asian Development Bank
AE	Advanced Economy
BAML	Bank of America Merrill Lynch
BIS	Bank for International Settlements
DMO	Debt Management Office
EBRD	European Bank for Reconstruction and Development
EMDE	Emerging Markets and Developing Economies
EME	Emerging Market Economy
ETF	Exchange Traded Fund
ETP	Electronic Trading Platform
EU	European Union
FCV	Fragility, Conflict & Violence Countries
FIG	Financial Infrastructure Group
FX	Foreign Exchange
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GN	Guidance Note on Local Currency Bond Market Development
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development
ICMA	The International Capital Market Association
IFAWG	International Financial Architecture Working Group
IOSCO	The International Organization of Securities Commissions
IFC	International Finance Corporation
IMF	International Monetary Fund
J-CAP	World Bank Joint Capital Markets Development Program
LIC	Low Income Country
IO	International Organization
LCBM	Local Currency Bond Markets
LMO	Liability Management Operation
MDB	Multilateral Development Bank
MIGA	Multilateral Investment Guarantee Agency
PD	Primary Dealer
PSW	Private Sector Window
SDG	Sustainable Development Goal
SME	Small and Medium-sized Enterprises
SSA	Sub-Saharan Africa
TA	Technical Assistance
TF	Trust Fund
USD	United States dollar
WAEMU	West African Economic and Monetary Union
WBG	World Bank Group

## INTRODUCTION<sup>1</sup>

**In recognition of the importance of LCBMs, the Group of Twenty (G20) countries launched an LCBM Action Plan in 2011 to monitor and support LCBM activity.** The action plan targeted three key areas for progress: (i) scaling up technical assistance (TA); (ii) developing a shared database to track relevant assistance; and (iii) monitoring annual progress. Since then, the IMF and World Bank have updated the G20 International Financial Architecture Working Group of progress to strengthen LCBMs in emerging markets and developing economies on a regular basis. In line with this Action Plan, this note provides an update on the current developments in EMDEs LCBMs, for both sovereign and corporate bond markets, as well as the role of foreign investor participation in LCBMs and the application of financial technology to LCBM development.

**A well-functioning and liquid bond market provides the government with a stable source of funding and improve the overall risk profile of the debt portfolio.** The ability to increase the supply of bonds, without a significant negative impact on their pricing and the overall cost of capital, provides the government with an additional tool for countercyclical policies at normal times and adequate policy space at times of crisis, hence contributing to preserve output stability. Other benefits include: (i) the strengthening of market discipline; (ii) the diversification of the sovereign debt portfolio; and (iii) lengthening of the maturity structure of government debt.

## CURRENT DEVELOPMENTS IN LCBMs IN EMERGING MARKET ECONOMIES

### A. Overview of Trends in LCBMs

**1. Local currency debt continued to grow relative to 2017 and remains the majority share of total debt in EMs** (Figure 1). Local currency debt grew both in nominal amounts and as a share of GDP in 2018 compared to 2017, to USD 22.4 trillion, or 68.4 percent of GDP (2017: USD 20.6 trillion, or 63.5 percent of GDP). As a share of total debt, there was a slight downward move in the share of local currency debt to total debt amid a low global interest-rate environment (2018: 86.5 percent; 2017: 87.6 percent). In 2018, the amount of local currency debt issued by government and non-government entities was roughly the same.

<sup>1</sup> This note was prepared by Anderson Caputo Silva, Ana Fiorella Carvajal, Bryan Gurhy, and Cindy Paladines, from the World Bank Group (WBG) and Thordur Jonasson, Charles Cohen, Yen Mooi and Kay Chung from the International Monetary Fund (IMF), Michael G. Papaioannou (IMF Expert) under the overall guidance of Alfonso Garcia Mora and Ceyla Pazarbasioglu, from the WBG, and Miguel Savastano from the IMF, respectively. The authors would like to thank peer reviewers from the WBG and the IMF for their input and comments to this note. The views expressed herein are solely the authors' and should not be attributed to the WBG, the IMF, their Executive Boards, or their management.

**2. Taking a longer-term perspective, EM marketable debt has more than doubled in nominal terms since 2011, with significant issuance of local currency debt over the period.<sup>2</sup>**

Total debt increased from USD 12.7 trillion in 2011 to USD 25.9 trillion in 2018 (Figure 1, Table 1), with local currency debt consistently exceeding over 85 percent of total debt. As a share of GDP, local currency debt has grown significantly, from 42 percent in 2011 to 68 percent in 2018.

**3. Global stocks of government and non-government local currency debt continue to be dominated by the debt issued in the Asia Pacific region, mainly driven by China.** At end-2018, the Asia Pacific region accounted for almost 70 percent of all EM local currency government debt and 87.2 percent of all non-government local currency debt, up from 50 percent and 73 percent respectively in 2011.

**4. Government debt has outpaced non-government debt in terms of local currency issuance.** While the aggregate figures for government debt mask significant variance across countries, those cross-country differences are relatively smaller in Asia, compared to other regions. Non-government debt issuance in Africa, and the Middle-Eastern Emerging Europe regions remains small.

**5. As a share of GDP, local currency government debt has grown significantly in the Asia Pacific region as well as in Africa and the Middle East regions.** In Emerging Europe, local currency government debt as a share of GDP has declined slightly since 2011, while in Latin America and the Caribbean, it has remained broadly stable. In Asia Pacific, local currency government debt as a share of GDP grew from 21 percent in 2011 to 34 percent in 2018, largely driven by the growth of local currency debt in China. Despite its declining share of the total, the increase in local currency government debt was also significant in Africa and the Middle East, where it almost doubled from 11 percent of GDP in 2011 to 20 percent in 2018. Much of the increase can be attributed to oil-producing countries tapping their local markets to offset the fiscal ramifications of the decline in oil prices.

**6. Fundamentals, along with market dynamics, have played an important role in supporting the observed LCBM trends.** From 2011 to 2018, the expansion of local currency government bond markets was more significant in countries with strong macroeconomic fundamentals (such as low and stable inflation and higher domestic savings), flexible exchange rate regimes as well as countries with a growing financial sector which includes bank and non-bank institutions with demand for local currency government securities. In addition, the low global interest rate environment has created increased demand from AE investors to increase their demand for EMs LCBMs.

<sup>2</sup> The term debt as applied in this Note refers to marketable debt (local and international debt securities) and the data used in calculations from the BIS and BAML. It should be noted that BIS data on domestic debt securities denote domestic issues regardless of currency of denomination.



**Table 1. Emerging Market Debt Overview 2011–18 (USD trillion)**

	2011	2012	2013	2014	2015	2016	2017	2018
<b>Total Debt</b>	12.7	14.0	14.5	16.2	18.2	20.6	23.7	25.9
Local Currency	11.2	12.3	12.5	14.0	15.4	17.6	20.8	22.4
International Market	1.5	1.8	2.0	2.2	2.8	3.0	2.9	3.5
<i>Local as Share of Total (%)</i>	<i>88.3</i>	<i>87.5</i>	<i>86.0</i>	<i>86.5</i>	<i>84.5</i>	<i>85.5</i>	<i>87.6</i>	<i>86.5</i>
<i>Local as Share of GDP (%)</i>	<i>42.0</i>	<i>43.8</i>	<i>42.1</i>	<i>45.6</i>	<i>51.5</i>	<i>53.8</i>	<i>63.5</i>	<i>68.4</i>
General Government	6.5	7.2	7.3	7.5	8.0	9.4	11.2	12.2
Non-government	6.1	6.8	7.2	8.7	10.2	11.2	12.5	13.7
<i>Government as Share of Total (%)</i>	<i>51.6</i>	<i>51.3</i>	<i>50.6</i>	<i>46.3</i>	<i>44.1</i>	<i>45.6</i>	<i>47.4</i>	<i>47.2</i>
<i>Government as Share of GDP (%)</i>	<i>24.6</i>	<i>25.7</i>	<i>24.7</i>	<i>24.4</i>	<i>26.9</i>	<i>28.7</i>	<i>34.3</i>	<i>37.3</i>
<i>Non-government as Share of GDP (%)</i>	<i>23.0</i>	<i>24.4</i>	<i>24.2</i>	<i>28.3</i>	<i>34.1</i>	<i>34.2</i>	<i>38.1</i>	<i>41.8</i>
<b>Local Currency Debt by Type of Issuer</b>	11.2	12.3	12.5	14.0	15.4	17.6	20.8	22.4
General government	5.9	6.5	6.6	6.7	7.2	8.4	10.1	11.0
Non-government	5.3	5.8	5.9	7.3	8.2	9.2	10.6	11.4
<i>Government as Share of Total (%)</i>	<i>52.7</i>	<i>52.6</i>	<i>52.5</i>	<i>47.9</i>	<i>46.7</i>	<i>47.9</i>	<i>48.8</i>	<i>49.0</i>
<b>International Debt by Type of Issuer</b>	1.5	1.8	2.0	2.2	2.8	3.0	2.9	3.5
General Government	0.6	0.7	0.8	0.8	0.8	1.0	1.1	1.2
Non-government	0.8	1.0	1.2	1.4	2.0	2.0	1.8	2.3
<i>Government as Share of Total (%)</i>	<i>43.7</i>	<i>41.8</i>	<i>38.8</i>	<i>35.8</i>	<i>30.0</i>	<i>32.1</i>	<i>37.5</i>	<i>35.5</i>

Sources: Bank of America Merrill Lynch (BAML), Bank for International Settlements (BIS).

Note: Domestic debt securities are used as a proxy for local currency debt securities. Domestic debt securities are according to the issuer residence regardless of the currency denomination. As defined in the Handbook on Securities Statistics (2015), the general government sector can be divided into central government, state government, local government, and social security funds. Non-government sector debt includes debt of financial corporations (including banks) and non-financial corporations.

**7. The strong growth of local currency non-government debt in the Asia Pacific region was driven by China** (Figure 1). Local currency non-government debt in the whole Asia Pacific region grew from 28 percent of GDP in 2011 to 46 percent in 2018. In China, non-government debt more than tripled in nominal value (to USD 7.7 trillion in 2018, from USD 2.3 trillion in 2011).<sup>3</sup>

<sup>3</sup> China's non-government debt securities figure includes the debt issued by local government financing vehicles (1 trillion US dollar was issued in 2018, about 13 percent of outstanding non-government debt securities).

Moreover, the growth of the local currency non-government debt market significantly outpaced the government debt market (USD 4.8 trillion in 2018), a trend that was not observed in the other countries of the Asia Pacific region.

**8. Nonresident investors continue to maintain large positions in local currency debt across several EM government bond markets, which elevates risks associated with sudden capital outflows.** In 2018 the share of nonresident investors in local currency government bond markets was above 30 percent in Indonesia, Mexico, Peru, and South Africa (Figure 2). China and India, two of the largest issuers of local currency bonds, have limited participation of nonresidents in their government bond market. Recently, China has started to open up its bond market to foreign investors, as part of its broader capital account liberalization strategy. Measures geared at improving the compatibility of the Chinese bond market with various bond index criteria, indicate a gradual and sequenced effort towards greater opening of the market to non-resident investors.

### Local Currency Debt Market—Maturity

**9. The average term- to-maturity of local currency government debt in EMs increased from about 6.5 years in 2007 to roughly 7.3 years in 2018** (Figure 1). This lengthening of maturity profiles mirrors developments in developed countries' sovereign bond markets. For example, the average term-to-maturity of outstanding marketable debt increased in Peru, South Africa, Thailand and Mexico by 5 to 7 years. While this maturity extension contributes to lowering refinancing risk, the fiscal cost of such debt extension may be non-negligible.

### Secondary Bond Market Liquidity

**10. In contrast to some AEs, liquidity in many EMDE government bond markets has improved reflecting progress in LCBM development and a broadening of the investor base.** Inclusion in global bond market indices has helped to improve government bond market liquidity and attract new investors. However, bid-ask spreads for EMs generally remain higher than those in AEs. The composition of EMDEs investor base has a bearing on market functioning that is important for issuers to monitor, as this will affect future demand and market liquidity.<sup>4</sup>

**11. Debt managers should be encouraged to take a proactive role in creating the necessary foundations for a liquid LCBM** (Section II.A). Vibrant secondary markets for government debt can only be expected in those countries at a more advanced stage of LCBM development. Whilst a vast amount of trading activity remains over-the counter electronic trading is gaining ground. Many EMs are applying quoting obligations in existing Electronic Trading Platforms (ETPs) or introducing new ETPs, which may improve market transparency and price discovery. For example, in 2018, South Africa launched an ETP for its bond trading. Also, Brazil and India expanded their fixed-income exchange traded funds (ETF). Brazil helped develop and launch the first issuer driven ETF as part of

<sup>4</sup> In particular, a large foreign holding of local currency government bonds with relatively low secondary market turnover could induce significant market volatility following a shift in foreign investors' sentiment.

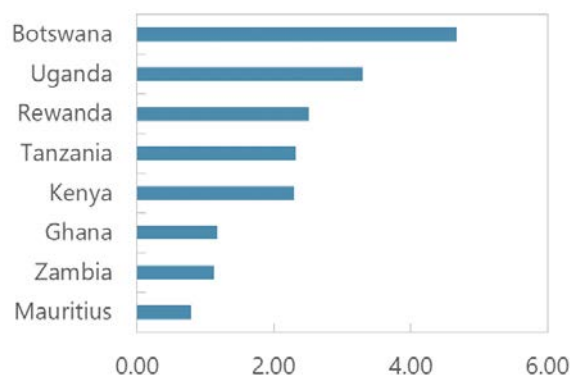
an innovative global initiative implemented by the World Bank. India applied a similar model and launched its first ETF, comprised of SOE debt. Both countries launched the ETFs through public offerings, reaching a wide investor base and sufficient volumes to support liquidity and economic viability.

## Sub-Saharan Economies

**12. Several Sub-Saharan African (SSA) governments issued longer dated bonds in recent months.** Ghana, Kenya and Tanzania issued fixed rate local currency bonds at maturities greater than 15-years, while Nigeria issued its debut 30-year naira bond in April 2019 (which was over four times oversubscribed). This trend towards longer-dated issuance can support long term finance and creates a conducive environment for other nongovernment bond issuers. Kenya has used longer maturities for the financing of infrastructure projects, an area in which many SSA countries face challenges.<sup>5</sup>

**13. Many Sub-Saharan African countries have extended the maturity of their government debt since 2010.** While this increased maturity is a positive development, it must be weighed against higher debt service costs, as government LCBM term premia generally remain high across SSA. In some cases, the maturity extension has been obtained through non-market mechanisms, which undermines LCBM market development. In addition, since 2010, twelve SSA countries with comparable debt data have made over 2,000 individual issues. This large number of instruments hinders the development of market liquidity and increases fragmentation.

**Sub-Saharan Africa: Increase in Government Bond Maturity**



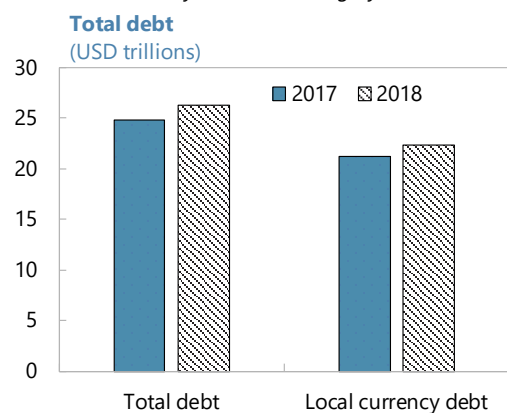
Source: Bloomberg and staff calculations.

Period 1: 2010–2014, period 2: 2015–September 2019.

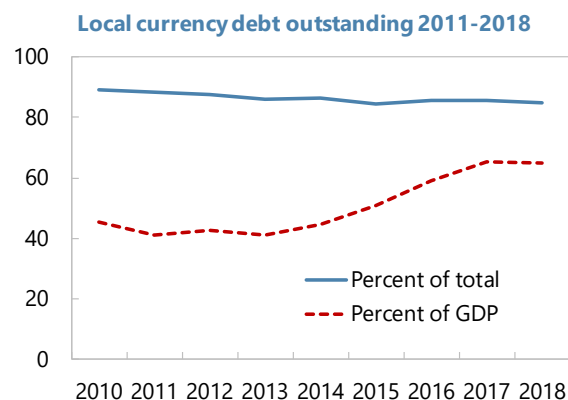
<sup>5</sup> Between 2009 and September 2019, the Kenyan government issued sixteen local currency government bonds at maturities ranging from 10 to 25 years, targeted at infrastructure development.

**Figure 1. Developments in EM Local Currency Debt**

Total debt rose USD 2.2 trillion between 2017 and 2018, with local currency debt increasing by USD 1.6 trillion.



Overall, local currency debt outstanding has remained high and growing as a share of GDP.



The Asia Pacific region accounts for the largest share of the local currency bond market, in both government...

**Government: Local currency bonds 2018**

Region	Share (%)
Asia Pacific	68
Latin America and Caribbean	20
Emerging Europe	6
Africa and Middle East	6

... as well as non-government debt.

**Non-government: Local currency bonds 2018**

Region	Share (%)
Asia Pacific	87
Latin America and Caribbean	10
Emerging Europe	2
Africa and Middle East	1

Local currency debt markets in some regions are dominated by one large economy.

**Local currency bond market: country share (Share of each region in percent)**

Country	Share (%)
China	75
Brazil	68
Russia	32
South Africa	28

Change in local currency government bonds' weighted average maturity of outstanding debt shows lengthening.

**Average maturity changes 2005-2018**

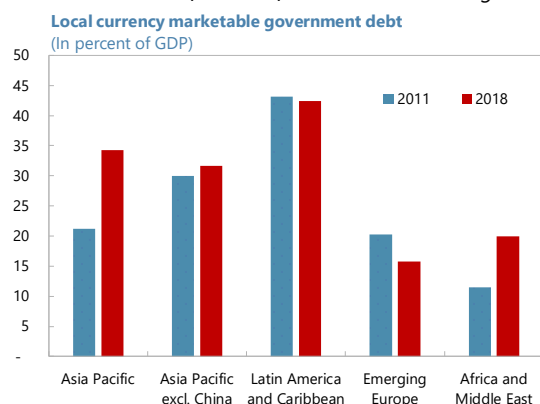
Country	Average maturity change (years)
India	1.5
Poland	1.5
Malaysia	1.5
Brazil	1.5
Indonesia	1.5
Turkey	2.0
Colombia	2.0
Argentina	2.5
Philippines	4.0
Mexico	5.0
Thailand	6.0
South Africa	7.0
Peru	8.0

Sources: BIS and BAML, Bloomberg. Staff calculations.

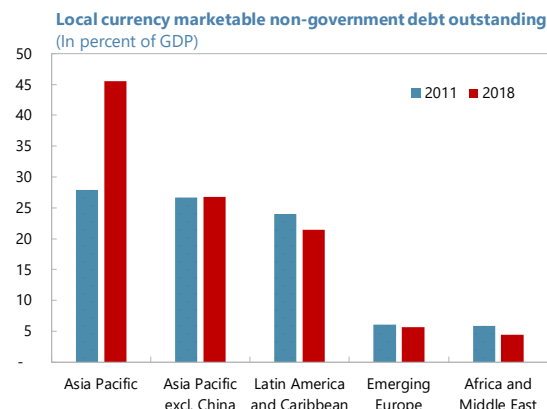
10 INTERNATIONAL MONETARY FUND

**Figure 1. Developments in EM Local Currency Debt (concluded)**

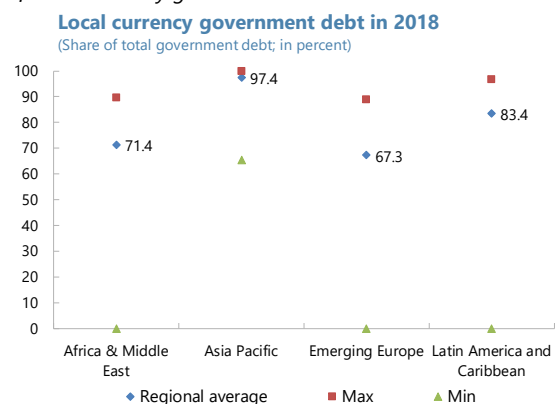
There was a large increase in local currency government debt in the Asia Pacific and Africa & Middle East regions



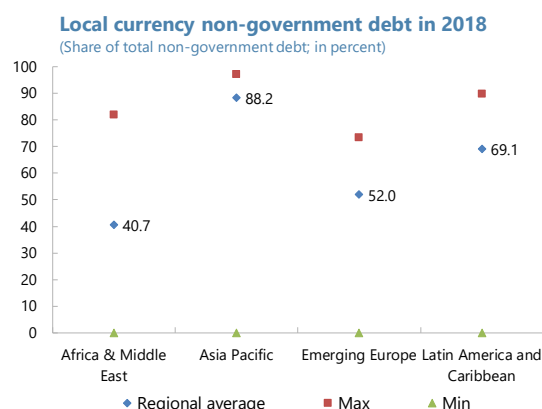
...and in the Asia Pacific region for local currency non-government debt



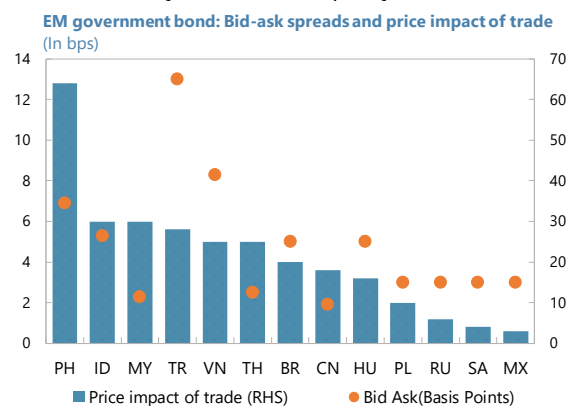
There is large intra-regional variation in the average share of local currency government debt



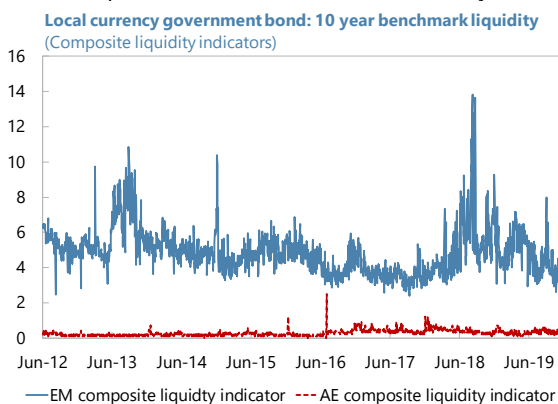
...and similarly for non-government debt.



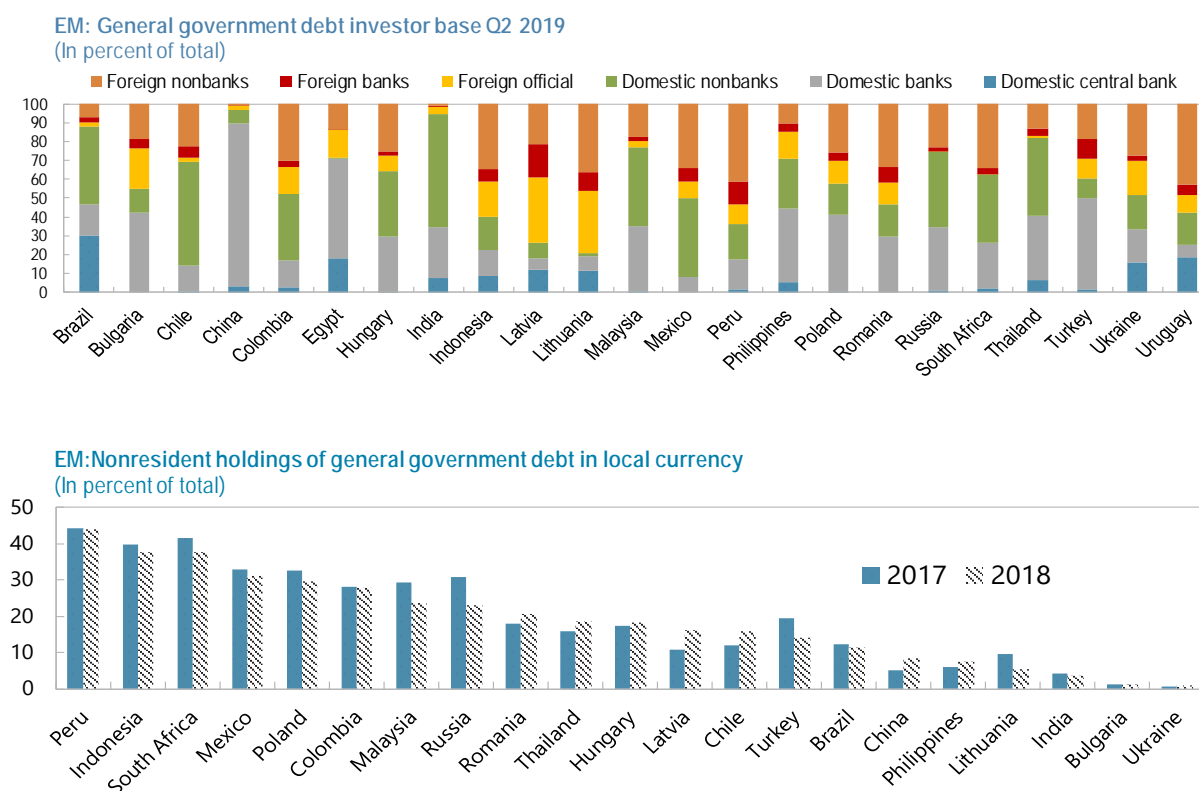
EM local currency bond market liquidity level varies...



... not as liquid as advanced Economies' secondary market



Sources: BIS and BAML, Bloomberg, ADB, Staff calculations. Note: Price impact of a trade estimated using Bloomberg's Liquidity Assessment (LQA) function which is a theoretical model to estimate price impact. Data based on 5 Dec 2019. Bid-Ask spreads collected using Bloomberg's composite pricing and ADB liquidity survey and are average bid-offer spreads for 10-year benchmark bonds over 2018 period. A higher price-impact of a trade reflects lower relative liquidity. Note: Composite liquidity indicators based on staff calculations estimated using the indicative bid-ask spreads as shown on Bloomberg for the designated 10-year benchmark bonds of selected EMDE and AE government LCBMs.

**Figure 2. Recent Developments in Nonresident Holdings of EM Government Debt Securities**

Sources: Bloomberg, Haver, IMF Sovereign Investor Base Dataset for Emerging Markets and IMF staff calculations.

## B. Key Developments in LCBMs

### Debt Issuance Policies

**14. EMs have made improvements in their issuance policies in line with the growth of their local currency debt markets.** For example, Mexico and Hungary increased flexibility in their issuance in response to heightened global financial risks. As countries have adapted their debt management strategies, benchmark building programs have helped many to improve their secondary market liquidity. In parallel, actions have been taken to mitigate increased refinancing risks. For example, benchmark building programs have been established in recent years in Albania, Georgia, Peru, and Ukraine. Other countries have promoted the diversification of debt instruments (e.g., the launch of a primary dealers' (PD) program for sovereign Sukuk in Saudi Arabia), and the commencement of Stock Exchange trading of Sukuk in Turkey. In addition, the use of Liability Management Operations (LMOs) to manage refinancing risk has become more widespread (e.g., in Vietnam).

**15. Some EMDEs have modified their issuance policies to diversify their investor base, but with mixed results.** For example, retail government debt programs were introduced in several countries, including Hungary, Indonesia, and Kenya. Many of these retail programs have had implementation challenges, illustrating the difficulties in reaching new investors. A small number of countries have issued Green bonds, debt instruments whose proceeds are earmarked for projects that yield environmental benefits.<sup>6</sup> Innovation continues to require careful evaluation of the costs and risks of introducing new instruments against the potential benefit of a more diversified investor base.

**16. Several EMDEs have recently introduced or strengthened their PD systems, in an effort to improve price discovery and diversify the investor base.** A recent survey by staff showed that as of June 2019, 83 countries use PD systems, and several others have indicated an intention to introduce one. However, PD systems may not be appropriate to all countries, particularly where the preconditions for their effective implementation are not met.<sup>7</sup>

**17. International organizations have also expanded their advisory programs to support the development of LCBMs** (Section II.D). In response to increased demand for LCBM capacity development, multilateral institutions have stepped up their LCBM advisory efforts. For example, the World Bank's Maximizing Finance for Development Agenda has brought new focus to support the growth of LCBMs. The International Development Association's Private Sector Window has brought additional resources to low income and fragile economies. Existing initiatives including the G20's Compact with Africa, the World Bank Group J-CAP Program, the Financial Sector Reform and Strengthening Initiative (FIRST), the IMF/World Bank's Debt Management Facility II and III, together with bilateral funding from development partners, including Switzerland's Government Debt and Risk Management Program, have also bolstered technical assistance efforts.

---

<sup>6</sup> The development of the green bond market has been supported by the publication of several market standards. These standards have enabled the labelling of specific securities as 'green', facilitating the screening of securities for those with Environmental Social and Governance criteria. For issuers, the Green Bond Principles, developed by International Capital Markets Association (ICMA), provide guidelines which focus on transparency and disclosure, based around four core components: use of proceeds; project evaluation and selection; proceeds management; and reporting. For investors, initiatives like the Climate Bonds Taxonomy provide criteria to assess the projects that a green bond is financing.

<sup>7</sup> "A Primer on Managing Sovereign Debt-Portfolio Risks," Jonasson and Papaioannou (2018). IMF Working paper.

## WORK OF INTERNATIONAL ORGANIZATIONS IN DEVELOPING LCBM

### A. Upgrading the Framework for Developing Sovereign LCBMs

**18. Responding to the strong interest and demand for promoting sovereign LCBMs, the IMF and the WB are preparing a new Guidance Note on LCBM Development.**<sup>8</sup> The Guidance Note (GN) is based on a new comprehensive framework, which expands on the traditional building blocks/pillars of LCBM development. The framework expands the 2013 Diagnostic Framework prepared for the G20 and identifies indicators that can be used to systematically assess the performance of LCBMs for each building block. Utilizing IMF-WB TA experiences in this area, pertinent literature reviews, and country authorities' responses to a comprehensive survey, the GN identifies challenges and presents policy recommendations for the various building blocks for each stage of LCBM development.

#### Existing Frameworks

**19. In 2001, the WB and the IMF published a handbook that set out the building blocks, supportive policies, and implementation issues related to the development of government bond markets.**<sup>9</sup> The handbook aimed to be a reference source for senior government officials involved in the development of government bond markets and individuals responsible for assisting with the market development process at an operational level. It contained experiences of practitioners from the public and private sector and covered topics ranging from the linkages with money markets and monetary policy operations, to policies needed to develop an issuance strategy, debt management considerations to build credibility, and reforms necessary to promote institutional investment. Issues relating to essential market participants (issuers and investors), basic market operations (secondary markets), and infrastructure needed for market operations (legal and regulatory framework and settlement and depository facilities) are also set out. The handbook also includes an analysis of the linkages between the government bond market and the subnational and the private sector securities markets.

**20. Following the launch of the G20 LCBM Action Plan in November 2011, the IMF, the World Bank, the EBRD, and the OECD were asked to develop a diagnostic framework to identify general preconditions, key components, and constraints for successful LCBM development.**<sup>10</sup> The LCBM Diagnostic Framework provides a tool for analyzing the state of development and efficiency of LCBMs in emerging and developing economies and for designing a

<sup>8</sup> The intention is to publish the GN by April 2020, followed by country pilots.

<sup>9</sup> "Developing government bond markets: a handbook," The World Bank and the IMF (2001). The World Bank publication.

<sup>10</sup> "Local Currency Bond Markets - A Diagnostic Framework," IMF, World Bank, European Bank for Reconstruction and Development, and OECD (2013).



strategy for LCBM development and deepening with appropriate sequencing of policy actions. Later, the Revised Guidelines for Public Debt Management, stressed the importance of LCBM development for public debt management, outlined the main LCBM pillars and policies to strengthen them.<sup>11</sup>

**21. The development of LCBMs continues to be a priority of the international community.**

For example, a recent Asian Development Bank (ADB) paper details sound practices for developing a local currency bond market, drawing on regional experiences and lessons from the ASEAN+3 Bond Markets Forum.<sup>12</sup> The paper looks at the essential building blocks and the enabling environment for these markets, as well as the roles of government, authorities, and market participants. It notes that it is not possible to apply a one-size-fits-all approach across ASEAN+3 due to each market's own unique features and the important role of LCBMs in helping mobilize developing Asia's significant savings to meet the region's large infrastructure investment needs (ADB, 2019). Overall, existing LCBM frameworks and related literature on sound practices provide many useful insights though do not offer a holistic approach to help diagnose the stage of sovereign LCBM development; current guidelines and studies have not bridged the gap fully to help country authorities and TA providers in this area.

**22. The new GN under preparation, by the IMF and the WB, seeks to fill this gap by defining more clearly the building blocks for domestic government bond market development, and offering a framework to assess the stage of market development in each block.** The GN expands the evidence based on country surveys and will provide a basis for an integrated approach to sovereign LCBM development.

### Overview of the New LCBM Guidance Note

**23. The GN draws on the information from a survey on the status of domestic government debt markets in 33 countries; some of the key takeaways from the survey were:**<sup>13</sup>

- The process to establish and maintain a benchmark yield curve came is a major challenge. Managing the debt redemption profile, improving the efficiency of cash management, and improving coordination among stakeholders are also noted as important challenges.
- Limited secondary bond market liquidity (as measured by turnover volume) was identified as a major challenge by about half of the survey respondents. This was attributed to a small number of domestic institutional investors, the prevalence of buy-and-hold strategies and investor inertia. Also, high bid-offer spreads and intermediary fees were highlighted as having a negative impact on market liquidity.

<sup>11</sup> "Revised Guidelines for Public Debt Management," IMF and WB (2014). IMF Policy Paper.

<sup>12</sup> "Good Practices for Developing a Local Currency Bond Market: Lessons from the ASEAN+3 Asian Bond Markets Initiative," Asian Development Bank (2019).

<sup>13</sup> The survey was conducted in mid-2019. Subsequent discussions with selected country authorities also informed the recommendations.

- Difficulties in attracting foreign investors and further developing the retail investor base was another common theme.
- Additional challenges mentioned by survey respondents were the options to issue foreign exchange denominated debt, and difficulties in increasing the maturity of debt instruments.

## The Building Blocks of LCBM

**24. EMDEs interested in developing their LCBMs need first to establish whether key preconditions are met, including macroeconomic and financial stability, the absence of fiscal dominance and the existence policies conducive to the efficient functioning of markets.** If one or more of these conditions cannot be met, the authorities should focus their efforts on meeting them. When these conditions are met, the revised Framework can help to diagnose the country's stage of LCBM development and identify the areas where reforms or policy measures are needed. The Framework can be used as a tool to monitor the progress in six building blocks. For each building block, namely: (i) the money market; (ii) primary market; (iii) investor base; (iv) secondary market; (v) financial market infrastructure; and (vi) legal and regulatory system. The Framework aims to provide appropriate performance indicators of its main functionalities and help prioritize the reforms needed.

### *Building Block 1. Money Market*

**25. A well-functioning money market is essential for the development of a LCBM.** This building block of the revised Framework focuses on the use of treasury bills and central bank securities and discusses the functions of a short-term yield curve.<sup>14</sup> Effective monetary operations that proactively manage systemic liquidity result in a reliable short-term money market yield curve. This short-term yield curve serves as a basis for the pricing of many other capital market products, anchors the overall yield curve, and supports market-based financing of the government and the corporate sector.

- **Active repo markets, with government or central bank securities as collateral, facilitate market making by broker-dealers, including the issuance process, and play a critical role in enhancing government bond market liquidity.**<sup>15</sup> Furthermore, a liquid money market helps strengthen banks' capacity to adjust liquidity positions and invest in longer-term assets, and enhances the effectiveness of monetary policy.
- **A derivatives market can support a separation of pricing of interest rates from liquidity considerations of the underlying cash instruments, improving signals about the path of future monetary policy.** It also will allow the banking system to manage its interest rate risk

<sup>14</sup> Other repo instruments, including certificates of deposit (CD), commercial paper (CP) and foreign exchange and interest rates derivatives, are not considered in the analysis.

<sup>15</sup> Collateralized repo transactions that try to minimize the credit risks of counterparties are being used more widely after the global financial crisis.

profile without having to change its activity in the cash market. Last, it will open up, through the FX swap market, a link with foreign markets and as such deepen the markets means of managing both its interest rate risk as well as its liquidity and FX risk exposure.

### ***Building Block 2. Primary Market***

**26. The primary government bond market acts as the foundation of the LCBM.** The primary market plays a pivotal role in domestic financing, as well as in the pricing of many instruments. The size of the primary market critically depends on the government's financing requirements, available debt instruments, the diversity of the investor base, and the efficiency of bond market infrastructure. Government bond yields are typically determined by market participants' inflation expectations, interest rate volatility and credit risk, with steep yield curves often limiting the scope for maturity extension. Experience has shown that sustained periods of macroeconomic stability positively impact the development of the LCBM by increasing market liquidity, facilitating lengthening of the yield curve, reducing the proliferation of debt instruments, and diversifying the investor base.

### ***Building Block 3. Investor Base***

**27. A deep and well-diversified investor base ensures demand for government securities under range of market conditions.** The size of the domestic financial sector largely determines the amount of government bonds that can be sold domestically and thus affects the potential size of the market. A large financial sector makes it easier to absorb fixed costs related to the development of market infrastructure and increases the potential for liquidity across different financial instruments. A well-diversified investor base, with varied risk-return preferences also allows the government to manage refinancing risk in its debt portfolio and to construct an efficient yield curve across key maturities.

### ***Building Block 4. Secondary Market***

**28. A secondary market provides a cost-efficient, secure platform for market participants to buy and sell securities at any point in time, in a fair and transparent manner.** It should be supported by several intermediaries, interested in trading government securities in standard amounts, at market-based price and during agreed times. Such a structure provides wholesale investors with avenues to buy and sell securities at short notice and at reasonable cost. In broad terms, secondary market liquidity allows for maturity transformation, with investors able to hold longer maturity assets relative to their liabilities, on the assumption that liquidity will be available in the secondary market when necessary. The secondary market also provides a pricing reference for the sovereign. A mature stage of LCBM development is typically characterized by healthy secondary market activity across the yield curve during normal times.

### ***Building Block 5. Financial Market Infrastructure***

**29. An efficient securities financial market infrastructure (FMI) facilitates the smooth flow and settlement of transactions in the money, primary and secondary markets, strengthens**

**investor confidence, and stimulates the pace of market expansion.** The state of development and functioning of custody and settlement infrastructure is a major determinant of systemic risk. A market may be exposed to considerable systemic risks in the absence of a sound securities settlement infrastructure, i.e. the failure of one party to a large transaction may lead to a series of subsequent failures. Systems used to settle financial market transactions should be safe, cost-efficient, and convenient to use. Financial market infrastructure should support a delivery versus payment, have a clear legal basis, be subject to regulatory oversight and have the necessary capacity to process required trading volumes within the chosen settlement cycle. At advanced stages of LCBM development, FMI can facilitate the smooth flow of transactions for different categories of investors with reduced uncertainty at low costs.

### ***Building Block 6. Legal and Regulatory Framework***

**30. The underlying legal and regulatory frameworks affect the structure and functioning and thus the development of government bond markets.** At the level of the government, as an issuer of securities, legislation and other legal instruments (e.g., a fiscal agency agreement) should stipulate clearly the ability of the government (and other public entities as appropriate) to borrow and the authorization of different government entities to operate in these markets, as well as provide for effective monitoring, reporting, and accountability mechanisms for such activities. The role that the central bank is expected to play as agent for the government is particularly important. Regulations should provide a sound legal basis for the organization of the primary and secondary markets in government securities. The legal framework should clarify the legal status of dematerialized securities, shield investors from insolvency of custodians, and prohibit and sanction inappropriate behavior by custodian (e.g., misuse of client assets) and intermediaries (in particular improper trading practices, such as market manipulation and insider trading). It is also critical that the legal framework for taxation is sufficient for the development and efficient working of the government bond market. In particular, tax laws should encourage investment and liquidity in bond markets by ensuring: the appropriate treatment of repo transactions (building block 1); the development of both the primary and secondary market (building block 2 and 4); and a clear and effective tax treatment for each key class of investor that conforms to international good practices, including foreign investors. In fact, the tax treatment of investment in the LCBM often becomes essential to establishing critical links between LCBMs and international FMIs.

### **Stages of LCBM Development**

**31. Using derived scale scores, the revised Framework will allow for an assessment of core functionalities for each indicator in each of the six building blocks of the LCBM.** Concretely, the revised Framework places a particular building block under assessment into one of four market development stages:

- Stage 1, or nascent stage, where the relevant indicators exhibit no functionality;
- Stage 2, or developing stage, where the relevant indicators exhibit some functionality, but several shortcomings exist;

- Stage 3, or emerging stage, where it is possible to identify the core elements of the functionality of the relevant indicators; and
- Stage 4, or mature stage, where the indicators exhibit considerable degree of functionality. This stage broadly corresponds to the levels/functionality the indicators exhibit in AEs LCBMs.

**32. The GN for the revised LCBM framework will also discuss the most common challenges in the development of sovereign LCBMs (by building block) and provide broad policy recommendations on how to overcome those challenges.**

## **B. Developing Corporate Bond Markets**

**33. Developing sovereign LCBMs is an important step to create an enabling environment for the development of corporate bond markets.** For many corporate issuers, access to domestic capital markets tends to lower costs through lower interest rates and longer maturities relative to bank loans. Corporate bond markets also provide access to local currency financing, allowing companies to manage their foreign exchange risk. From an investor perspective, corporate bond markets offer more attractive investing opportunities in terms of their return compared to bank deposits, albeit with a higher risk. Further, if a wide range of instruments exist, capital markets can provide investors the option of holding a diversified portfolio, contributing to better risk management. This is particularly critical for institutional investors such as pension funds and insurance companies.

**34. Corporate bond markets can contribute to economic growth and financial stability.** The potential contribution of corporate bond markets to economic growth in EMDEs can be large, especially, given the challenge of attaining the Sustainable Development Goals (SDGs). The estimated financing gaps in key strategic sectors that are critical to achieve the SDGs are very large. For example, in infrastructure alone it has been estimated that USD 2 trillion in investment would be needed in EMDEs over the next 15 years. Similar sizable gaps exist in the housing, small- and medium enterprise financing, and climate related sectors. Traditional funding sources such as public investment or bank lending will not be sufficient to close these gaps. The mobilization of private sector funding, including in the corporate bond market, will thus be critical.

### **State of Development of Corporate Bond Markets and Preconditions**

**35. Corporate bond markets have thus far played a limited role in mobilizing financing in EMDEs, although they have grown recently.** The overall size of the domestic corporate bond markets in EMDEs in terms of GDP remains small,<sup>16</sup> and financial institutions (in particular banks) are the major issuers of corporate bonds. Non-financial corporations in the majority of EMDEs continue to rely mostly on bank financing. In addition, very few types of instruments are available, and the markets lack liquidity.

---

<sup>16</sup> There are notable exceptions in terms of large local corporate bond markets (e.g., China and Malaysia).

**36. The basic enabling environment for a corporate bond market is not always present in EMDEs.** Research and experience suggest that several preconditions need to be met for corporate bond markets to develop. These preconditions can be grouped in three main categories: (i) a stable macroeconomic environment; (ii) a relatively developed financial sector; and (iii) a solid institutional environment. In addition, many corporates in EMDE countries lack the financial sophistication to engage with financial markets, often viewing this funding route as too complicated, costly and difficult to explain to shareholders.<sup>17</sup>

- **Macroeconomic stability.** For investors to trust a market and invest long term, macroeconomic stability is critical. Most empirical studies find that capital market development correlates strongly with key macroeconomic variables, including low and stable inflation, higher levels of national investment and savings, and a strong current account position.<sup>18</sup> In addition, surveys confirm the importance of a low and stable risk-free rate upon which to benchmark private securities.
- **A relatively developed financial sector.** Corporate bond markets necessitate a certain level of financial development, including market bond pricing, a sound banking system and a sufficiently large institutional investor base. Banks are important due to their role as providers of liquidity and credit to the market, as well as of key market infrastructure (including payments and custody). Further, although banks are usually the first and main issuers of securities, including of corporate bonds. There is an inherent tension between capital market developments and banks, as they both compete for the same companies in the credit market.
- **A solid institutional environment.** Respect for the rule of law, which at a more granular level translates into respect for creditor rights, and effective mechanisms to enforce such rights are important preconditions for market development.<sup>19</sup> The quality of the public administration and policy continuity, especially at early stages of market development, is also an important factor in capital market development, as confirmed by market participants.

**37. The size of the economy operates as a key determinant of market potential. A general finding from empirical research is that, all other things equal, larger economies tend to have larger capital markets.** Conversely, capital markets tend to be smaller in small economies and, thus those markets tend to be illiquid and shallow. Other factors also play a role, in particular the structure of the corporate sector and the level of diversification of the economy. The impact of these factors on market development are current areas of research focus for the WBG.

---

<sup>17</sup> The government bond yield curve serves as an important reference point for capital market activity, and thus is an important precondition for corporate bond market development. However, the reference function of the government bond market should be managed within the context of the potential crowding-out impact it can have within the broader capital market.

<sup>18</sup> “Development of Corporate Bond Markets in Emerging Market Countries,” Chapter IV Global Financial Stability Report. IMF (2005). IMF publication.

<sup>19</sup> Empirical studies tend to show a strong correlation between these variables and capital markets development, including corporate bond markets development.

## Implications for the Work of Government Authorities and IFIs

**38. At a country level, authorities should focus their efforts on ensuring that most/all of the preconditions are met.** These include maintaining prudent macroeconomic policies, establishing the basic legal and institutional framework and avoiding wild gyrations in economic policies. For many EMDEs, there is significant room for improvement in meeting these preconditions. Furthermore, improved coordination between different country authorities is often needed.

**39. For IFIs, acknowledging the importance of preconditions calls for a careful selection of countries in which capital markets development should be covered.** To this end, the WBG is currently developing a framework for country selection for capacity development, and the starting point is an assessment of preconditions. This framework is being anchored in a rigorous analytical exercise. To accelerate impact, the WBG implemented the J-CAP initiative in mid-2017, which uses jointly advisory and transaction support to mobilize private sector financing via capital markets to key strategic sectors. The combined use of advisory and transaction work creates a virtuous circle where one reinforces the other. This in turn requires the deployment of staff across the whole WBG, operating as a one-stop window for countries.

## C. Technical Assistance by IOs and Local Currency Debt Issuance by IFIs

### Development Framework and Technical Assistance

**40. International Organizations (IOs) continue to support the development of LCBMs in EMs and LICs through various programs and initiatives.** Collaboration between IOs is also evolving, in alignment with the G20 LCBM Action Plan:

- **The African Development Bank (AfDB) and Japan's Government Pension Investment Fund (GPIF)** signed a partnership in September 2019 to promote environmental, social and governance investments in the global capital markets. This partnership will focus on channeling investments towards inclusive and sustainable growth in Africa, contributing to the achievement of the Sustainable Development Goals. The creation of the African Domestic Bond Fund in 2018 has also helped to increase price discovery and transparency in several fixed income markets in Africa.
- **The Asian Development Bank (ADB)** has plans to develop a new Private Sector Window (PSW) to further support local currency operations in fragile and post conflict states and in small island developing states. The ADB's work to mainstream local currency finance is further supplemented by development of the AsianBondsOnline platform which is a comprehensive open resource on ASEAN local currency capital markets. The ADB continues to provide support to Developing Member Countries to develop financial institutions and capital markets as outlined in its Strategy for 2030.
- **The European Bank for Reconstruction and Development (EBRD)** has intensified efforts to develop the foundations of financial markets in member countries. The EBRD approach also



bridges market gaps or imperfections by absorbing the associated risks within the bank's balance sheet. Development activities are delivered in a continuous delivery approach through the mechanism of Money Market Working Groups (Box 1).

- **The Inter-American Development Bank (IADB)** has actively worked to develop new funding mechanisms to provide currency risk protection to borrowers in the Latin America and Caribbean region through local currency financing. The IADB has been successful in increasing the liquidity of less developed local currency markets in the region and in expanding and deepening established local currency markets. Since 2005, the IADB has undertaken 175 operations in a diverse range of local currencies (Mexico, Colombia, Peru, Brazil, Chile, Uruguay, Costa Rica, Jamaica, Dominican Republic, Trinidad and Tobago), worth over USD 7.2 billion. In 2019, the IADB achieved an important milestone by executing a pioneer debt management operation for the Government of Jamaica in a two-tranche conversion to Jamaican dollars. The IADB worked with the Ministry of Finance and a market counterpart to develop and structure this 10-year operation, worth USD 50 million, associated with an active loan with the IADB. Additionally, during the past five years the IADB continued to broaden its capabilities in local currency financing in certain currencies by establishing treasury operations in Mexico, Brazil and Colombia providing additional flexibility to offer borrowers long-term financing in local currencies.
- **The IMF is implementing several TA projects following the building blocks of the Revised Framework.** Georgia, for example, is developing a set of financial and fiscal legal instruments that will underpin the development of local currency bond markets and develop their capital market more broadly, building on an initial set of reforms (e.g., payment systems law, securities holding legislation and tax law framework for financial instruments and investment funds). The project is comprehensively incorporating work on the six building blocks and including legal and regulatory reforms: (i) an improved contractual framework for government debt securities; (ii) a master securities lending agreement; (iii) MoF-National Bank of Georgia fiscal agency agreement; (iv) PD legal framework; and (v) tax law framework for private equity and the insurance sector.

**41. Other initiatives have also contributed to develop local capital markets.** The TCX Fund (TCX)<sup>20</sup> contributes to improving the functioning of financial markets in developing countries. TCX helps structure risk management products like derivatives, for countries and markets where these risk management products are not sufficiently developed. In recent years, TCX has placed, in cooperation with a few shareholders, a growing volume of off-shore synthetic exotic currency bonds of AAA issuers with specialized funds and investors. TCX has enabled borrowers in less developed, illiquid financial markets to obtain financing without excessive currency risks. In addition, by providing its hedging services in currencies and for maturities where previously no market existed, TCX helps those markets to become more liquid while associated risk premia are reduced.

**42. The WBG continues to implement its “Maximizing Finance for Development (MFD)” initiative, which was launched in late 2017.** The initiative aims to help EMDEs maximize their

<sup>20</sup> TCX Fund was established in 2007 by a group of international development finance institutions (DFIs), following an initiative by Netherlands Development Finance Company (FMO), the Dutch development bank.



development resources by drawing on private financing and sustainable private sector solutions while still meeting the highest environmental, social, and fiscal responsibility standards. The MFD initiative recognizes the importance of strengthening LCBMs across the whole universe of EMDEs as one important means of stepping up the availability of private financing available for development purposes.

**43. In 2018, the World Bank Group developed a key tool (International Development Association (IDA)'s IFC-MIGA Private Sector Window (PSW)) to strengthen efforts to mobilize private sector investment in low income and fragile economies.** As part of the IDA18 replenishment round, IDA Executive Directors approved the creation of a new USD 2.5 billion PSW to attract private sector investment for IDA-eligible countries, with a focus on those countries that are fragile and/or conflict affected. As of August 31, 2019, 28 projects for a total of USD 603 million have been supported under PSW, including USD 240 million in support of 13 projects in Fragility, Conflict & Violence (FCV) countries. Of this total amount, 14 projects equivalent to USD 393 million were approved in FY19 alone. Furthermore, there is a downstream pipeline of over USD1 billion that is past concept approval and an additional USD 1.1 billion in identified 'midstream' opportunities, including projects to be supported by the four PSW facilities.

**44. The World Bank and the IFC continue to implement the Joint Capital Markets Program (J-CAP) initiative launched in 2017.** The J-CAP initiative affirms the World Bank Group's commitment to expanding technical assistance to bolster domestic capital markets in target countries. The J-CAP initiative mobilizes experts across the World Bank Group to strategically sequence advisory services and demonstration transactions, thereby unlocking synergies and creating systemic market impact. The J-CAP initiative has identified six priority countries and one sub-region in which its programs will be implemented, including Bangladesh, Indonesia, Kenya, Morocco, Peru, Vietnam, and the WAEMU region (as well as selected "supplemental" countries). Since its launch, J-CAP has produced joint WBG "action plans" for each priority country. These joint plans have been a crucial first step, identifying not only the potential synergies between advisory services and demonstration transactions, but also identifying capital market areas with the greatest potential for development.<sup>21</sup>

**45. The IMF and World Bank continue to provide significant technical assistance (TA) in debt management involving bond market development, supported by multi-donor trust funds.** The Debt Management Facility (DMF) II, implemented jointly by the IMF and World Bank in April 2014, provides debt management capacity building to developing countries. The third phase of the DMF has been recently launched and incorporates a wide range of activities, including debt management strategy formulation and implementation (MTDS), implementation of the Debt Sustainability Framework (DSF), development of domestic debt markets, international capital market access, debt portfolio risk management, and subnational debt, with an increased focus on regional

<sup>21</sup> Work areas either underway or expected include the development of money markets, the government yield curve, and secondary market liquidity, as well as more sector-specific activities, such as on infrastructure (e.g., municipal bonds, project bonds), housing (e.g., REITs, covered bonds) and SME finance (e.g., reverse factoring, SME loan securitization). J-CAP is also working to establish mechanisms for sharing knowledge and lessons.

and e-training. The Financial Sector Reform and Strengthening Initiative (FIRST) also provides TA to promote sounder financial systems, including financial sector development.

**46. TA in local currency bond market development through IFIs is also supported through several bilateral initiatives.** In addition to the work of the DMF, TA in debt management and bond market development has been supported through bilateral initiatives funded by Japan (Strengthening Regional Public Debt Management), Canada, and SECO in Switzerland (the Government Debt and Risk Management Program offered by the World Bank Treasury and the Capital Markets Strengthening Facility offered by the World Bank Finance, Competitiveness and Innovation Global Practice).

### Box 1. A Money Market Development Framework

Several IFIs have provided TA to develop monetary operations and money markets. The IMF's Monetary and Capital Market Department has delivered extensive TA in these areas, e.g., in Indonesia. Also, the EBRD and Frontclear have developed a Money Market Development Framework (MMDF), which is a toolkit to: (i) assess the status of money market development in a certain jurisdiction; and (ii) identify areas that need to be strengthened to advance money market activity.

The MMDF consists of a questionnaire which explores the functioning of the money market across several building blocks namely 1. Current level of money market development, 2. Market environment, 3. Central bank activity, and 4. Resources. The questionnaire allows countries to score the functioning of the market through all the milestones of the different building blocks. The results determine the state of development and identify the areas where policy makers should concentrate on in terms of next steps for market development. The MMDF also provides a set of recommendations for the authorities to improve market functionality.

The MMDF has been applied in five countries to date (Armenia, Egypt, Georgia, Morocco and Kazakhstan). In 2019, the MMWG delivered new interest rate benchmarks in Egypt, Kazakhstan and Morocco. Whilst the MMWG in Georgia announced their reformed benchmark in 2018. These benchmarks have been designed in line with the new reference rates (RFRs) that have been chosen as the successors to Libor.

Source: EBRD

## Local Currency Debt Issuance of IFIs

**47. International Organizations (IOs) have continued their issuance of bonds in EM and LIC local currencies, both in domestic and in international capital markets.** These risk-free instruments can play a catalytic role in the development of LCBMs by establishing a benchmark for lower-rated issuers. In this regard, to date the World Bank has undertaken funding transactions in 32 emerging markets and frontier currencies, while the IFC has issued local currency bonds in onshore or offshore bond markets of more than 20 countries. The largest local currency transactions have taken place in relatively large economies, i.e. in Brazil, China, India, Mexico, Poland, Russia, South Africa, and Turkey.

**48. In 2019, the World Bank raised funds in 18 currencies, totaling the equivalent of USD 2.6 billion, and 14 currencies year-to-date in FY 2020, totaling USD 1.2 billion equivalent.** IBRD's biggest local currency transactions in 2019 were in Indonesia, Brazil, India and Mexico.

**49. The IFC raised funds in 21 currencies in FY 2019, totaling the equivalent of USD 2.6 billion, and in 16 currencies year-to-date in FY 2020, totaling USD 750 million-equivalent.** Among IFC's largest issuances in FY 2019 were those in Indian Rupees, Indonesian Rupiah, and Turkish Lira.

**50. The EBRD has issued EUR 2.1 bn of bonds since early 2018 in over 163 transactions, in currencies as diverse as the Belorussian Rubble and Lebanese Pound.** In addition, the EBRD has cemented its reputation as an innovative issuer by offering of inflation-linked Eurobonds denominated in Kazakh Tenge to the local investors via domestic infrastructure.

**51. The ADB significantly increased its local currency operations during the 2016–2019 period through the delivery of both sovereign and non-sovereign local currency projects.** ADB increased the volume of annual non sovereign local currency disbursements to more than USD 800 million in 2019 and 30 percent of all non-sovereign disbursements. In addition, ADB expanded the number of local currencies bond transactions that were intermediated from 8 to 23 while more than tripling the volume of local currency borrowings (bond issues) outstanding to approximately USD 2 billion.

## THE ROLES OF FOREIGN INVESTOR PARTICIPATION AND FINTECH IN LCBM DEVELOPMENT

### A. Foreign Investors' Participation

**52. The role of foreign investors in LCBMs is often assessed in terms of their likely contribution to the objective of developing a well-functioning and liquid local bond market that provides the government with a stable source of funding at reasonable costs and desired maturities.** Countries consider expanding the role of foreign investors should strive to maintain a stable macroeconomic environment and an acceptable degree of capital account openness that fosters a stable and growing participation of foreign investors in their government securities markets. Further, systems that allow monitoring of foreign investor flows and holdings, including amounts and maturities, would be important for detecting possible adverse changes in investor sentiment that may result in a sudden stop of capital flows.

**53. Foreign investors take into account several parameters when formulating their investment policy for EMDEs.** Common concerns of nonresident investors include: (i) the exchange rate regime; (ii) the existence of capital controls; (iii) the easiness to repatriate investments upon liquidation; (iv) access to the primary or secondary markets to purchase government bonds;

(v) secondary and FX market liquidity or ability to buy and sell at “fair value”; and (vi) appropriate market infrastructure—clearing, settlement, and custody integrity.

### Benefits from Foreign Investor Participation

**54. A complex strategic issue for debt managers that has important implications for macroeconomic and financial stability is the decision to broaden the investor base by allowing foreign investors to participate the local bond market.** Some studies focus on the role of foreign investors in reducing the cost of sovereign debt issuance. Peiris (2010),<sup>22</sup> for example, estimates the impact of the entry of foreign investors on the volatility and level of EM government bond yields, concluding that the significant presence of foreign investors could reduce borrowing costs, lengthen the maturity of debt, and improve market liquidity. A heterogeneous investor base with different time horizons, risk preferences, and trading motives ensures active trading and increases market liquidity, facilitating the government’s task to adhere to its funding strategy.

**55. Foreign investor participation in domestic government bond markets tends to broaden an issuer’s funding sources and increase the sophistication of instruments.** This, in turn, benefits sovereign issuance decisions and supports liability management operations (LMOs). Also, such broadening of a country’s investor base typically leads to a diversification of the sovereign debt portfolio and a lengthening of the maturity structure. Foreign investor participation in domestic markets may contribute to increased discipline through greater scrutiny of macroeconomic developments.

### Risks from Foreign Investors’ Participation

**56. Allowing foreign investors in the local bond market can affect the cost-risk trade-off of debt managers (Jonasson and Papaioannou, 2018).**<sup>23</sup> Aspects such as debt portfolio maturities, the point in the business cycle, and volatility of investors can contribute to refinancing risks. As foreign investors tend to be relatively sensitive to risk, and manage their portfolios actively, they may make local (and non-deliverable forward) markets more volatile, and vulnerable. Such risks can arise, as even small changes in global asset allocation can generate capital movements for the recipient economy that may cause large movements in the real exchange rate, asset price bubbles, or credit booms, all of which can affect macroeconomic stability.

**57. Past experience has shown that “sudden stops” and/or quick withdrawals of foreign capital can be particularly disruptive and aggravate matters for the affected countries during periods of debt distress.** Jonasson, Papaioannou and Williams (2019)<sup>24</sup> note that countries with a high share of foreign private participation in their investor base for local government debt are empirically “the most skittish in times of trouble.” Potential disruptions include depletions of foreign

<sup>22</sup> “Foreign Participation in Emerging Markets’ Local Currency Bond Markets,” Peiris (2010). IMF Working Paper.

<sup>23</sup> “A Primer on Managing Sovereign Debt-Portfolio Risks,” Jonasson and Papaioannou, (2018). IMF Working Paper.

<sup>24</sup> “Sovereign Debt: A Guide for Economists and Practitioners,” Chapter 5: Debt Management. Jonasson, Papaioannou and Williams (2019). IMF and Oxford University Press.

exchange reserves, which add to depreciation pressures, balance sheet stress, loss of market access, and potentially, a sovereign debt restructuring. As such, it is not advisable to allow foreign investors in an LCBM at an early stage of development, or if secondary market is shallow and illiquid.

## **Incentives to Increase Foreign Investors' Participation**

### **58. Practices and policy measures that help attract foreign investors include:**

- Increasing transparency and developing a domestic government yield curve that facilitates the private sector's pricing of risk and a more accurate pricing of government instruments at issuance and in LMOs.
- Creating benchmark securities, building liquidity of secondary markets and developing new financial products, e.g., inflation-linked bonds, within a stable macroeconomic and financial environment.
- Availability of hedging instruments, especially interest rate and exchange rate derivative instruments (e.g., interest rate and exchange rate forwards, swaps and options).
- The government's commitment to sound, safe, and robust market infrastructure, and to equitable treatment of investors. Also, adoption of measures to improve market competition (e.g., market indices, performance league tables).
- An effective and efficient tax framework, broadly consistent with international practice.
- A well-established investor relations program, along with transparency in debt management strategies and operations.<sup>25</sup>

**59. In the survey conducted for the revised IMF-WB Guidance Note for LCBM development, authorities acknowledged the positive role of foreign investors in developing LCBMs.** Respondents indicated that they had plans to encourage foreign investor participation through policy changes aimed at (i) improving information dissemination; (ii) improving the regulatory framework; (iii) enhancing access to hedging instruments; (iv) issuing local currency bonds in offshore markets; (v) improving the tax framework; and (vi) relaxing capital controls, where they exist. However, authorities also indicated that the optimal level of foreign investor participation would depend on the specific country's circumstances, including debt level and financial conditions and the level of LCBM development, and would prefer a relatively small share of foreign investors in the investor base, given the risks discussed above.

<sup>25</sup> Given concerns about the sustainability of public finances, legislation should require the public disclosure of comprehensive, timely and reliable information on public debt, including locally issued debt.

## B. Scope, Issues, and Challenges in Applying Fintech to LCBM Development

**60. New financial technology offers scope for cost reduction for intermediaries, with the potential for lower transaction costs for investors and easier access for investors.** Faster and cheaper payment and settlement systems in turn lead to more efficient markets that are generally more supportive for debt managers. In addition to market efficiencies, these advancements offer the prospect of a leap forward in financial inclusion, e.g., for retail investors in government bonds, particularly in developing markets.<sup>26</sup>

**61. Distributed Ledger Technology (DLT) is continuously changing the manner in which information is gathered, transmitted and exchanged.** DLTs, even with private sector operated centralized ledgers, are expected to allow market intermediaries to materially streamline IT system infrastructure and dramatically reduce costs. With lower costs for transactions, fees paid by investors should similarly see a reduction.

**62. In light of the lower transaction costs of intermediaries transitioning to newer financial technologies, an increase in investor participation, particularly in less developed markets, is likely.** Previously untapped investors, e.g., retail investors, may soon become reachable and represent a new pool of funding for domestic issuance. In developed markets, the main focus in the use of technology in debt markets may continue to be primarily on enhanced cyber security, eliminating costs and inefficiencies, increasing potential for automation, and auditability.

**63. On the issuer front, multilaterals and DMOs have used new technologies in public issuance, for example in the “Blockchain Bonds” issued by the WBG.** This transaction established a proof of concept in applying the technology in primary markets as the blockchain technology was used as a central ledger for purposes of transaction verifications and access (Box 2).

**64. When applying DLT to debt issuance and to the development of secondary markets, DMOs should ensure that advances in technology provide more insight and tracking of market activity (including the activity of investors, trading entities and market makers).** Similarly, these requirements hold for a central body managing a centralized securities ledger that also triggers additional requirements for the operator, including having to undertake due diligence, settlement platform selection and maintenance, managing customer data and information, and oversight of transaction monitoring.

**65. However, technological improvements seem unlikely to act as a catalyst of change in the type of instruments utilized by DMOs.** A notable exception would be the emergence of central banks introducing digital instruments. While the ramifications of utilizing digital and e-currencies are still being analyzed, they offer the prospect of being a game-changer on topics such as transparency, oversight and access of digital financial services to retail investors. The

---

<sup>26</sup> Relating to retail investors' participation in LCBM, on the investors' side the urgency of financial literacy education and investors protection should be highlighted, while on the borrowers' side, the standardization of bond instruments is most critical.

consequences of the adoption of a digital and e-currencies could have important operational implications on DMOs, such as on the ability to trade and settle but could also trigger increased participation of non-resident investors and affect the structure of the LCBM. Other challenges would follow from the positive effect that Fintech may have on participation of foreign investors in LCBMs, indicating that sudden capital outflows (triggered by foreign investors) could become larger and more frequent.

**66. Overall, authorities need to balance the risks alongside potential benefits that can be reaped from the use of technology by adopting clear policies and regulations.** These include addressing potential issues and risks include that of anti-money laundering and combating the financing of terrorism. Further, the evolving and differing regulatory approaches across jurisdictions pose a challenge for countries, investors and DMOs alike.



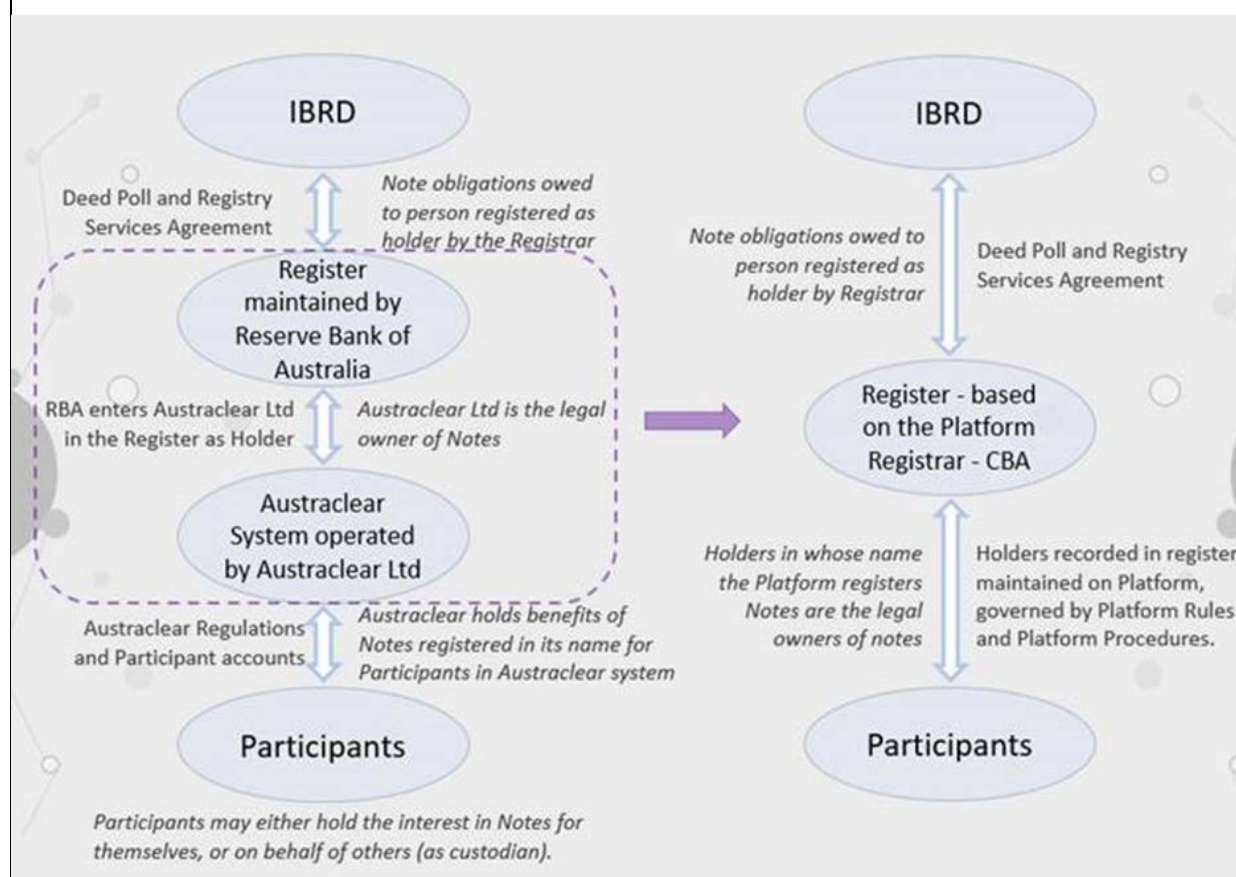
### Box 2. Blockchain Bonds—Experience of the WBG

In August 2018, the World Bank issued the first global “blockchain bond”: the Blockchain Operated New Debt Instrument (bond-i). The Commonwealth Bank of Australia (CBA) arranged the bond, raising about USD 80 million with a tenor of two years from seven Australian financial institutions.

A blockchain bond is a bond with its ownership recorded in a distributed database called a blockchain. This format, which originated with Bitcoin, has generated substantial interest in the financial sector for the transparent way in which it records transfers of ownership of an asset. A blockchain records transactions for a given period in a cryptographically stamped block of data, with each block linked to the previous period’s stamp, thereby chaining the blocks together.

The ownership of the bond-i is authoritatively recorded in an Ethereum blockchain database, rather than in a register maintained by the Reserve Bank of Australia. The ownership records in blockchain database are also visible to each investor, but not to the public. Phase 2 of the bond-i project will facilitate secondary market transactions recorded on the blockchain, and custodians will be able to hold bonds on behalf of other institutions. The blockchain does not at this point incorporate a payment token such as a Central Bank Digital Currency, which would allow delivery versus payment, so payments will be made through traditional means. The blockchain approach is aimed at lowering costs, easing reconciliation, allowing direct holding of assets, and digitally orchestrating actions such as interest payments thereby removing intermediaries.

### Market Structure for a Traditional Bond and for Bond-i



Source: World Bank.