Improving the Investor Base for Local Currency Bond Markets in China, India and Indonesia

Cosmina Amariei
Willem Pieter de Groen
Diego Valiante

Improving the Investor Base for Local Currency Bond Markets in China, India and Indonesia

Centre for European Policy Studies (CEPS)
Cosmina Amariei
Willem Pieter de Groen
Diego Valiante

In cooperation with
Research Bureau of the People's Bank of China (PBoC)
Yu Li
Observer Research Foundation (ORF)
Abhijnan Rej
Economic Research Institute for ASEAN and East Asia (ERIA)
Astrid Dita
Fauziah Zen

Consultation was undertaken with the Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), and the Indonesian Financial Services Authority (OJK).

Brussels, August 2017

The Centre for European Policy Studies (CEPS) is an independent policy research institute based in Brussels. Its mission is to produce sound analytical research leading to constructive solutions to the challenges facing Europe today. CEPS Paperbacks present analysis and views by leading experts on important questions in the arena of European and international public policy, written in a style geared to an informed but generalist readership.

This report has been prepared between 10 December 2014 and 31 December 2016 within the framework of the Emerging Market Sustainability Dialogues (EMSD), which is implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the German international cooperation agency, on behalf of the German Ministry of Economic Cooperation and Development (BMZ).

EMSD is a network of representatives from the financial sector, think tanks and multinational corporations who jointly develop and implement solutions for sustainable economic development in emerging economies, through consultation, dialogue and research.

The views expressed in this report are those of the authors writing in a personal capacity and do not necessarily reflect those of CEPS or any other institution with which they are associated.

ISBN 978-94-6138-552-9

Centre for European Policy Studies

Place du Congrès 1, B-1000 Brussels

Tel: 32 (0) 2 229.39.11

e-mail: info@ceps.eu

CONTENTS

List of Boxes, Figures and Tables

FOREWORD

Asia's emerging markets will need trillions of Euros in the coming years to upgrade their infrastructure and to sustain economic growth. Three Asian countries in particular face some of the greatest global infrastructure investment needs: China, India and Indonesia.

Local currency bond markets (LCBMs) play an important role in unlocking additional capital required to finance infrastructure projects, by transforming abundant local savings into long-term investments, for infrastructure finance and growth.

This report was prepared within the framework of the Emerging Market Sustainability Dialogues (EMSD) network and is the result of an innovative approach that encourages fresh thinking and open dialogue among various stakeholder groups. The study has been developed through the joint effort of three think tanks: the Belgium-based Centre for European Policy Studies (CEPS), the India-based Observer Research Foundation (ORF), and the Indonesia-based Economic Research Institute for ASEAN and East Asia (ERIA). In compiling this report, policy-makers, think tanks, financial regulators and private sector representatives from Europe and Asia came together to develop solutions to enhance peer-learning and knowledge exchange on local currency bond markets in Asia.

The study has also benefited from the expertise and data of the Research Bureau of the People's Bank of China (PBoC), the Reserve Bank of India (RBI), the Securities and Exchange Board of India (SEBI), and the Indonesian Financial Supervisory Authority (OJK).

Discussions at various events, including the 3rd Annual Symposium on EU-Asia Relations in Financial Services (Beijing, May 2016), the conference of the Asia-Pacific Financial Forum (APFF), in cooperation with the Asia's Securities Industry & Financial Markets Association (ASIFMA): Corporate Bonds, Repo & OTC Derivatives Developments in China (Beijing, March 2017) have also contributed to and enriched this study.

We hope that this report supports further informed exchange and cooperation, contributes to enhancing local currency bond markets in Asia and thereby to developing infrastructure that is economically viable, socially sound and environmentally friendly.

Daniel Taras
Global Programme Director
Emerging Market Sustainability Dialogues (EMSD)

Achim Deuchert
Senior Advisor
Emerging Market Sustainability Dialogues (EMSD)

EXECUTIVE SUMMARY

China, India and Indonesia are in need of alternative sources of finance. In the coming years, these three countries will need vast amounts of capital for, among others, bringing investments in infrastructure to the level that optimises economic growth. This study looks at the possibility to further develop the local currency bond markets in general, and to broaden and deepen the institutional investor base in China, India and Indonesia in particular.

Need for private investments

The funding gaps for infrastructure differ substantially across the emerging Asian G20 countries. Indonesia would have to increase its infrastructure spending almost by half. India would have to spend about a tenth more than it has spent before, while China is among the few countries that could reduce its annual spending on infrastructure by more than a third in the period up to 2030.

Infrastructure funding mainly comes from public authorities (70%). Private entities and development banks make up the rest. With the governments being fiscally constrained and in view of development banks' limited capacity, private entities should be more involved in closing the funding gaps. The efficiency of the projects could also improve substantially with the participation of private entities. The private funding primarily comes from banks, which are increasingly restrained in their ability to lend due to higher capital requirements and legacy assets that need to be resolved. Alternatively, the development of the capital markets could contribute to infrastructure finance.

Role of local currency bond markets

Besides providing local currency bonds for infrastructure, a local currency bond market that is more developed could also function as a shock absorber in a crisis, activate savings, enhance competition with bank-based and other types of finance for non-financial corporates, and provide long-term financing, etc.

Furthermore, the transition to a more sustainable low-carbon economy could exacerbate the financial problems of banks in oil-intensive economies (like China and India) and increase the need for new infrastructure substantially. This may ultimately create a funding gap for innovative projects, in which green bonds could play a greater role, as proposed last year by the People's Bank of China.

Market structure and investor base

Efficient bond markets require a broad and diversified investor base and deep and liquid markets in order to be able to absorb shocks like the one generated by the recent crisis. There are substantial differences in the market structures and investor bases in China, India and Indonesia.

China

The Chinese financial sector is four times the size of the economy, comparable to the advanced economies (EU, US). The financial sector remains very much bank-dominated. The corporate bond market has grown relatively quickly in recent years, catching up with government and financial institution bond markets. The majority of the bonds are denominated in the local currency, but the issuance of foreign denominated bonds has increased substantially in recent years. Moreover, the debt instruments are quite fragmented, with many types of instruments depending on the issuer, maturity and responsible regulator.

Banks dominate government bond holdings and are also the main investors in corporate bond markets. The current market infrastructure and prudential regulations incentivise banks to invest in highly rated, liquid instruments, and make it difficult for other players to participate. Nonetheless, there is great potential for other institutional investors, such as insurers, pension funds, and asset management companies, to further develop through the indirect participation of households in capital markets. Moreover, foreign investors are still under-represented in the investor base, despite measures by authorities to gradually lower entry barriers (e.g. direct access to interbank market).

India

The Indian financial sector remains underdeveloped, with financial assets representing just over two times the size of the economy. Compared to the more developed financial sectors, debt securities markets are significantly smaller. Government bonds represent the most important debt securities segment, while corporate bond markets are largely accessible only to financial institutions and public sector entities. Nonetheless, the number of non-financial companies issuing bonds has increased in recent years.

Banks and insurance companies are the main holders of both government and corporate bonds in India. Banks need to hold highly rated bonds in order to fulfil the liquidity requirements. Insurers and pension/provident funds have to abide by investment limits (quantitative and qualitative), while mutual funds are subject to (partially) self-imposed investment restrictions. Some of these requirements that encourage banks and insurers to hold debt securities to maturity and limit the issuance to highly rated corporations have recently been relaxed slightly. Direct participation of households in debt securities markets is almost absent and foreign investors play a marginal role in the Indian investor base.

Indonesia

Indonesia has the least developed financial sector among the three emerging countries. In relative terms, it has a large equity market comparable to the size of its banking sector, but a smaller, very fragmented, debt securities market. Government bonds represent the bulk of debt securities, with a significant portion denominated in foreign currency. Corporate bond markets are largely confined to financial entities and sovereign owned enterprises. The authorities are, however, committed to developing bond markets; they have, for instance, recently started issuing government bonds of different maturities to establish a benchmark.

Foreign investors and banks are the main investors in government bonds, while pension funds, mutual funds and insurance companies are the main investors in corporate bonds. The high share of foreign participants is primarily due to limited investment restrictions and higher yields. Individual investors have access to government savings bonds, but overall their savings remain locked in cash and bank deposits. The non-bank financial sector could be further developed in terms of scale and size of its activities.

Policy recommendations

This report presents several recommendations to make the local currency bonds markets more attractive to both issuers and investors by looking into capital markets functions: price discovery, execution and enforcement (as presented in detail in chapter 5).

China

Issuers

The low bankruptcy rates do not reflect an accurate picture of the credit quality of corporates. Opening the credit rating agency market to more international players could help to gradually eliminate the home bias and align practices with international standards.

Investor base

Compared to banks, insurance companies and pension funds have yet to play a greater role in the corporate bond markets. Expanding the investment mandates of institutional investors may provide additional incentives to serve the corporates that have lower credit ratings.

Regulatory and supervisory fragmentation

There is scope for a rationalisation of the overlapping roles of the different responsible authorities in the primary and secondary bond markets. Better coordination between institutions and changing from an entity-based approach to a functional approach could be considered.

India

Issuers

In order to encourage corporates to re-issue bonds under the same ISIN identification number, additional problems related to the applicable stamp duty and the bunching of repayment liabilities need to be tackled.

Investor base

The investor base for high-yield corporate bonds could be further developed. The lack of liquidity in credit-risk protection instruments currently works as a deterrent. Apart from institutional investors, more retail investors' participation (through income taxation and investment guarantees) to the market is imperative.

Market infrastructure

Future actions to establish a functional trading platform with a central counterparty facility (like for government securities) for over-the-counter trades in corporate bonds will have to weigh its costs and benefits against the suitability for corporate bond markets.

Indonesia

Issuers

Expanding the issuer base with private companies beyond the finance-related firms and capital-intensive sectors is key. Options to speed up and simplify the process for issuing corporate bonds (the so-called 'hybrid' issuance process) and to eliminate the discriminatory tax regime (making bond interest expenses deductible) could be considered.

Investor base

Incentives for institutional investors, which are much smaller than banks and prefer to hold instruments to maturity, in order to shift investments from short-term to long-term assets and trade more, e.g. adjusting risk weights for the computation of regulatory capital or mandating investment in corporate bonds or project bonds, could be considered.

Market infrastructure

The implementation of a clearing mechanism for over-the-counter transactions, in addition to the currently available delivery-versus-payment system, together with a greater development of hedging tools could be an important improvement.

INTRODUCTION

There is a major need for alternative funding sources in the emerging G20 countries in Asia. In light of the significant economic growth over the years and fast-changing industrial development, there are growing needs for infrastructure investments in the region. The private sector is also looking for alternatives, as it is confronted with a distressed banking sector that is reluctant to lend while restructuring its business model.

Focusing on the needs for finance, Asia requires substantial investments to upgrade its infrastructure. The ASEAN+3 countries require an estimated USD 8.2 trillion between 2010 and 2020 to meet their infrastructure needs. The large majority of these infrastructure needs is concentrated in China, India and Indonesia. The governments in these three countries have undertaken substantial efforts to enhance infrastructure investments, but public resources alone are insufficient to meet the investment demands. The development of local currency bond markets (LCBMs) could contribute to raising the needed infrastructure funds and to diversifying the financial system, in order to further stabilise capital flows in the area. Well-developed LCBMs could ultimately contribute to more sustainable investments that may result in greater economic growth.

Within the framework of the G20, China, India and Indonesia have committed to the development of LCBMs. More specifically, in 2011 the G20 adopted an action plan to deepen LCBMs as part of a broader agenda to reform the international monetary system, which aims to enhance the stability of the international financial system. The action plan primarily consists of support measures for the G20 countries to advance LCBMs, i.e. to improve the coordination of technical assistance, increase data availability and progress a diagnostic framework by multilateral institutions (the World Bank, IMF, European Bank of Reconstruction and Development and OECD). The framework, which was finalised in 2013, includes the main elements and preconditions for expanding LCBMs as well as elements for monitoring their growth. In this study, a 'revised' set of those elements included in the diagnostic framework is used to assess LCBMs and to identify policy actions for the development of LCBMs in China, India and Indonesia.

The report is divided into five chapters. Chapter 1 looks at the main benefits of developing the LCBMs. A macroeconomic assessment of the need and potential for LCBMs in China, India and Indonesia follows in chapter 2. Chapter 3 reviews the current market structures in these three emerging G20 countries. Chapter 4 then discusses current investor base and chapter 5 assesses the policy responses so far in key areas (price discovery, execution and enforcement), and suggests potential policy actions to enhance the LCBMs. To facilitate the ease of reading, specific source references for the extensive financial and statistical data are not given at each instance, but are available from the authors upon request.

1 RATIONALE FOR THE DEVELOPMENT OF LOCAL CURRENCY BOND MARKETS

Key findings

- *The development of local currency bond markets (LCBMs) has a large number of benefits, ranging from unlocking long-term investments to better creditworthiness assessment*
- *The potential for LCBMs depends primarily on the size of the economy and its financing needs*
- *Under certain conditions, LCBMs are an attractive source of financing for infrastructure*

The development of robust and efficient LCBMs can enhance sustainable economic growth. There are roughly eight benefits from expanding LCBMs, listed and discussed below:

Shock absorber. The development of an LCBM contributes to eliminating the currency and maturity mismatches that are present respectively in bond markets denominated in foreign currencies (Kwon, 2006) and bank loans (ADB, 2013). Moreover, it contributes to the diversification of the financial system. Hence, in the case of a banking crisis like the 2008 financial crisis, the LCBM may insulate the economy from a credit crunch through alternative debt financing. In effect, LCBMs can absorb the volatility of capital flows through cross-sectional risk-sharing, i.e. risk-sharing through risk dispersion instead of risk concentration, like interbank funding (Allen and Gale, 1995; Valiante, 2016). This all contributes to more financial stability (IMF, 2013; ADB, 2013).

Additional financing. Local currency bonds provide an alternative funding and investment possibility for Asian financial markets, which are bank dominated. For instance, they contribute to filling shortages in infrastructure finance, which requires mature and liquid funding in debt capital markets. Moreover, the traditional business models of banks in Asia focus on (ultra-conservative) net interest income and less on fee income, which makes them reluctant to develop structured financing schemes (Ray, 2015). On the one hand, LCBMs can provide stable funding for governments and corporations. In particular, large corporations and infrastructure projects that have sufficient scale to bare the fixed costs for debt issuances might be able to attract funding that they cannot obtain from banks, which seem more equipped to finance small companies (Eichengreen, 2006). On the other hand, with higher yields, on average it is an attractive investment opportunity, especially for local investors (IMF, 2013; ADB, 2013).

Activation of savings surpluses. Many of the Asian countries have large trading surpluses and household savings that are invested in real estate and US Treasuries or as deposits in banks with often low returns. If some of these funds shifted to LCBMs for the use of, for instance, infrastructure investment (see Box 1.1) they could contribute to higher economic growth (Ray, 2015).

Competition. As an alternative to bank financing the LCBMs force the banks to provide more attractive terms and conditions. In particular, in countries with concentrated banking markets, as in most of the Asian countries, this may promote more efficient markets and better funding conditions (IMF, 2013; ADB, 2013).

Support for monetary policy. The local currency bonds, and especially government bonds, are important for the effective execution of monetary policy. More specifically, the local currency bonds can be used as securities in repurchasing transactions, collateral for lending facilities, reserve requirements, open market operations, etc. (IMF, 2013). LCBMs also help in setting benchmarks for market-based reference rates for monetary policy operations.

Disciplinary effect on governments. Captive funding for governments can stimulate fiscal discipline. Furthermore, besides their role in debt financing, the issuance of government bonds denominated in the local currency can accelerate market development with the formation of a yield curve that serves as a benchmark for the corporate bond market (IMF, 2013). The yield curve is crucially important for investors, which obtain information on the discount and expected inflation rates from it (Gürkaynak et al., 2005).

Longer-term financing. Local currency bonds do not have the leverage and maturity mismatch that banks have, which makes them a better source of long-term funding with a maturity above ten years (IMF, 2013).

Creditworthiness information. Market rates, public reporting and monitoring make the bond markets provide more and faster creditworthiness information than the banking system (ADB, 2013).

The potential for the development of the LCBM primarily depends on both economic size and financial needs (IMF, 2013). To maximise the gains from it, the market must be efficient, otherwise the real interest rate on the bonds will be above those of bonds denominated in foreign currencies and the market will soon be illiquid, due to the capital outflows. Sufficient scale is important for the creation of an efficient market, with large enough demand, supply and no or limited distortion (Spiegel, 2009; Hale and Spiegel, 2009).

Box 1.1 The challenge of financing global infrastructure

Countries around the global are facing a challenge to finance their infrastructure needs. The advanced economies will primarily need the funds to replace their outdated infrastructure and emerging economies have to invest it in new infrastructure to support economic growth. The McKinsey Global Institute estimated in 2016 that unless new technologies change the infrastructure needs dramatically, the advanced and emerging economies will need to invest at least €45 trillion in transportation, power, water and telecom systems in the period up to 2030. China and India would have to make a substantial share of these investments, with 29% and 6% of the global infrastructure financing needs respectively. If the UN's Sustainable Development Goals are also taken into account, an additional €1 trillion a year would be required globally for economic infrastructure (UNCTAD, 2014).

Most countries would have to beef up their infrastructure expenditure to reach the levels required according to the estimations. Hence, Indonesia would have to spend 1.3 percentage points of GDP per year more on infrastructure in the period from 2016 to 2030 compared with the 3.1% it has spent annually in recent years (2008–13). For India, which has already been investing substantially more in infrastructure at 5.2% of GDP annually, the investment gap of 0.5 percentage points of extra required investments is significantly lower. China, in turn, is one of the few countries around the globe that could reduce its spending as a share of GDP in upcoming years (minus 3.3% of GDP) and still unlock the full growth potential. In recent years China has also been among the countries that spend the most on infrastructure (8.8% of GDP annually).

Governments are responsible for a large majority of the infrastructure spending in emerging and developing countries (70%) (Bhattacharya et al., 2012), while in developed countries (except Japan) private financing is significantly more important (Wagenvoort et al., 2010; HM Treasury, 2014). The remaining funds in the emerging and developed countries are from development banks (10%) and private sources (20%) (Delmon and Delmon, 2011). The private sources (i.e. corporate and project finance) in almost all countries except for the US are predominantly from banks (Inderst, 2016).

Capital markets contribute to both public and private financing. Bonds are almost exclusively financing the public component, while private financing is also undertaken through listed companies (telcos, energy, real estate, etc.) and funds.

Fiscal constraints are likely to make the governments cut infrastructure spending and widen the gaps even further. Nevertheless, enhanced productivity and more involvement of private investors could enable the infrastructure investment challenges to be met. Based on 400 case studies, the McKinsey Global Institute concluded that infrastructure spending could be reduced by 40% if the project selection, project delivery, utilisation of the infrastructure and maintenance could be optimised. In addition, private investors could also contribute more to closing the infrastructure financing gap. Most of these funds, however, are under the management of investors in high-income countries, while most of the demand for infrastructure is in middle-income countries. Still, foreign investors will only put money into infrastructure projects if these form an attractive investment proposition (MGI, 2015).

The financing of infrastructure can be made more attractive with more developed LCBMs as discussed in other parts of this study, but this is unlikely to be sufficient. The main challenges to unlocking the private funds will be to reduce the likelihood of investor losses on investments. Public–private partnerships could also be part of a solution. If well structured, they benefit from the low funding costs of the government and the private sector's discipline to assess, develop and maintain the project. However, public–private partnerships form only 5 to 10% of the infrastructure investment and are often unable to benefit from the advantages that public and private parties could add (MGI, 2016).

The projects that are bankable and have decent returns for the given risk are appealing to institutional investors (Inderst, 2009; Della Croce, 2011). In order to make more projects bankable there are several policy options: i) charges for users to ensure the projects generate sufficient revenues; ii) government sale or privatisation of completed revenue-generating projects and businesses to free up funds to invest in new infrastructure projects; iii) stakeholder engagement and compensation to shorten decision processes; iv) government provision of forward guidance on their investment plans; and v) the establishment of specialised teams and pooling of expertise to develop the complex infrastructure projects as well as public–private partnerships (MGI, 2016).

Moreover, there are also some measures that would directly contribute to reducing the search costs and liquidity (Ehlers et al., 2014), which would be important to making infrastructure more suited to capital markets funding: vi) development banks functioning as first-loss absorbers, credit enhancers and insurers of the political risk; vii) transparency in the performance of infrastructure projects to ease the risk–return assessment; viii) more standardisation, which could contribute to easing the assessment of projects; and ix) the pooling of projects to lower the transaction costs (MGI, 2016).

2 MACROECONOMICS OF LOCAL CURRENCY BOND MARKETS

Key findings

- *Based on the size of the economy and the financing needs, China and India have the most potential for their local currency bond markets*
- *All three countries under study have a huge need for investment in new infrastructure projects*

This chapter focuses on the macroeconomic conditions of the three emerging G20 countries in Asia. The macroeconomic conditions, including fiscal and monetary policies, are important determinants of the potential of LCBMs. Stable macroeconomic conditions (e.g. economic growth, the current account balance, inflation and exchange rates) give investors in local currency bonds the confidence that the investment is preserved and provide an attractive environment for public and private bodies to issue bonds (IMF, 2013). In addition, this chapter assesses the current status of the local infrastructure financing means in China, India and Indonesia.

2.1 China

China definitely has the size for a deep and efficient LCBM. Over the past decades the Chinese economy has become the largest in the world based on purchasing power parity and the second largest in nominal terms. Since 1990, nominal GDP has increased thirty-fold and even corrected for inflation the economy has still increased by a factor of ten. The real income per capita has grown slightly less due to an increase of the population and a decrease of the dependency ratio. The population grew by a fifth to 1.4 billion people, while the share of the working-age population increased by 10.6 percentage points to 73.6%.

Private sector

Economic growth slowed down after 2010. Chinese growth has predominantly come from high exports and investments, resulting in large trade surpluses, especially in the run up to the 2007–09 global financial crisis. In more recent years the trade balance has decreased slightly due to a slowdown of the global economy and the increasing importance of domestic consumption. The investments and savings levels are

nevertheless still very high. Because of a constrained banking sector (more non-performing loans), the need for additional intermediation channels have emerged, which the bond markets can provide (Deutsche Bank, 2016).

Public sector

Government expenditures grew faster than revenues in the past quarter century. Although the primary budget has been nearly balanced in most of the recent years, the financing costs have increased the general government debt to substantially higher levels. The expectation is that government debt will continue to increase in upcoming years from 44% of GDP at the end of 2015 to about 53% at the end of 2020.

The increase in government debt as a share of GDP is also reflected in the increased issuance of bonds, which so far forms the main source of funding for the Chinese government. More specifically, over 90% of Chinese government debt is funded through bonds. The bonds are almost exclusively denominated in the local currency (RMB); only 0.7% of the government bonds were denominated in foreign currencies at the end of 2015. The treasury (56%) is the most important issuer of government bonds, followed by the policy banks (42%) and central bank (2%).

Infrastructure

China is among the top third of countries with the best infrastructure around the globe, i.e. it is ranked 39 out of 140 countries in the World Economic Forum's global competitiveness index. Substantial investments in infrastructure could nevertheless contribute to sustainable growth (Walsh et al., 2011; Canning & Pedroni, 2008). More specifically, Bhattacharyay (2010) estimated that in the period from 2010 to 2020 about half of Asia's infrastructure investment needs would be in China (USD 4.3 trillion or 5.39% of expected cumulative GDP), of which around 72% would be required for new infrastructure and 28% for the maintenance of existing infrastructure. Looking at the types of infrastructure that are needed, the majority of the funds would have to go to electricity (63%) and a substantially smaller amount to transport (26%), information technology and communications (8%), and water and sanitation (2%).

In its latest five-year plan (13th) the government placed the focus on urban planning and environmental protection for the years 2016 to 2020. Moreover, the Chinese government is also very active, with the support of several development banks that invest hundreds of billions in infrastructure (e.g. the China Development Bank, Asian Infrastructure Investment Bank, New Development Bank, Agricultural Bank of China and China Export–Import Bank), in both China and other countries. For its domestic infrastructure finance China is nevertheless expected to rely more on public–private partnerships and capital markets (Deutsche Bank, 2016).

Monetary policy

Chinese monetary policy is targeting exchange rate stability and economic growth. Monetary decisions are taken by the Monetary Policy Committee of the People's Bank of China (PBoC), which needs approval from the State Council for important monetary policy decisions. The Monetary Policy Committee sets targets for the annual money supply, interest rates and exchange rates.[1] Although inflation is not one of the key monetary policy targets, prices have remained rather stable in recent years in comparison with other areas in the world. This makes it more attractive to issue bonds denominated in the local currency instead of foreign currencies.

The China Foreign Exchange Trade System of the PBoC is responsible for maintaining exchange rate stability. It uses a 'dirty' basket peg regime that allows the exchange rate to move within a limited range from a basket of 13 currencies, in which the USD and the EUR supposedly have the largest weights. Since 2010 the RMB has appreciated compared with other currencies, which has made it relatively more attractive to borrow in foreign currencies.[2] Hence, the share of corporate bonds denominated in foreign currencies of total bonds outstanding increased from 6% in 2010 to 17% in 2015. Moreover, the RMB still cannot be freely converted for all transactions. It is freely convertible under the current account and regulated in the capital account, but China is gradually opening up. The government is promoting the international use of the RMB in three areas: trade, investment and reserve currency. At this time only authorised RMB clearing banks are borrowing and lending against market rates.

1 PBoC uses a broad set of instruments, including reserve requirements, policy rates, rediscounting, lending, open market operations and other instruments specified by the state to reach the monetary policy targets.

2 In fact, the issuer of the foreign-denominated bond benefits from the lower value of the debt denominated in foreign currencies expressed in the domestic currency.

2.2 India

The Indian economy is the third largest in the world based on purchasing power parity. In nominal terms India is still the seventh largest economy in the world, which should be sufficient for a deep and efficient LCBM. In the past quarter century, the economy has increased twenty-fold in nominal terms and almost five-fold in real terms. GDP per capita is substantially lower with the population growing by half in the past 25 years to 1.3 billion. The share of the working-age population grew during the same period by 10 percentage points to 65%.

Private sector

Economic growth has slowed down since the boom years (2003–10), except for 2008. The growth has primarily been fuelled by the development of the services sector. Both the exports and imports of goods and services have increased gradually over the past decade. The trade balance of India vis-à-vis the rest of the world has been negative during most years over the past three decades with the exception of the early 2000s. In more recent years the trade deficit has decreased.

Notwithstanding the trade deficit, India has both high investment and savings rates. The banking sector is traditionally the main actor transforming savings into investments. Over the past few years, however, the Indian banking sector has been confronted with deleveraging policies by the central bank, a high number of non-performing assets and an inefficient allocation of funds (EY, 2015; Deutsche Bank, 2016). At a time when the banks are struggling the bond market provides an alternative, particularly for larger companies, as lately also reflected in the increase in bond issuance.

Public sector

The historically high level of public debt has slightly decreased in terms of GDP in recent years due to high inflation and economic growth, and despite a high fiscal deficit. Government debts are primarily financed through the issuance of government bonds and to a lesser extent loans. General government debt is expected to continue to decrease in upcoming years, from 66% at the end of 2014 to 62% of GDP at the end of 2020.

Infrastructure

The quality of the infrastructure in India is close to average when compared with other countries around the globe. In fact, it is ranked 81 out of 140 countries in the World Economic Forum's global competitiveness index. This means that there is still a lot of room for improvement of the infrastructure, which is likely to contribute to sustainable growth (Walsh et al., 2011; Canning & Pedroni, 2008). The estimates by Bhattacharya (2010) show that about a quarter of Asia's infrastructure investment needs are in India (USD 2.2 trillion or 11.12% of expected cumulative GDP between 2010 and 2020). About two-thirds of these investments are needed for new infrastructure and the remaining third for maintenance of existing infrastructure. The main investment needs are for transport (51%) and electricity (29%) infrastructure and the remaining in information technology and communications (17%), and water and sanitation (3%).

The Indian government has reduced infrastructure investments and other capital expenditures significantly since 2010 in order to reach its fiscal targets. The government increased its infrastructure investments in 2015 somewhat, but India is still likely to need substantial amounts of funds from development banks and private parties in order to meet the large infrastructure investment needs. Among the initiatives that the Indian government has taken is the establishment of the National Investment and Infrastructure Fund in 2015 to raise public and private funds for infrastructure investments undertaken by the government. Moreover, the government also allows various infrastructure companies (rail, road and irrigation) to issue tax-free bonds, and the India Infrastructure Finance Company Ltd provides credit enhancements for infrastructure bonds (Deutsche Bank, 2016).

Monetary policy

Indian monetary policy is primarily targeting price stability. In fact, the Reserve Bank of India agreed with the government to lower the inflation target from below 8% by January 2015 to below 6% by January 2016, with a flexible inflation target of 4% plus/minus 2% from the financial year 2017 onward. Inflation is controlled through the policy repo rate (which in April 2016 was 6.5%), money market rates and the bank's liquidity position.[3] The decreasing interest rates on domestic debt paper might make it more attractive to issue local currency bonds. Yet this also depends on exchange rate developments. The Indian rupee has been fully floating since March 1993, albeit that the exchange transactions are still performed through authorised dealers and the Reserve Bank also intervenes in the market when it deems necessary. In recent years the rupee has strongly depreciated, which has made it relatively more attractive to issue local currency bonds with foreign currencies becoming more expensive.

2.3 Indonesia

The Indonesian economy is the eighth largest in the world based on purchasing power parity. In nominal terms it is only the sixteenth largest global economy, which makes it more challenging to develop a deep and efficient LCBM. The Indonesian economy has grown by a factor of fifty in the past quarter of a century, but just over three-fold in real terms. The per capita growth has been lower due to a 40% increase in the population to 260 million, despite a rise in the share of the working-age population by around 10 percentage points. The economy has been growing at around 5% per year since 2002.

Private sector

Domestic consumption has been gradually increasing over the past few years. In fact, the growth in imports has outpaced that of exports, turning the positive trade balance into a negative for multiple years after 2011. Like many Asian countries, Indonesia has relatively high investment and savings rates. The banking sector is traditionally the main actor transforming savings into investments.

Public sector

The Indonesian government reduced its debt substantially between 2000 and 2012, but has increased it again in more recent years. Although the government budget has been increasing in recent years, the Indonesian government runs still a relatively small budget. This limits the room for the allocation into investments. The primary budget has had a surplus or has been balanced for most of the period since 2000, although it turned negative in 2012. More than two-thirds of government debt is funded by bonds and the remainder is almost exclusively funded by foreign loans (IMF, 2015). The bonds are denominated in both the local currency and foreign currencies, with the latter accounting for about 30% of the total government bonds outstanding. Government debt as a share of GDP is expected to increase gradually in upcoming years.

Infrastructure

Based on the quality of the infrastructure, Indonesia is just in the top half when compared with other countries around the globe, ranking 62 out of 140 countries included in the World Economic Forum's global competitiveness index. Additional investments to improve the competitive position of Indonesia are likely to contribute to sustainable growth (Walsh et al., 2011; Canning & Pedroni, 2008). The estimates of Bhattacharyay (2010) show that Indonesia would need about USD 450 billion or 6.2% of expected cumulative GDP for the period between 2010 and 2020. The large majority of these funds (70%) would have to go to new infrastructure, while the remaining (30%) should be used for maintenance of existing infrastructure. Indonesia primarily needs infrastructure for transport (63%), with the remaining investments needed for electricity (16%), information technology and communications (16%), and water and sanitation (6%).

The Indonesian government has increased spending on infrastructure significantly in recent years, but the realisation of the infrastructure takes more time than foreseen. Notably, it cut the subsidies to fund infrastructure. Moreover, Indonesia has also obtained funding from development banks, for example the China Development Bank, which provided funds for a high-speed train. The expectation is that Indonesia will continue raising a large share of non-government funds through public–private partnerships and development banks and less through capital markets (Deutsche Bank, 2016).

Monetary policy

The monetary policy of Bank Indonesia is targeted at ensuring the stability of the rupiah, which includes two key aspects: safeguarding price stability and to a lesser extent limiting exchange rate volatility. The inflation target is 4% per annum with a range of plus or minus 1%. The central bank tries to control inflation with a policy rate (in March 2016 it was 6.75%) that is enforced through open market operations (i.e. bond issuance, reverse repos, term deposits and foreign reserves) and standing facilities (i.e. deposit and lending facilities).[4] The rupiah is freely floating, but Bank Indonesia has the possibility to intervene. In the past it intervened in cases of large depreciations, which reduces the risk of issuing bonds denominated in foreign currencies, i.e. these bonds become more expensive for the issuer in the event of a depreciation of the rupiah.

3 These are enforced through a range of instruments, including the cash reserve ratio, statutory liquidity ratio, refinance facilities, marginal standing facility, overnight and term repo/reverse repo auctions, open market operations, the bank rate (i.e. buying or rediscounting commercial papers) and the market stabilisation scheme (i.e. absorbing large inflows through the sale of short-term government securities).

4 The policy rate is transmitted into inflation through a range of transmission instruments, including the interest rate, credit, the exchange rate, asset prices and inflation expectations.

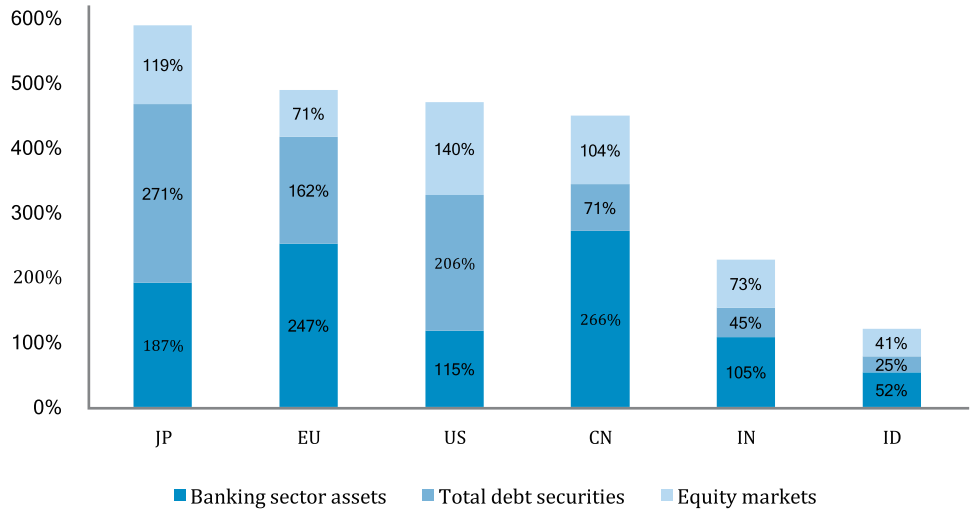
3 MARKET STRUCTURE OF LOCAL CURRENCY BOND MARKETS

Key findings

- *Financial and public sector entities are the main issuers of corporate bonds (public offerings, private placement or hybrid regimes)*
- *Highly rated non-financial and privately owned companies are increasingly tapping into the corporate bond market*
- *The secondary market for corporate bonds (mostly OTC) lacks depth and liquidity, with securities held to maturity and limited hedging possibilities*

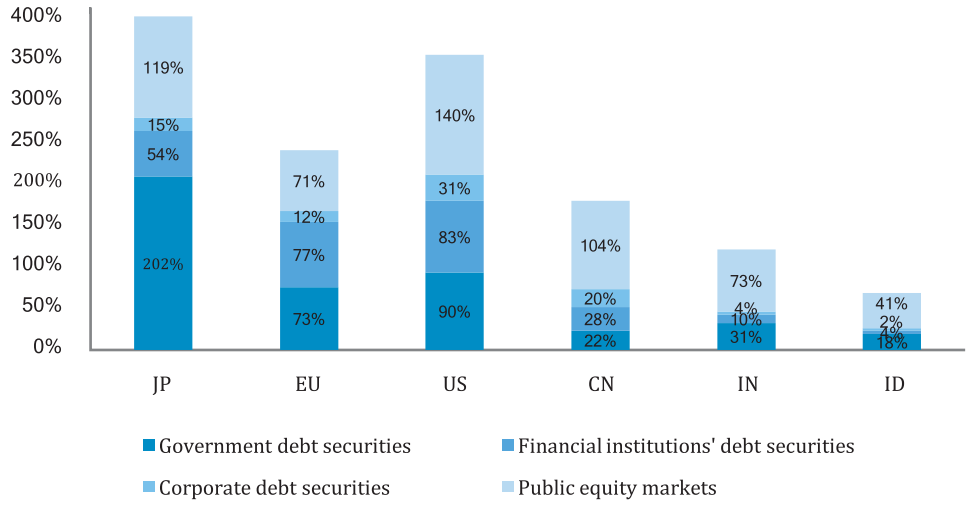
The size and composition of the financial sector largely varies across countries. In general, mature financial markets like those in Japan, the US and EU are larger than those in emerging Asian countries. Yet at almost four times the size of the economy, the Chinese financial sector is still about the same size or even larger than the financial sectors in the EU and US. The Indian financial sector is roughly half that size and the Indonesian financial sector is less than a third of the size. The size of the financial sector primarily indicates the level of financial intermediation that takes place in a country. This, however, tells us little about the quality of the intermediation or whether it contributes risk to the system. Large financial sectors are not necessarily better. Although when the size of the financial sector is substantially smaller, as in India and Indonesia, it is unlikely that the full potential of the financial sector has materialised.

Figure 3.1 Size of the financial sector (% GDP, end 2015)



Note: Data for banking sector assets (end 2014).
Sources: ECB, US Fed, BoJ, PBoC, RBI, BI, BIS, WFE, FESE, IMF and Eurostat.

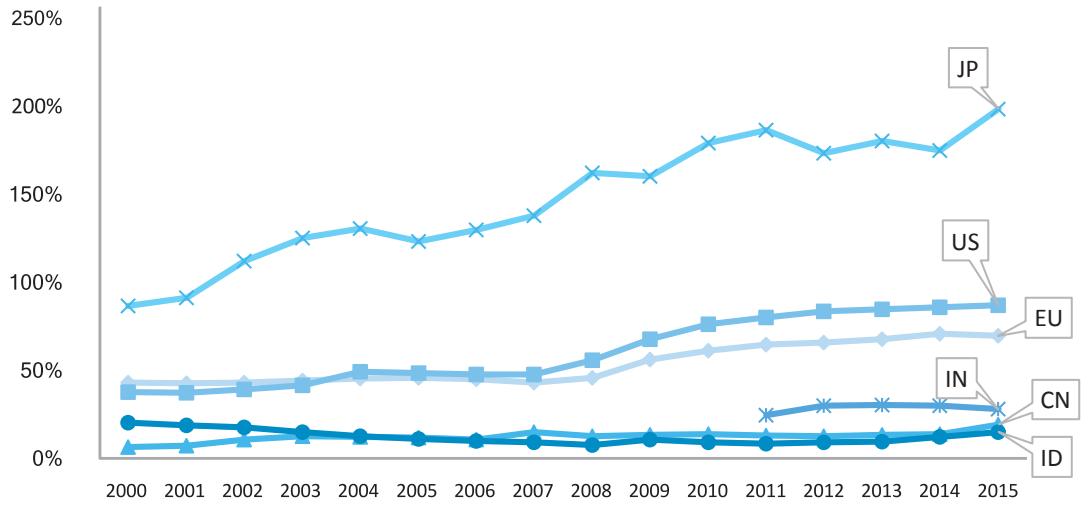
Figure 3.2 Capital markets structure (% GDP, end 2015)



Sources: ECB, US Fed, BoJ, PBoC, RBI, BI, BIS, WFE, FESE, IMF and Eurostat.

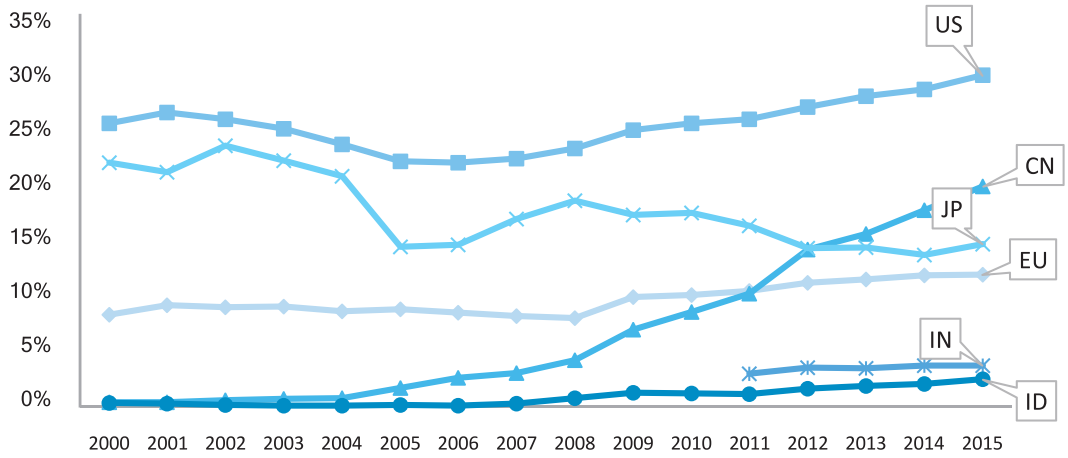
Most notably, the two figures above suggest that the banking sector plays a dominant role in the development of the local financial system. This is particularly the case for China, but bond markets are a small part of the financial sector in all three countries. If we then look at the structure of the capital markets, there is still much room for LCBMs to reach the relative sizes (to GDP) comparable with advanced economies, like the US, Japan and (partially) Europe. Most important is the diversification between the different market funding channels, which is still missing. The LCBMs are mainly driven by government debt securities, although in much lower amounts than in advanced economies. Corporate bond markets are struggling to emerge in India and Indonesia, while they have grown significantly in China and are now bigger than the Japanese and the European markets, also driven by government-sponsored entities.

Figure 3.3 Government debt securities – Outstanding amounts (% GDP)



Notes: Data for India are from 2011 onwards; general government (only the domestic component) data are from BIS; data on financial and corporate bonds are from the Securities and Exchange Board of India (SEBI).
Sources: BIS, IMF, ECB and Eurostat.

Figure 3.4 Corporate debt securities – Outstanding amounts (% GDP)



Notes: Data for India are from 2011 onwards; general government (only the domestic component) data are from BIS; data on financial and corporate bonds are from the Securities and Exchange Board of India (SEBI).
Sources: BIS, IMF, ECB and Eurostat.

The consequence of limited outstanding amounts is also shallow liquidity in secondary markets, which is a stumbling block to attracting foreign investors and to stabilising capital flows in the country. Hence, the turnover ratio in the Asian government bond markets is, on average, less than half of the trading activity in the US government bond market. In turn, the liquidity in the corporate bond markets is substantially less in most countries including the US.

3.1 China

Since 2005, the total size of the bond market has been growing at an exponential rate. At the end of 2015, the size of total bonds outstanding relative to GDP was 71%. The corporate bond market has also become more important since 2008, in both nominal terms and relative to GDP. The majority of the corporate bonds are denominated in the local currency, but the share of bonds denominated in foreign currencies has increased substantially in recent years.

Market composition

The issuers in the Chinese bond market include the central and local governments, the PBoC, the three policy banks, commercial banks and other non-bank financial institutions, and non-financial companies. At the end of 2015, the bonds issued by the government and policy banks accounted for 80% of the total issuance and 55% of the total amount outstanding. The total issuance in the past ten years shows that the number one financing tool remains the financial bond (35%), the second is the T-bond (25%), the third is the medium-term note (MTN) (10%), the fourth is the enterprise bond (8%), the fifth is the short-term financing bond (5%), while corporate bonds take up only a small share (2%).

At the end of 2015, the top 30 corporate bond issuers (in sectors such as banking, transportation, public utilities and energy) had €1.1 tn outstanding, accounting for 53% of the total corporate bond market. The top ten corporate bond issuers accounted for almost 25% of the total corporate bond market.

Table 3.1 Debt instruments in China (composition)

Outstanding amounts (end 2015)	%
Government bonds	31.9
T-bonds	22.0
Local government bonds	9.9
Financial bonds	29.3
Policy banks	22.2
Commercial banks, insurance companies, securities companies, etc.	7.1
Medium-term notes	8.6
Enterprise bonds	6.3
Interbank negotiable certificate of deposits	6.2
Short-term financing bonds	5.0
Private placement notes	4.4
Corporate bonds	3.5
Agency bonds	2.4
Asset-backed securities	1.4
Others	1.0

Source: Wind Information (2016).

Enterprise bonds are issued by state-owned enterprises (SOEs) subject to case-by-case approval by the National Development and Reform Committee (NDRC) in line with the national economic development goals. Exchange-listed corporate bonds are regulated by the China Securities Regulatory Commission (CSRC), with issuer criteria including a credit rating, the ability to meet a distributable profit requirement and a leverage cap of debt to net assets of 40%. In June 2012, the Shanghai Stock Exchange (SSE) introduced high-yield bonds, sold as private placements to qualified investors. These bonds may be traded on the exchange under restrictive conditions. The MTNs may be issued by corporates that are members of the National Association of Financial Market Institutional Investors (NAFMII) and which have met the registration requirements (since 2008). MTNs are traded and circulated only in the interbank bond market and typically have tenors of three to five years.

In addition to plain-vanilla enterprise and exchange-listed bonds, MTNs and commercial paper, corporate issues include senior, subordinate and hybrid instruments issued by bank and non-bank financial institutions, as well as convertible bonds and asset-backed securities.

Corporate bonds are generally issued by companies with credit rating of AAA (domestic scale). Domestic ratings may substantially divert from assessments of internationally (accepted) credit rating agencies (CRAs). A sub-market that can bring in issuers with lower credit ratings, such as small and medium-sized enterprises (SMEs), private enterprises and enterprises that are relying on higher-cost bank loans, and thus enable them to access the corporate debt market, is still undeveloped. Apart from the credit risk, there are also problems with reluctant underwriters and guarantors. Since 2012, SME collective notes have been allowing groups of between two and ten SMEs to collectively tap the interbank bond market. These notes are issued with a credit enhancement provided by the underwriter or the China Bond Insurance Company, but only have been partially successful so far (as discussed in chapter 3, Box 3.1).

Local government financing vehicles (LGFVs) were first established in 2005 as a type of municipal state-owned enterprise and are central to infrastructure financing. Among the bond issuers, 9 of the 30 largest are infrastructure-related state-owned entities. Financing raised by LGFVs typically relies on explicit or implicit government guarantees.

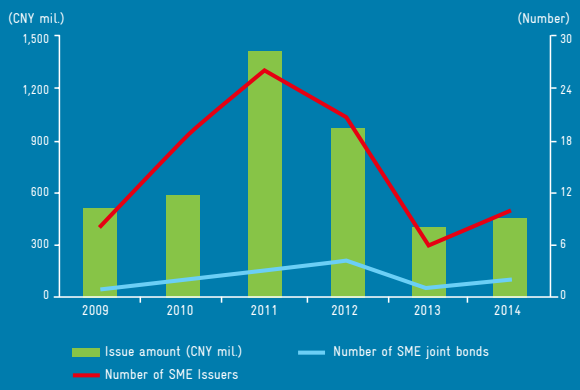
At this stage, the pressing issue is to better understand the true repayment ability of Chinese corporates. By looking at the 3,000 largest Chinese listed companies, the 2016 China Corporate Debt Monitor by Natixis shows that SOEs actually have more debt and a worse repayment ability than privately owned enterprises. SOEs can also borrow longer term due to their explicit/implicit government guarantee compared with privately owned enterprises. New industries (in the airlines, consumer, healthcare, information and communications technology, renewables and environment, semi-conductor and tourism sectors) do not have as much credit history to borrow, nor the size to entice the interest of the largest banks. This explains why they are far less leveraged and also why they are still facing higher funding risks than those of older industries (in the chemical, energy, industrial, infrastructure, material & metals, real estate and utilities sectors). Compared with the number of stressed companies, the observed bankruptcy rates (in an artificial market situation) are very low but increasing.

Box 3.1 Bond issuance for SMEs in China

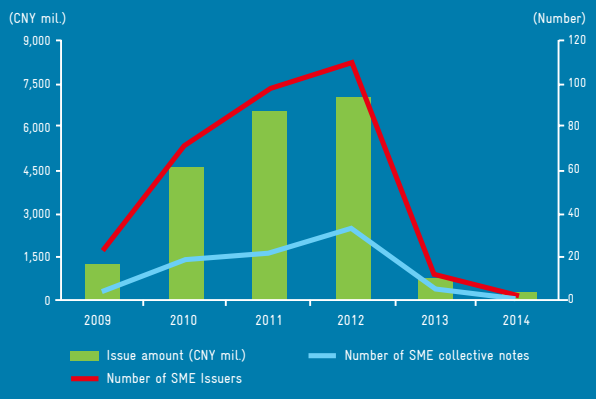
There are three opportunities for SMEs to issue bonds: SME joint bonds, SME collective notes and private placement bonds. In 2014, SMEs raised RMB 65 bn in the bond market, over 98% of it through privately placed bonds. They also raised RMB 430 m in collective notes, at an average bill coupon rate of 7.8% and RMB 490 m in SME joint bonds at an average bill coupon rate of 9%. Over 25 commercial banks issued RMB 55 bn in specialised SME financial bonds; this accounts for over 80% of the total amount raised by SMEs in the bond markets.

Figure 3.5 SME bonds issuance

a) Joint bonds issuance



b) Collective notes issuance



Notes: SME data based on firms employing fewer than 1,000 persons or having annual turnover not exceeding RMB 400 m/€50 m.
Source: Asian Development Bank (2014).

3.2 India

Over the past five years, the amount of outstanding bonds in India relative to GDP has been close to 50%, with government debt securities representing over 75%. The corporate bond market amounted to 15% of GDP and it remains largely confined to financial institutions and public sector entities. Nonetheless, since 2011 the proportion of corporate non-financial companies tapping into the corporate bond market has increased.

Market composition

The central government issues treasury bills and bonds or dated securities while the state and local governments/bodies only issue bonds. The government of India also issues savings instruments (savings bonds, national saving certificates) or specialised industrial bonds. Corporate issuers include public sector undertakings/enterprises (a 'quasi-government' segment), banks and other types of financial institutions and corporates. Their issuance is composed of certificates of deposits, commercial papers, structured notes, bonds/debentures, and securitised debt instruments. The market for credit risk protection instruments like credit default swaps (CDS) has not yet developed. Currently, offshore centres such as Hong Kong, London and Singapore are able to provide CDS on Indian corporations – the development of onshore CDS centres is needed.

In Q1 2016, the total amounts outstanding were €611 bn for government securities (G-secs) and €280 bn for corporate bonds. The amounts raised through public issuance and private placement of corporate bonds went from €26 bn (2009) to 57 bn (2015).

Table 3.2 Debt instruments in India (composition)

Outstanding amounts (end March 2016)	%
Central government securities	46.0
State government bonds	25.8
Public sector undertakings	8.3
Corporates	7.3
Treasury bills	5.7
Banks	5.0
Financial institutions	1.8
Others	0.1
Interbank negotiable certificate of deposits	6.2
Short-term financing bonds	5.0
Private placement notes	4.4
Corporate bonds	3.5
Agency bonds	2.4
Asset-backed securities	1.4
Others	1.0

Source: NSE.

Indian government bonds are generally 10-year bonds with a few issues of longer tenor stretching to 25 or 30 years. At present, the maturity profile of the outstanding central government securities is the following: up to 1 year (3.6%), 2-5 years (24.6%), 6-10 years (30.4%), 11-20 years (28.3%), and more than 20 years (13.1%). The lack of sufficient volumes in securities other than the 10-year government bond does not allow for the development of a benchmark yield curve across maturities. Besides the central government, other governments are also issuing bonds in India (see Box 3.2 on municipal bonds).

A majority of corporate bonds are concentrated in the 2 to 5-year maturity range, followed by the 5 to 10-year range. Over 97% of the

publicly listed corporate bonds and 90% of the privately placed corporate bonds have a domestic rating of AA or above. Also, over 90% of the corporate bonds were issued in the fixed-rate category, with a very limited supply of floating debt.

The preference for bank loans, given the regulatory asymmetry in the treatment of loans and bonds, the high level of indebtedness of major corporates from both domestic and external sources, the disclosure requirements and other costs related to public issuance, also keep the demand for corporate bonds muted. In addition, banks are overexposed to large corporates. In August 2016, the Reserve Bank of India (RBI) announced new measures for enhancing credit supply for large borrowers through a market mechanism – for exposure beyond a threshold.

In September 2015, RBI allowed banks to provide partial credit enhancement (PCE), in the form of a non-funded, irrevocable contingent line of credit, to bonds issued by corporate entities and special purpose vehicles. The aggregate PCE provided by all banks for a given bond issue would be limited to 20% of the bond issue size. In August 2016, the aggregate limit of PCE was increased to 50% of the bond issue size subject to the PCE provided by any single bank not exceeding 20% of the bond issue size.

The estimated private funding needed for infrastructure development in India is USD 444 bn. Commercial banks would lend only 33.38% of all the private funding needed. Capital debt markets are expected to fill in the gap, in particular through infrastructure debt funds. Also, banks have recently been allowed to issue long-term bonds with a minimum maturity of seven years for the purpose of raising funds for lending to long-term projects in infrastructure subsectors and affordable housing. These bonds have been exempted from computation of net demand and time liabilities (NDTL) and have therefore not been subjected to statutory liquidity ratio (SLR) requirements. Banks are allowed to hold these on their balance sheet as held-to-maturity (HTM) assets. To further encourage the overseas rupee bond market, banks are being permitted to issue rupee bonds overseas (Masala bonds) for their capital requirements (additional tier 1 capital and tier 2 capital) and for the same framework of financing infrastructure and affordable housing.

Box 3.2 Issuance of municipal bonds in India

As India urbanises rapidly, infrastructure finance for urban local bodies (ULBs) is becoming more important. Municipal bonds are the main financial instrument to fund India's infrastructure needs. The need for local funding for infrastructure arose after the adoption of the Decentralisation Acts in 1992, which reduced the funding from the central government for sub-national levels (Chakrabarti, 2014).

The large majority of ULBs, however, did not have the creditworthiness to attract funds on their own without paying high interest rates. Typically, the ULBs that have therefore successfully attracted funds with guarantees from state governments. The Indian city of Ahmedabad was an exception to this. In April 2002 and 2005 Ahmedabad Municipal Corporation (AMC) issued tax-free municipal bonds for water utilities and sewage projects. The AMC issues set the standards for recourse structures for other ULBs by introducing new credit enhancement measures. It used an innovative cash flow structure that led to credit enhancement by the Credit Rating Information Services of India Ltd (CRISIL) from an A+ (adequate safety) rating to AA (high safety) and the issues were a mixture of public and private placements.

The AMC example nevertheless remains an exception. The municipal bond market in India has been hobbled by a lack of uniform standards and regulations. Recently, however, the Securities and Exchange Board of India (SEBI) has issued standard norms on the issuance of municipal bonds. These norms, which were launched in July 2015, are expected to introduce standards that will make such bonds attractive to institutional and retail investors.

Market organisation

Government securities are issued through auctions conducted by the RBI through the Negotiated Dealing System (NDS), which has two modules – one for the primary market and the other for the secondary market. Scheduled commercial banks, scheduled urban cooperative banks, 20 primary dealers, insurance companies and provident funds, which maintain fund accounts (current accounts) and securities accounts (subsidiary general ledger, SGL accounts) with RBI, can place their bids in the auction through this NDS. All non-NDS members, including non-scheduled urban cooperative banks, can participate in the primary auction through scheduled commercial banks or primary dealers. Corporate bond market issuance is dominated by private placements, as these account for more than 90%. In the case of a public offer, the minimum subscription must be at least 75% of the base issue size (the minimum base issue is INR 1 bn).

Overall, the government bond markets are more liquid than corporate bond markets. The secondary market in corporate bonds is far from mature, and lacks depth. At the end of 2015, the value of trading in government securities amounted to €2.8 tn (€1.5 tn), while in corporate bonds it amounted to €152 bn.

Government securities can be bought/sold on the secondary market either through the NDS, the Negotiated Dealing System-Order Matching (NDS-OM), OTC or on trading platforms available for both retail and institutional investors at stock exchanges, e.g. the National Stock Exchange of India (NSE) (New Debt Segment) and Bombay Stock Exchange (BSE) (with two trading platforms, the Wholesale Debt Market Segment and Retail Debt Market Segment).

The NDS-OM is an electronic, screen-based, anonymous, order-driven trading system for dealing in government securities, launched in 2005. Financial institutions, including state cooperative banks, primary dealers, insurance companies, mutual funds and larger provident funds have current and SGL accounts with RBI and therefore can directly trade on NDS-OM. A number of qualified entities, such as non-banking finance companies, smaller provident funds, pension funds, cooperative banks, regional rural banks and trusts, corporates and foreign institutional investors (FIIs), which at present do not have current and SGL accounts with the RBI, can only trade indirectly on NDS-OM through banks and primary dealers. The Clearing Corporation of India Ltd (CCIL) is the clearing and settlement agency exclusively for the government securities market. All outright secondary market transactions in government securities are settled on a T+1 basis.

In January 2013, SEBI provided guidelines for setting up a dedicated debt segment on the stock exchanges. The dedicated debt segment should offer separate trading, clearing, settlement, reporting facilities and membership for the retail and institutional debt platforms, respectively. Institutional investors can trade on the debt segment either as clients of registered trading members or directly as trading members on a proprietary basis only.

The NSE launched the first dedicated debt platform in May 2013 followed by the BSE in 2014. There is, however, negligible activity on these trading platforms. The trading volumes in corporate bonds have yet take off. On 21 April 2016 SEBI issued a circular for setting up an electronic book platform for the issuance of privately placed bonds for the amount of ₹ 500 cr and above. Additional efforts (by both SEBI and RBI) are envisaged for developing a trade repository for corporate bonds, covering both the primary and secondary market segments.

Since 2009 it has been mandatory for all the trades in corporate bonds, either over the counter or on the debt segment of stock exchanges, to be cleared and settled through the clearing houses of exchanges, namely the National Securities Clearing Corporation Ltd of the NSE or the Indian Clearing Corporation Ltd (ICCL) of the BSE and the Metropolitan Stock Exchange of the India Clearing Corporation Ltd (MSEI CCL). With respect to the settlement risk related to OTC trades in corporate bonds, the delivery versus payment system has been implemented.

In October 2013, SEBI mandated the National Securities Depository Ltd and Central Depository Services Ltd (CDSL) to jointly create, host, maintain and disseminate the centralised database of corporate bonds/debentures. The database can be accessed by the public without any fees or charges.

Since 1 April 2014 the reporting of trades in corporate bonds on F-TRAX has been discontinued. Furthermore, in the SEBI circular dated 21 March 2014, SEBI advised that all OTC trades in corporate bonds are to be reported solely on any one of the reporting platforms provided in the debt segment of the stock exchanges, namely the NSE, BSE and MSEI within 15 minutes of the trade (no real-time dissemination). RBI also revised its circular dated 24 February 2014 directing its regulated entities to report their OTC trades in corporate bonds and securitised debt instruments on any of the stock exchanges (NSE, BSE and MSEI) with effect from 1 April 2014.

Secondary market trades in certificates of deposit and commercial papers, along with market repo transactions in corporate bonds, certificates of deposit, commercial papers and non-convertible debentures of an original maturity of less than one year are reported on the Clearcorp F-TRAC Platform.

With respect to the repo market, the Clearcorp Repo Order Matching System (CROMS) was launched by a subsidiary of CCIL in January 2009. This is an anonymous order-matching platform for market repos in all types of G-secs. About 70% of all market repos in G-secs is concluded on this platform. Bilateral repos in corporate bonds are allowed but the volumes are low because both the counterparty risks and the lending rates tend to be very high.

Eligible securities for repo in corporate debt were recently relaxed from AAA to AA and repos on corporate bonds with a maturity of less than one year were allowed. Since 2015, the RBI has permitted bonds issued in India by financial multilaterals like the World Bank Group's International Finance Corporation, the Asian Development Bank and African Development Bank, to be eligible underlying assets for repo in the corporate debt market.

Currently, participation in corporate bond repos is restricted to regulated entities like banks, primary dealers, mutual funds, insurance companies, etc. The measures taken in August 2016 by RBI allow the brokers authorised as market makers to participate in the corporate bond repo market. This action is expected to meet their funding and securities requirements arising out of market-making activities.

RBI also announced that necessary guidelines will be issued in consultation with SEBI and all the stakeholders for the launch of an electronic platform for repos on corporate bonds. An electronic dealing platform with a central counterparty facility with an appropriate risk-management framework similar to the CROMS platform for G-secs may also be introduced.

Finally, in order to promote development of the corporate bond market, RBI announced in September 2016 that it is actively considering corporate bonds to be eligible collateral for liquidity operations (a Liquidity Adjustment Facility).

3.3 Indonesia

The limited amount of government debt in Indonesia is also reflected in a relatively small government bond market (€143 bn, 18% of GDP at year-end 2015), with a quarter denominated in foreign currencies, in particular USD, EUR and JPY. The corporate bond market is also very small (€53 bn, 6% of GDP at year-end 2015). Most corporate bonds are denominated in local currencies. Sukuk (Islamic bonds), either government or corporate, are increasingly popular in Indonesia, even though the size of the market is still small compared with conventional bonds.

Market composition

Since 2003, the government of Indonesia (GoI) has been issuing a wide range of bonds: conventional and Islamic, coupon-bearing and zero coupon, fixed and floating rate, non-retail and retail, short term and long term, local and foreign currency denominated, tradable and non-tradable, and benchmark and non-benchmark. With the objective of building a benchmark yield curve, the government has only recently started to issue on a regular basis short-term treasury bills (3 and 12 months), yet has also managed to tap the long-term bond market (up to 30-year maturity). Indonesia has been successful in targeting individual investors with government savings bonds known as Obligasi Ritel Indonesia (ORI), distributed through a wide network of banks and securities companies which are registered as primary dealers. The frequency of daily government bond transactions of the outright type was 491 times/day in 2013 compared with 653 times/day in 2014 (a 33% yoy growth), with volumes of IDR 7.64 tn/day in 2013 and IDR 11.63 tn/day in 2014 (a 52% yoy increase).

Corporate issuers can decide to issue either conventional debt securities or sukuk, e.g. commercial paper, medium-term notes, corporate bonds traded OTC or on the stock exchange. The Indonesian corporate bond market is dominated by financial issuers. In the past five years, on average half of corporate bond issuances came from bank and non-bank financial institutions as well as companies. In 2014–15, the issuance of bonds by the financials amounted to €2.86 bn (68%) compared with non-financials (32%).

Commercial papers are issued by corporates for funding purchased inventory or managing their working capital, with no guarantee, at a discount, and are usually purchased by financial institutions. The average maturity of corporate bonds is two years (mostly one year), paying quarterly coupons. In the past few years, most of the corporate bonds have received relatively high ratings, ranging from AAA to BBB. SOEs are able to issue bonds with a longer tenor (three to five years, and up to ten years). These bonds are backed up by state guarantees on a case-by-case basis. In 2015, four out six issuers of bonds through public offering were SOEs, representing 49% of the total money raised.

At the end of 2015, the top 30 corporate bond issuers in Indonesia had an aggregate bond stock representing 75% of the total corporate bond market (the domestic component only). The gross issuance of government and central bank debt securities amounted to €7.5 bn, while for corporate bonds it was €0.7 bn. Only 13 companies issued new corporate debt in Q4 2015, led by finance-related firms and capital-intensive sectors, such as telecommunications, construction and property.

The corporate bond secondary market is largely illiquid because of the preference by most of the domestic institutional investors to hold them to maturity. In effect, corporate bonds are typically issued for shorter tenors (one, three and five years), with only SOEs braving a longer tenor issuance. Typically, a large new corporate issue would be traded only for a few days after issuance, with the underwriter of the issue serving as the only market maker until its inventory runs out. According to the OJK Statiscal Bulletin, 6 companies issued corporate bonds for the first time and 44 companies engaged in re-issuance of corporate bonds.

The turnover ratio for corporate bonds was only 11% in 2013. For corporate bonds of all types, the frequency of daily transactions recorded an increase of 8.3% yoy from 84 times/day in 2013 to 91 times/day in 2014, but by contrast the daily transaction volume recorded a decrease of 8.6% yoy from IDR 752 bn/day in 2013 to IDR 687 bn/day in 2014. Secondary trading of other types of debt instruments are either underdeveloped or absent.

Box 3.3 Bond issuance for bank recapitalisation in Indonesia

Although the Indonesian LCBM is relatively young, there have been some niche segments that have been relatively successful. For example, bonds issued by the Indonesian government formed the main instruments to fund the purchase of equity of distressed banks between 1998 and 2001.

Most recap bonds are pretty straightforward, like fixed-rate bonds and variable rate bonds. Nonetheless, a small fraction of recap bonds had some special features to limit the risks to the government and investors. During the Asian financial crisis (1998–2001) it was difficult for the Indonesian government to obtain foreign currencies, and thus in order to prevent the need for foreign currencies the bonds were issued in the local currency. These would, however, require a high yield to compensate for hyper-inflation and the consequential depreciation of the rupiah at the time or be issued with a short maturity, which could potentially aggravate the problems. Instead, the bonds were linked through a currency bond index to the USD and the trading was initially restricted, which allowed the government to issue bonds with longer-term maturities (three to ten years) without paying high yields over the entire maturity period, whereas the uncertainty on how long the economic recovery does not need to be considered by the investor (Andrews, 2003).

Local currency bonds are not yet a significant source of infrastructure finance. The infrastructure projects are primarily financed by large banks and development banks, which are ready to enter into long-term projects.

To sum up, capital markets in Indonesia are relatively young and there is a need for further development. The relatively small size of other institutional investors and the discriminatory tax regime (bond interest expense is not deductible) have also not been conducive to corporate bond issuance. Another issue relates to the detailed disclosure requirements, with private companies being reluctant to engage in the cumbersome process of debt issuance.

The board of commissioners of the Financial Services Authority of Indonesia (OJK) is currently assessing options to speed up and simplify the issuance process for corporate bonds through the so-called hybrid issuance process. Such corporate bonds would be made available only to qualified institutional buyers/investors, which are assumed to be sophisticated investors, with a sound understanding of the risks and benefits of their investments. OJK's tasks would be to determine the criteria for qualified institutional buyers. The hybrid issuance process aims to shorten the time needed, lower the cost of ongoing disclosure by the issuer and reduce uncertainties related to market variables in the issuing process (such as the interest rate and exchange rate).

Hedging instruments, e.g. a liquid IDR fixed-for-floating rate swap, could also be instrumental in allowing corporates to manage their exposures.

Market organisation

Government bonds are issued and subscriptions allocated either by competitive auctions through agents or by private placements through the primary dealer banks using Bank Indonesia's Scripless Securities Settlement System (BI-SSSS). Only the central bank, OJK, the deposit insurance corporation (Lembaga Penjamin Simpanan) and local governments can buy domestic government bonds without intermediation. Debt securities are issued through public offerings (corporate bonds through book building on the exchange) or through private placements (medium-term notes).

A securities offer that does not meet the criteria for a public offering (a so-called private placement) is exempted from the obligation to submit a registration statement and prospectus for approval by the OJK. The public issuance of debt securities may be supported by a guarantor (which is optional, not mandatory), which will cover the loss of the security holders should the issuer fail to meet its obligation. The guarantee might come in the form of issuer's assets or other guarantor assets. If the issuer is supported by guarantor, the guarantor's assets must be disclosed in prospectus and the contract between issuer and trustee.

There are also obligations to acquire investment ratings at the issuance of the bond and renew them on an annual basis. Once having publicly listed bonds, the issuer is required to submit periodic or non-periodic reports.

A corporate bond investor also requires a sort of guarantor. In this case, initiatives like the Credit Guarantee and Investment Facility, launched in 2013 with the task of providing guarantees for corporates in the ASEAN+3 region when they issue corporate bonds, involves a practice that could be utilised more.

Bond trading in Indonesia can be carried out OTC or on the stock exchange (the Indonesia Stock Exchange, IDX). Most of the bonds, either government or corporate bonds, are traded on the OTC market by a wide range of players. OTC transactions are carried out on various platforms, such as voice box, chatting or instant messenger. Banks and securities companies may act as broker-dealers, underwriters, investment managers, custodians and paying agents.

In order to bring more transparency in the OTC market, OJK is currently designing a trading platform, called the Electronic Trading Platform (ETP). Market participants can place their bid/offer, execute the order, and disseminate post-trade information. OJK is planning to implement ETP in three phases. The first phase will start towards the end of 2016 and the scope is limited to government savings bonds known as Obligasi Ritel Indonesia (ORI). These will be followed by government bonds benchmark series and corporate debts in the second and third phases. Market participants are expected to move their government savings bonds transactions from OTC market to the ETP system. By implementing ETP system, market liquidity hopefully would be improved, trading risk and trading cost will be decreased, which in turn could translate into a reduction of the financing cost.

Secondary markets in government bonds are more liquid compared with corporate bonds. Typically, a large new corporate issue would be traded only for a few days after issuance, with the underwriter serving as the only market maker. At the end of 2015, the trading volume in government bonds amounted to €226 bn, while that of corporate bonds amounted to €12 bn. The lack of liquidity stems from various factors, from the low domestic bondholder base to the underdeveloped derivative market, such as that in government bond futures.

There is mandatory reporting for all the executed trades. They must be reported on the centralised trading platform (CTP) within 30 minutes after a trade is executed. Trades are linked to Bank Indonesia's Real-Time Gross Settlement System and settled on a delivery-versus-payment basis. CTP was put in place by the OJK on 1 September 2006 and it compiles trading reports from the Fixed Income Trading System (FITS) platform run by IDX, the Ministry of Finance Dealing System (MoFIDS) and the Trade Report Service of Penerima Laporan Transaksi Efek (CTP-PLTE). The reporting agents are the banks, securities firms and custodians.

FITS is a trading system for bonds listed on the IDX, which gives access to retail investors. Retail bonds are traded in relatively small nominal values, starting at IDR 5 mn (minimum subscription). The MoFIDS is composed of primary dealers in government bonds appointed by the Indonesia Ministry of Finance, Debt Management Office (DMO). The Indonesian bond market has one market association, called the Inter-Dealer Market Association for Government Securities (HIMDASUN). CTP-PLTE is the reporting system for bonds and sukuks traded on the OTC secondary market.

Apart from the custodian banks, there are two central securities depositories: Bank Indonesia (BI) handles government bonds, and the Indonesian Central Securities Depository (Kustodian Sentral Efek Indonesia, KSEI) handles corporate bonds, as well as government bonds (as a sub-registry to BI). The Indonesian Clearing and Guarantee Institution (KPEI), which uses e-CLEARS (Electronic Clearing & Guarantee System), guarantees the settlement of trades executed through the stock exchange. There is no clearing system on the OTC market. Investors rely on the custodian banks or securities companies for the identification and protection of their assets.

Since 1 January 2016, all repo transactions between market participants have been conducted in accordance with POJK (OJK Regulation) No. 9/POJK.04/2015. In the regulation, OJK states that every repo agreement should follow the Global Master Repo Agreement issued by OJK (or other parties authorised by OJK). Repos conducted between market participants and the regulator/authority, such as BI, are exempted from this regulation.

Coordination Forum of Project Finance through Financial Markets (FK-PPPK)

The members are the Ministry of Finance (MoF), Bank of Indonesia (BI), and Financial Services Authority (OJK). In 2016, FK-PPPK was led by the MoF and will be followed by BI and OJK in the second and third year, respectively. In order to execute strategic initiatives, the members agreed to put together high-level working committees for 3 pillars: regulation and policy harmonization, instrument and investor base development, and market infrastructure. With respect to the instrument and investors base, the following targets were agreed upon: to increase the use of real estate investment trust (REITs) to support industrial development of real estate; to encourage SoEs to conduct

initial equity and/or bond public offerings and to issue collective investment contracts in the form of asset backed securities; to encourage the issuance of collective investment contracts in the form of capital protected and discretionary funds in order to finance infrastructure, telecommunication and energy development projects.

3.4 Conclusions

The financial sectors in the three emerging markets under study vary largely in size and to a lesser extent in composition.

The issuer base for debt securities in China is evenly distributed among government, financial and non-financial corporate entities. At present, the corporate bond market is among the largest in the world. It is very fragmented due to different types of issuers (e.g. ownership, size, sectors), financing needs (e.g. short-, medium-, long-term), issuance regimes (i.e. publicly listed, private placements, hybrid) and, perhaps most important, different supervisory authorities for primary and secondary market and institutions (e.g. banks, securities companies and insurers). The market is further skewed to highly rated issuers, which implies that it is difficult for issuers with lower credit ratings to access the market. There are some initiatives to create sub-markets dedicated to SMEs, which in general have lower credit ratings. But these markets have not gained much traction yet.

Government bond markets are much more liquid than Chinese corporate bond markets. Nonetheless, the government bond market is not sufficiently liquid and deep. This has several causes, including the lack of business incentives for market makers/brokers. Additionally, both derivatives and repo markets are underdeveloped.

China maintains a two-bond-market flat structure with the interbank bond market (95% of the market) and the exchange-based bond market. CIBM (with CFETS trading system) is the dominant trading venue, which by international standards is quite expensive to access. The post-trading market infrastructures impose different practices and administrative burdens on market participants.

Debt securities issued by central, state and local governments in India represent over three-quarters of the bond markets. Most government bonds have a long-term maturity and are held to maturity, which makes it more difficult to develop a benchmark yield curve. In turn, the corporate bond market is predominantly accessible to financial institutions and public sector entities. The preference for bank loans, large corporate high debt levels, disclosure requirements and other costs related to public issuance make corporate bonds a less attractive option. Moreover, private placement regimes are preferred over public listings.

Government bond markets are also more liquid than corporate bond markets. Although accessible to a diverse group of financial players, the secondary market in corporate bonds is far from mature. At present, there is negligible activity on the dedicated debt platforms of the stock exchanges. Underwriters and market makers in corporate debt bonds along the lines of primary dealers in the government securities market are absent. Recent measures on mandatory clearing and reporting of OTC trades in corporate debt, the creation of an electronic book platform for the issuance of privately placed bonds, the development of a trade repository for corporate bonds, and the launch of an electronic platform for repos on corporate bonds are likely to contribute to the development of the market.

Debt securities markets in Indonesia are relatively young and underdeveloped. The country has a relatively developed Sukuk market, which is nevertheless small compared to the conventional bond market. Government bonds represent over 75% of the total, 25% of which is denominated in foreign currencies. Financial institutions (in particular banks) and capital-intensive sectors, such as telecommunications, construction and property development, are the main issuers of corporate bonds. The bonds usually receive higher ratings. Only sovereign owned enterprises are able to issue bonds with a longer maturity, up to ten years, since they are in some cases backed by state guarantees. The discriminatory tax regime that makes bonds more expensive than bank loans as well as the cumbersome issuance process make companies reluctant to issue bonds. Public initiatives to speed up and simplify the issuance process for corporate bonds through the so-called 'hybrid issuance process' could encourage more companies to tap corporate bond markets. Most bond trading is OTC and very little takes place on the stock exchange (IDX). The corporate bond secondary market is largely illiquid. In order to bring more transparency into the OTC market, OJK is currently designing a trading platform (ETP).

4 INVESTOR BASE FOR LOCAL CURRENCY BONDS

Key findings

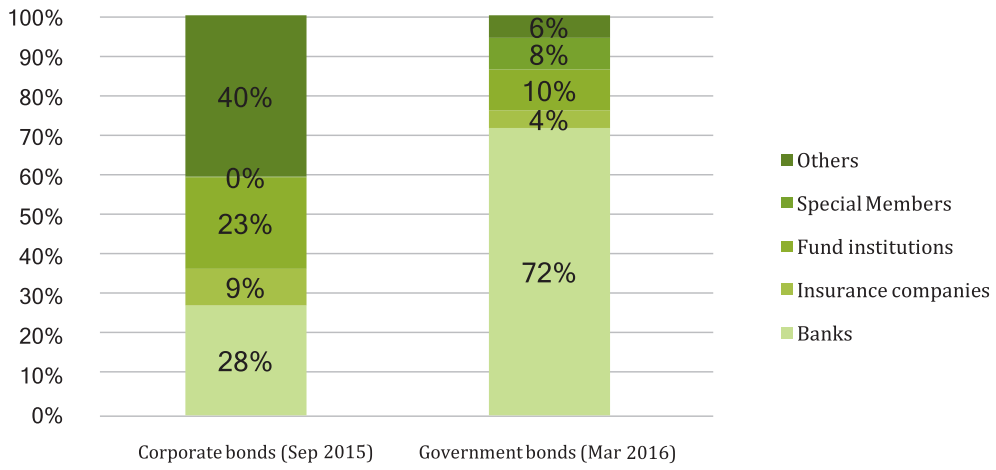
- *Broadening and diversifying the investor base (domestic or foreign) for both government and corporate bonds markets remains a priority*
- *Banks are traditionally the dominant investors in bond markets, but other types of investors (insurers, pension funds, mutual funds, asset managers, households, etc.) are gaining traction*
- *Revision of the investment limits (quantitative and qualitative) and incentives (regulatory requirements and taxation rules) could enhance investors' participation*

There are different types of investors operating in the Chinese, Indian and Indonesian bond markets. Nonetheless, (state-owned) banks dominate trading activities. 'Buy-and-hold' strategies are widespread among investors and access to a new supply of bonds is often very difficult and limited to a few. The structure of the investment industry is therefore still greatly skewed towards traditional banks, but their role is set to diminish, as policy-makers are gradually opening the market to new players.

4.1 China

Commercial banks (in particular state-owned and joint-stock entities) dominate government bond holdings (75%) and hold a relatively smaller proportion of the corporate bonds outstanding (25%). Insurance companies and pension/social security funds have yet to play a more important role in the two market segments. At present, insurance companies are more exposed to the government bond markets, while for the fund institutions (in the broad sense) the same applies to the corporate bond markets. Trust companies (an important part of the shadow banking sector) have around 8% of their assets invested in bonds. Of the total assets of mutual funds, bond funds account for 7% and hybrid funds for 15%. Individual investors most commonly participate in the bond market indirectly through mutual funds. A handful of foreign investors hold less than 2% of the bonds traded on the interbank bond market.

Figure 4.1 Investor profile, China (% of total bonds outstanding)



Source: ADB.

Banking sector

The formal Chinese banking sector consists of policy banks, state-owned/large commercial banks, joint stock commercial banks, city/rural commercial banks, rural/urban credit cooperatives and other financial institutions, such as finance companies, trust investment companies, financial leasing companies and postal savings banks.

At the end of 2015, the total assets of the formal banking sector was €28 tn (250% of GDP). The shadow banking sector, including wealth management products, trusts and interbank lending, has estimated assets of €3.8 tn, or 15% of the total assets of the regulated banking sector.

Commercial banks (in particular state-owned and joint-stock entities) dominate government bond holdings (75%) and hold a relatively smaller proportion of the corporate bonds outstanding (25%). Commercial banks are also the largest holders of medium-term notes. Banks rarely invest in bonds domestically rated lower than A or even AA. There is an investment bias against lower-rated or unrated investments, which is also due to regulatory ratios. At year-end 2015, the weighted, average, core tier 1 capital adequacy ratio of commercial banks was 10.9%, while the liquidity ratio of commercial banks was 48.0%.

Trust companies (an important part of the shadow banking sector) are non-bank lenders that raise money through high-yield collective investment schemes and use the proceeds to fund high-risk borrowers that normally do not qualify for bank loans. They surpassed insurers in 2014 to become the biggest sector of China's financial system after commercial banks. At the end of 2015, trust assets under management totalled €2.3 tn. Around 8% of these assets were invested in bonds.

Insurance companies

The insurance sector is composed of three main types of insurance companies, namely life insurance, property insurance and reinsurance. The total assets of insurance companies amounted to €1.7 tn by the end of 2015. By 2020, the total assets are expected to reach €2.8 tn. Investment-based, unit-linked types of insurance plans are not common in China.

The insurance companies have very conservative investment policies. At the end of 2015, bank deposits and bonds accounted for 56.2% of the asset allocation, while equity and funds made up 15.2%. According to the CIRC, only 7% of insurers' assets are allocated to equities and less than 1% to those overseas. Insurance companies are also the largest holders of commercial bank bonds.

Since 2014, insurers' assets have been classified as liquid assets (cash, demand deposits and government debt with maturities shorter than

one year), fixed-income assets, equity assets, real estate assets and other financial assets (banks' wealth-management products and trusts). The ceilings on fixed-income holdings have been removed. There are no restrictions on investment in liquid and fixed-income assets. The allowable percentage of total assets allocated to equity holdings, including publicly traded shares, equity funds and private equity, was raised from 20 to 30%. The ceilings for real estate investment, alternative financial investment and overseas investment are 30%, 25% and 15% respectively.

In 2010, the rules applying to insurance companies stipulated that the total book balance of an insurance company investing in banks' demand deposits, government bonds, central bank bills, policy bank bonds and money market funds should be no less than 5% of the total assets of the company at the end of the last quarter. Also, the total book balance investing in unsecured enterprise (corporate) bonds and the debt-financing instruments of non-financial enterprises should be no more than 20% of the total assets at the end of the last quarter.

Pension funds

China's social insurance system consists of five main public funds amounting to €670 bn. Both employers and employees are required to make contributions (at different rates) to a basic pension fund, unemployment insurance fund and medical insurance fund, as well as to the housing provident fund. Employers, but not employees, are also required to contribute to the work-related injury and maternity insurance funds. In the case of public funds, discretionary investment options for individual members of public pension funds may be considered.

The National Social Security Fund (NSSF) – a buffer mechanism for the public pension funds (the Urban Enterprise Pension System and Rural Pension System) – has total assets of €204 bn, of which 50% are managed by third parties. It is by far the biggest institutional investor in China's pension sector. Over 70% of the total portfolio is composed of financial assets held for trading and investments held to maturity, 12% in financial assets available for sale and 9% in long-term equity investments. Currently, the investment portfolio of the NSSF has the following investment limits: bank deposits, treasury bonds and policy bank bonds must make up at least 40%, while local government bonds and corporate bonds up to 20% (an increased limit from 10% in April 2015). At least 20% of the assets should be invested in government bonds.

Enterprise annuities, analogous to a 401(k) account in the US, were introduced in 2004 as voluntary, defined-contribution retirement plans organised by eligible employers. At the end of 2013, the aggregated assets of enterprise annuities under management were €100 bn. These are expected to grow six times by 2020 given the tax incentives in place since December 2013, namely that employers can claim a tax deduction for contributions of up to 8.3% of salary costs, with taxes on individual contributions of up to 4% of salary being deferred until withdrawal from the plan. They could become a true second pillar for the pension system.

Fund management companies and securities companies

The Securities Association of China (SAC) lists 109 securities companies (investment banks and brokerages) as members. At the end of 2014, the assets of the top ten securities companies in China totalled €480 bn, which represented 45% of the total assets of securities companies.

The funds industry is composed of publicly offered funds (supervised by CSRC) and private funds (overseen by the self-regulatory body, the Asset Management Association of China) run by fund management companies and fund managers, respectively. Private funds are available only to qualified investors compared with those available for subscription by the general public.

At the end of 2014, the total assets of the fund management industry were over €1 tn. At that time, 95 fund management companies – 47 domestic and 48 joint ventures – were managing total assets of €886 bn through 1,897 funds. The top 20 asset managers have assets under management (AuM) amounting to €733 bn. An analysis by Oliver Wyman[5] estimates that the assets managed by fund management companies will grow to €3.3 tn by 2020.

5 Oliver Wyman (2014), Asset management in China: The awakening of the dragon, August.

Mutual funds represent 70% of the total fund management industry, composed of money market funds (48%), equity funds (28%), hybrid funds (15%), bond funds (7%) and qualifying, domestic, institutional investors' funds (2%).

The external asset-management business for institutional investors is underdeveloped. The unprecedented outsourcing arrangement in April 2014 by China Life Insurance, China's largest life insurer and largest IAMC (insurance asset-management company), marked the opening to more professional management of insurers' assets by fund management companies.

In January 2016, a massive insurance fund was set up for investment in infrastructure and emerging sectors (with 46 corporate shareholders, including 27 insurers, 15 insurance asset-management firms and 4 private companies). The China Insurance Investment Company (CIIC) manages the fund. At least 20% of the assets should be invested in government bonds.

Sovereign wealth funds

The China Investment Corporation (CIC) is the investment agency for the State Administration for Foreign Exchange (SAFE), managing the second largest sovereign wealth fund in the world. At the end of 2015, CIC was managing nearly €748 bn in assets, out of which 33.1% were internally managed assets and 66.9% were externally managed. In the investment portfolio, publicly listed equities account for 47.5%, long-term investments for 22.2%, fixed-income securities for 14.4%, absolute return for 12.7%, cash and others for 3.3%. The fixed-income category is further split into the sovereign bonds of advanced economies (64.2%), investment-grade corporate bonds (30.7%) and the sovereign bonds of emerging economies (5.1%).

Households (retail investors)

At year-end 2014, Chinese households' financial assets amounted to €13.7 tn, these being allocated as follows: cash and deposits (62.5%), wealth management products (15.3%), insurance reserves (11.7%), shares/equities (8.7%), mutual funds (1.0%) and bonds (0.6%).

Foreign investors

At present, a handful of foreign investors holds less than 2-3% of the bonds traded on the interbank bond market. As of February 2016, access to the interbank bond market (CIBM) by foreign financial institutions is no longer restricted by quotas.

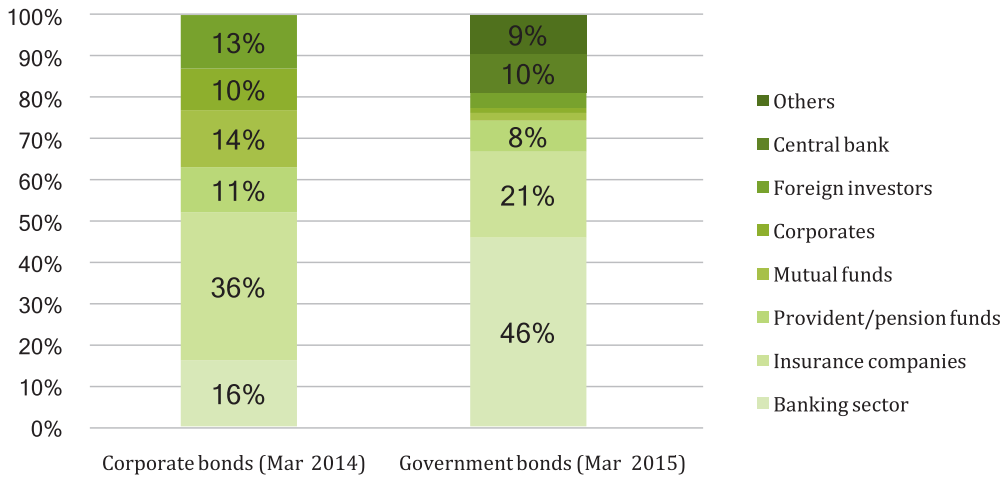
In November 2016, ASIFMA and its partners published the findings of their Global Investors' Survey: Accessing Mainland China's Onshore Bond Markets. At the time of the survey, 65% of the respondents already had access to the China onshore bond market through QFII (33%), RQFII (25%), CIBM (21%), agent under the PBOC scheme (4%) or other channels. Overall, the top three investment preferences are central government securities/agencies, policy banks and corporates and financial institutions with high credit quality. The bottom three investment preferences are structured credits, project and infrastructure finance and green bonds.

Firstly, when it comes to the most important legal and operational concerns, investors mentioned the free repatriation of invested funds, clear beneficial ownership rules and clarity on withholding tax and VAT regime. These are followed closely by the recognition of close out netting and clear bankruptcy default mechanism, clear and feasible Know Your Customer rules, and freedom to use trading and settlement infrastructure integrated with global markets. Secondly, the liquidity in the secondary bond market and free flow of capital across borders are regarded as the most relevant capital market development concerns. These are followed closely by the availability of hedging instruments, corporate governance and inclusion in global bond indices. Thirdly, the availability of credit information offshore was listed as the most important 'credit information'-related concern, in particular the coverage of issuers by international credit rating agencies and the availability of international ratings at bond instrument level. Most international investors do not rely on domestic ratings and their different scales. Lastly, in terms of macro-economic factors, fixed income investors are primarily concerned with clear and stable government policies on financial markets and the value of the RMB.

4.2 India

The development of bond markets needs the sustained participation of long-term institutional investors. The largest investors in government bonds are banks (46%), followed by contractual savings institutions (28.5%). Life insurance companies hold 36% of the corporate bonds, followed by banks (16%) and mutual funds (14%). A class of underwriters and market makers in corporate debt bonds along the lines of primary dealers in the government securities market is absent at present. A number of regulatory restrictions on the

Figure 4.2 Investor profile, India (% of total bonds outstanding)



Sources: Government of India and CRISIL.

investment mandates of financial institutions are currently in place. Insurance companies and pension funds are not allowed to invest in securities with a rating lower than AA+. Although they can invest in debt securities with a BB+ rating, mutual funds adhere to the general trend and do not invest in securities below AA+. Investment norms for regulated entities may be reviewed to facilitate the active participation of institutional investors in the corporate debt market. Retail participation in Indian bond markets is very limited. The investment cap on corporate bonds has yet to be reached by foreign investors.

Banking sector

The banking sector consists of public sector banks (nationalised banks and state bank groups), private sector banks, foreign banks, regional rural banks and a wide network of urban cooperative banks and rural cooperative credit institutions. At the end of March 2015, all scheduled commercial banks' assets reached €1.7 tn (or 80% of GDP), with 70% being accounted for by the public sector banks. Despite the substantive share of total assets, the public sector banks accounted for only 42% of total profits during 2014–15.

Banks are the largest investors in government bond markets (46% of the total amounts outstanding). Banks invest in government and other approved securities to a large extent in order to comply with the SLR. In turn, this leads to a held-to-maturity bias within the government bond market, which negatively impacts the development of the benchmark yield curve. Banks are also the second-most important investor in corporate bonds (16% of the total amounts outstanding) after insurance companies. They have additionally made investments in privately placed, unrated bonds and at times in bonds issued by corporates that are not their borrowers. Overall, the aggregate exposure of a (consolidated) bank to capital markets (both fund and non-fund based) should not exceed 40% of its consolidated net worth of the previous fiscal year.

Banks are allowed to include investments under the HTM category of up to 25% of their total investments and are permitted to exceed this limit provided that the excess comprises only SLR securities, or the total SLR securities held in the HTM category is not more than 22.5% of their demand and time liabilities (DTL). A number of prudential guidelines on investment in non-SLR securities are now in place.[6] Recently, RBI raised the limit on bank investments in non-SLR securities by 10%, being allowed to invest in the unrated bonds of companies engaged in infrastructure activities within an overall ceiling of 20%.

6 An example is the RBI Master Circular, Prudential Norms for Classification, Valuation and Operation of Investment Portfolio by Banks, Mumbai, 5 July 2015.

Insurance companies

The insurance sector is composed of life insurance, non-life insurance and reinsurance companies, with both public and private players. As of September 2015, the life insurance sector constituted 24 players, chiefly the Life Insurance Corporation of India, which has 70% of the market share, and 23 private players (including foreign participation). The total AuM of life insurers amounted to €312 bn. The non-life insurance sector (the most important of which are motor and health insurance) is much more competitive, with 28 players, among which 6 are public and 22 are private. The total AuM of non-life insurers amounted to €23 bn. Overall, total AuM by insurers relative to GDP was 17% of GDP.

Insurance companies play an important role in both bond market segments, with holdings of 21% of the outstanding government bonds and 36% of the outstanding corporate bonds. Most importantly, insurance companies and pension funds are not allowed to invest in securities with a rating lower than AA+. At least 50% of the assets of insurance companies are required to be invested in government securities, 15% in infrastructure bonds and the rest in a basket of equity markets, mutual funds, debt and money market instruments.

Pension/provident funds

The pension system can be classified broadly into four segments: the National Social Assistance Programme (NSAP) (limited), pillar 0; the Employees' Provident Fund Organisation (EPFO), which is a defined contribution and publicly managed plan and an example of the typical pillar 2 arrangement; private pensions and annuities administered by life insurance companies; and the National Pension System (NPS). In terms of assets under management, EPFO funds hold two-thirds of the market, and private pensions and annuities one-third. The NPS is still very small but developing rapidly. Altogether, the pension funds hold 7.6% of outstanding government bonds and 11% of the outstanding corporate bonds.

The EPFO operates three major schemes: the employees' pension scheme, the employees' deposit-linked insurance scheme and the employees' provident fund scheme. All three are mandatory for employees. As of April 2015, the employees' provident fund has a new investment 'pattern': a minimum of 45% and up to 50% in government securities; a minimum of 35% and up to 45% in financial and non-financial corporate debt securities; up to 5% in money market instruments; a minimum of 5% and up to 15% in equity and related instruments; and 5% in asset-backed securities and units of infrastructure investment trusts. Recently, EPFO increased the number of private sector companies in which investment is allowed to 15 compared with 7 previously. EPFO also extended the tenor of investments in the AAA-rated paper of public sector units to up to 25 years and for AA-rated public sector units up to 15 years. The investments totalled €122 bn in 2014–15.

The NPS is a voluntary contributory pension scheme regulated by the Pension Fund Regulatory and Development Authority (PFRDA). The NPS scheme offers multiple investment choices: asset class E, investments in equity market instruments, such as index funds; asset class C, investments in fixed-income instruments; and asset class G, investments in government securities, such as state government bonds and central government bonds. The funds are managed by professional fund managers from the public and private sectors with proven track records and as per the PFRDA-approved investment guidelines. At present there are eight pension fund managers managing the pension wealth of subscribers in the NPS scheme. Different investment guidelines have been issued for different NPS schemes. For example, for the government sector NPS schemes, the portfolio should be allocated as follows: government securities (up to 55%), debt securities (up to 40%), money market instruments (up to 5%) and equity assets (up to 15%). The AuM of the NPS were at €6.7 bn at the end of March 2014, of which the central government and central autonomous entities accounted for 50%, the state government/state autonomous entities for 42% and citizens for 6%.

Mutual funds and securities companies

In April 2016, the Association of Mutual Funds in India (AMFI) listed 2,407 funds (open-ended and closed-end funds, and interval fund schemes), with a net asset value (NAV) amounting to €197 bn. The market is highly concentrated, with the top 5 asset management companies (out of 45) having a market share of 60%. Private mutual funds accounted for 83% of the total AuM, while public mutual funds accounted for 17%. Mutual funds held 14% of the outstanding corporate bonds and less than 2% of the outstanding government bonds. As to the holders of units in mutual funds, corporate investors accounted for around 47% of the total AuM, while high-net-worth individuals and retail investors accounted for 28.9% and 21.5%, respectively.

With regard to the investment type/strategy, bond funds came first (42%) and equity funds second (25%), followed by money market funds (24%). Mutual funds can invest only 10-20% in corporate bonds. According to SEBI's "Deployment of Debt Funds Monthly Report" for April 2016, fund investments in corporate bonds, public sector enterprise bonds and financial bonds amounted to €55 bn or 27% of the total AuM.

In February 2016, SEBI tightened the norms for investment by debt-oriented mutual funds and introduced caps on how much they can invest in debt issued by an individual company (10-12% of NAV), a business group (20-25% of NAV) or in any specific sector (25% of NAV). This came after a series of sharp and sudden downgrades of corporate debt, which led to a hit on the fixed-income portfolios of mutual funds.

Households

As of September 2015, households' financial assets amounted to €172 bn or 9% of GDP. Their composition was as follows: currency and bank deposits (60%), life insurance funds (19%), provident and pension funds (16%) and shares and debentures (5%). The claims on government were negative (€-6 bn).

Retail participation in Indian bond markets is almost absent. The further development of the investment industry around the middle class (as opposed to only wealthy private individuals) would be a welcome development. Smoothing out tax discrepancies between equities taxed at 0% compared with bonds taxed at 10 to 20% may help retail investors get involved in the bond markets.

With the RBI measures for the development of the fixed-income and currency markets (25 August 2016), retail participation in the G-sec market has been further promoted, i.e. facilitating participation by small investors in primary as well as secondary markets. Individual investors with dematerialised accounts at depositories have been allowed to trade directly on NDS-OM since 16 August 2016. As a next step, RBI will remove the remaining restrictions on a seamless transfer of G-secs between depositories and the RBI.

Encouraging the issuance of zero-coupon bonds, providing more clarity on taxation issues, including the provision of a special quota for retail investors in debt issues and reducing transaction costs for retail investors could increase retail investors' participation in corporate bonds. Income taxation and guarantees on return of the money invested in corporate bonds by retail investors are issues to be further addressed.

Foreign investors

Currently, foreign portfolio investors can invest up to USD 30 bn in government debt and up to USD 51 bn in corporate bonds in total. The withholding tax rate has been reduced from 20 to 5% in the past years. RBI recently gave FIIs the permission to use corporate bonds (with an AA rating and above) and G-secs as collateral to meet margin requirements.

The cap on corporate bonds has yet to be reached. The debt utilisation status in November 2016 was 76.7%.[7] This suggests that government capital controls are not the main reason why FIIs are not keen on corporate bonds in India – the structural problems may be more fundamental.

Most of the corporate bond issuances in 2015 have been subscribed by local investors, with foreign investors not showing much of an appetite. The absence of incremental inflows from FIIs into Indian corporate bonds can also be attributed to the fact that, since February 2015, FIIs have not been allowed to invest in corporate bonds with maturities of less than three years. A lot of FII interest was seen in shorter maturities.

The RBI measures for the development of fixed income and currency markets (25 August 2016) will give foreign portfolio investors (FPIs) direct access to NDS-OM for G-secs. It has also been agreed with SEBI to provide FPIs the facility to trade directly in corporate bonds in the OTC segment and on an electronic platform of a recognised stock exchange without involving brokers.

7 See NDSL, FPI Monitor, "Debt utilisation status", Mumbai (https://www.fpi.nsdl.co.in/web/Reports/ReportDetail.aspx?RepID=1).

Table 4.1 Restrictions for foreign investors in India

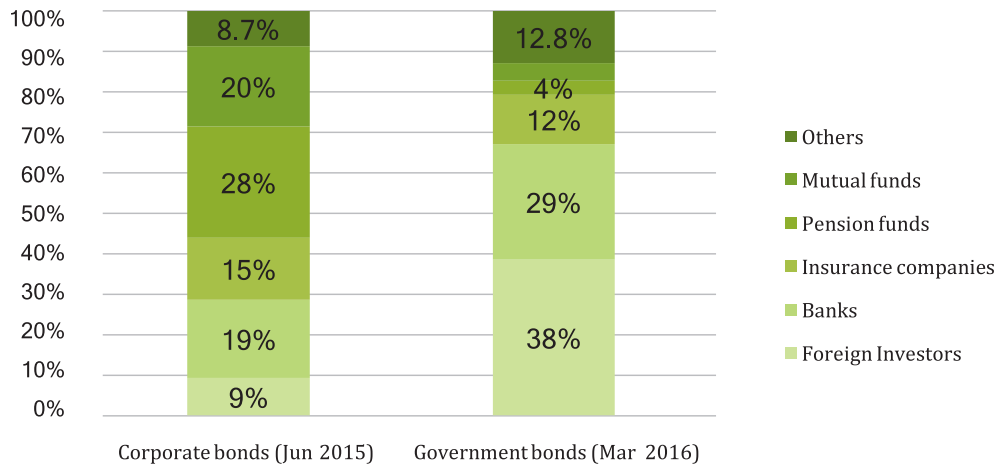
Instrument	Eligible investors	Limit	Restrictions
Government securities	FPIs and long-term investors – Sovereign wealth funds (SWFs), multilateral agencies, pension funds, insurance funds, endowment funds and foreign central banks	USD 25 bn	Eligible investors are permitted to make investments in government securities/bonds with a minimum residual maturity of three years.
Government securities – long term	FPIs that are SWFs, multilateral agencies, endowment funds, insurance funds, pension funds and foreign central banks	USD 5 bn	Eligible investors are permitted to invest only in dated securities of a residual maturity of one year and above.
Corporate debt	FPIs and long-term investors, SWFs, multilateral agencies, pension funds, insurance funds, endowment funds and foreign central banks	USD 51 bn	Investment in commercial papers is permitted only up to USD 2 bn within the limit of USD 51 bn. Eligible investors are permitted to invest in corporate bonds with a minimum residual maturity of three years. FPIs are not permitted to make any further investments in liquid and money market mutual fund schemes. There is no lock-in period and FPIs are free to sell the securities (including those that are presently held with less than three years of residual maturity) to domestic investors.

Source: PWC (2015).

4.3 Indonesia

Banks are the largest investors in bonds in Indonesia. The other institutional investors are much smaller in size but have grown substantially over the past 15 years. The main holders of government securities are foreign investors (38%), domestic commercial banks (29%) and insurance companies (12%). The corporate bonds' investor base is characterised by a handful institutional investors that prefer to hold instruments to maturity. Pension funds dominate the corporate bond market (over 28%), followed in almost equal shares by mutual funds, banks and insurance companies (19% each). Bond funds account for 18%, while hybrid funds for 7% of the total mutual funds industry. Mutual funds investing in corporate bonds can only invest in corporate bonds with investment-grade rating (BBB- and above). The ownership of mutual funds is also concentrated among high-net-worth investors. Indonesia has successfully targeted individual investors with government savings bonds but over 93% of households' financial assets are locked in cash and bank deposits.

Figure 4.3 Investor profile, Indonesia (% of total bonds outstanding)



Sources: ADB and KSEI.

In 2016, OJK generated the SID (Single Investor Identification) for government bond holders. This is largely based on the SID already generated for equity and mutual fund investors. According to OJK database, there are currently 89,936 government bond investors.

Banking sector

Indonesia's financial sector is bank dominated, contributing 79% to the total size of the financial sector. Banking is divided into commercial and rural banks. Commercial banks differ from the rural banks in the sense that the latter are not directly involved in the payment system and they have a limited scope of business and a restricted operational area. Commercial banks are classified into those based on non-sharia and sharia principles (conventional vs Islamic commercial banks). At the end of 2015, Indonesia was home to 118 banks, of which 10 were foreign banks. The total assets amounted to €208 bn (or 52% of GDP). Over 70% of the total banking assets were controlled by just 10 players. Banks were the largest investors in bonds in Indonesia, with 29% of the holdings of outstanding government bonds and 19.5% of corporate bonds outstanding.

Insurance companies

The insurance sector consists of public and private providers of life insurance, general insurance and reinsurance, professional reinsurers, social insurers, and the healthcare and social security agency (BPJS Kesehatan). Healthcare coverage in particular has traditionally been fragmented: private insurance schemes for those who could afford it, basic state provision for those who do not have the necessary means and non-governmental organisations in specialised areas providing support in between. In January 2014, Indonesia's government launched a project to establish a compulsory, national health insurance system with the aim of making basic state care available to all citizens by 2019.

At the end of 2014, a total of 141 insurance companies had on their balance sheets assets amounting to €54 bn or 7.3% of GDP. There are 47 life insurers currently operating in Indonesia, with two players leading the way with a collective 40% market share, along with 87 other general insurance companies. Insurance companies also sell unit-linked products similar to unit trust mutual funds. Their investment portfolio was split as follows: time deposits and certificate of deposits (24.0%), shares (23.5%), corporate bonds (20.4%), mutual funds (17.0%), government bonds (11.5%) and others (3.0%). Compared with other institutional investors, insurance companies held 12.2% of the outstanding government bonds and 15.2% of the corporate bonds outstanding.

Pension funds

There are four main pension funds in Indonesia: the national pension fund managed by the Workers' Social Security Agency (BPJS Ketenagakerjaan), the public pension fund for civil servants managed by the state-owned enterprise PT Taspen, the Employer's Pension Fund (DPPK) and the Financial Institution Pension Fund (DPLK). The two public funds manage about 60% of Indonesia's pension assets between them, with the balance being held by private plans. The DPLK comprises pension fund institutions established by banks and life insurance companies, which have open memberships for employees of any company as well as private individuals. By contrast, the DPPK is established by non-banks and non-insurance companies with membership solely limited to employees. Altogether, at the end of 2014 they had assets amounting to €35 bn or 3.8% of GDP, held 3.6% of the outstanding government bonds and 27.6% of the corporate bonds outstanding.

With respect to the two private pension schemes, OJK data shows that Indonesia had 267 pension fund institutions as of 2014, with total net AuM of €12.8 bn, of which 19% was accounted for by 25 DPLK institutions, while the remaining 81% was in 242 DPPK companies. Their investment portfolio was allocated as follows: money market instruments (31%), corporate bonds (21%), government securities (17%), shares (16%), mutual funds (6%) and others (9%).

There is scope for expanding pension coverage for employees at state-controlled and private companies. Establishing pension plans for state-owned enterprises could have a useful demonstration effect on other private employers, as many domestic companies do not offer pension plans.

Mutual funds and securities companies

The mutual fund industry is small (€18 bn AuM or 2.5% of GDP), but relatively fragmented (1,091 mutual funds were active in 2015). Equity funds (38%) come first, principal-protected funds second (21%) and bond funds third (18%). The remaining is composed of money market funds (10%), mixed/balanced funds (7%), sharia-based funds (4%) and index-linked exchange-traded funds (2%). For a given type of mutual fund, an asset manager should allocate at least 80% of portfolio assets in the main investment type while the remaining 20% can be diversified.

Fund ownership is concentrated among high-net-worth investors and has not yet achieved significant penetration among the middle class. According to data from the Association of Indonesian Mutual Fund Managers (APRDI), the average mutual fund investor's holding is worth between IDR 1.3–IDR 1.4 billion. An expansion of the mutual fund base will benefit a broader spectrum of Indonesian savers. Future points of distribution could include financial advisers, insurance companies, independent distributors and direct-to-consumer electronic platforms.

At the end of 2015, 115 securities companies (brokers) were active and had invested €193 bn in government bonds (67%) and corporate bonds (33%). The ten largest brokers (of which nine are foreign entities) executed 42% of the transactions in fixed-income investments (with a trading value amounting to €80 bn).

Households

Retail government bonds are made available only to Indonesian citizens. Indonesia targeted individual investors with government savings bonds (ORI). ORI are relatively short-term – between two and four years – with monthly or quarterly interest payments. They are priced above the interest rate on bank savings deposits and distributed through a wide network of banks and securities companies registered as dealers, including the Post Office. Significant sales commissions are paid, making distribution an attractive option for participants in the retail network.

At the end of 2015, households' financial assets amounted to €182 bn (data compiled by ERIA), of which 93% was in cash and bank deposits, 6% in equity assets and 1% in bonds. More specifically, retail investors held €1.25 bn in government bonds, €413 m in corporate bonds and €473 m in sharia bonds.

Foreign investors

Regarding participation as a foreign investor in the capital market, non-resident entities may do so only through the intermediation of domestic institutions. Foreign investors remain attracted to Indonesian government bonds, which offer the highest yields among all the markets in the region. About 45% of these investors are positioned at the long end of the yield curve. Foreign investors hold over 38% of the outstanding government bonds and a much lower share of the corporate bond market (over 9%).

Nonetheless, a number of impediments to non-resident investors remain in place, e.g. currency controls and restrictions on cash accounts. With respect to the tax treatment, Indonesia withholds 20% on both interest income and capital gains on debt securities for foreign investors compared with 15% for domestic investors. However, foreign investors are entitled to make use of the double tax agreement/tax treaty, allowing them to utilise a lower tax rate (down to 0% for certain countries).

4.4 Conclusions

The investor bases of the government and corporate bond markets differ largely depending on the types of bonds and the countries where they have been issued.

The total assets of the Chinese banking sector are six times those of non-bank financial intermediaries. The insurance sector, pension funds, asset management and the individual investor market should be further developed for a more diversified and resilient financial sector and investor base in bond markets. Commercial banks dominate government bond markets and hold a relatively smaller proportion of outstanding corporate bonds. There is a need to discourage banks from holding bonds to maturity, which reduces liquidity in the market. Reducing or broadening assets for liquidity requirements could also redirect their asset allocation strategy more towards SME financing or other corporate debt. Chinese households hold most of their financial assets in cash and deposits. Activating these funds either through direct or indirect participation (insurance sector, pension funds, etc.) in the capital markets could deliver a substantial contribution to the development of the bond markets. Additionally, foreign investors today hold only a negligible portion of outstanding bonds. Recent measures to gradually open bond markets to foreign investors are, however, likely to attract more of them.

The Indian banking sector is five times larger than the non-bank financial sector. Banks are the largest investors in government bond markets and are second only to insurance companies in corporate bond markets. Recent measures to allow banks to issue bonds for long-term projects in infrastructure subsectors and affordable housing, raising the limit on investments in unrated bonds of companies engaged in infrastructure, etc., are likely to increase participation in corporate bond markets. Investment guidelines for regulated entities could be reviewed. Insurance companies and pension funds are, for instance, not allowed to invest in securities with a rating below AA+. Although

they can invest in lower rated debt securities, mutual funds adhere to this with self-imposed investment mandates. Retail investor participation in Indian bond markets is currently limited, but could be encouraged with tax incentives, guarantees on returns, lower transaction costs and further development of offerings by non-bank financial intermediaries (e.g. mutual funds). Foreign investor holdings are still very low, even after the withholding tax rate was reduced and investment caps revised.

The total assets of the Indonesian banking sector are twice those of the non-bank financial sector. In particular, the main holders of government securities are foreign investors, domestic commercial banks and insurance companies. Pension funds dominate the corporate bond market, followed in almost equal shares by mutual funds, banks and insurance companies. Commercial papers are issued by corporates for funding inventory or working capital, with no guarantee and at a discount, and are usually purchased by banks. In general, there is a strong preference by small domestic institutional investors to hold bonds to maturity. Ownership of mutual funds is concentrated among high-net-worth investors. Indonesia has successfully targeted individual investors with government savings bonds, but household financial assets remain, for the large majority, locked in cash and bank deposits. Foreign investors are attracted to Indonesian government bonds, which offer the highest yields in the region. Withholding tax on both interest income and capital gains on debt securities is 5% higher than for domestic investors, which some foreign investors can circumvent using double taxation agreements.

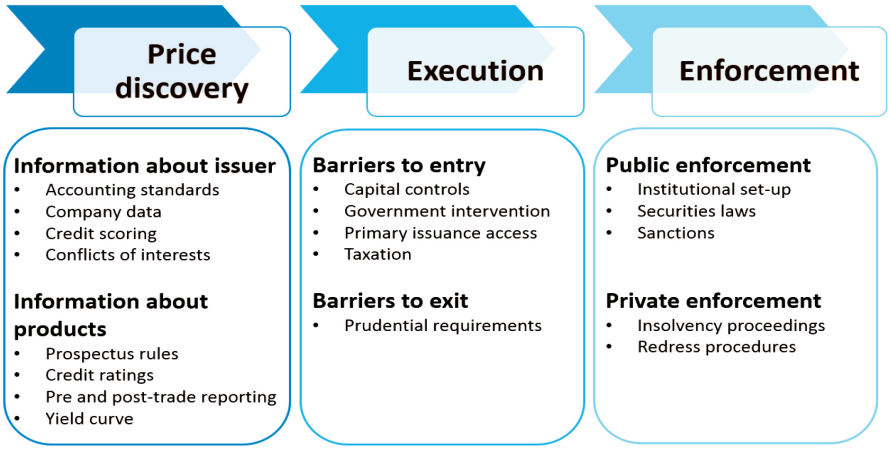
5 IMPROVING THE INVESTOR BASE FOR LOCAL CURRENCY BONDS

Key findings

- *In China, the entry of foreign credit rating agencies could contribute to the elimination of the home bias and compliance with international standards*
- *The competences of regulators and supervisors in China could be revised and coordination could be improved to avoid overlap and different approaches*
- *In India, the establishment of a functional trading platform with a central counterparty facility for OTC trades in corporate bonds could enhance market efficiency*
- *In Indonesia, the development of the corporate bond market could be stimulated with measures to speed up and simplify the issuance process and to eliminate the discriminatory tax regime*
- *Establishing a clearing mechanism for OTC transactions instead of the DvP could contribute to the development of the market for hedging instruments in Indonesia*

The quality of the investor base is intrinsically linked to its diversification, i.e. to the participation of a wide range of players in financial markets. In order to provide enough incentives for different types of investors to trade, including those active in LCBMs, policy-makers set the framework of rules and practices that define a well-functioning capital market. A transaction in local currency bonds comprises three phases: price discovery (information flows), execution (accessibility of the markets), and the enforcement of rules and contracts (private and public enforcement) (see Figure 5.1). Improving the diversification of the investor base can thus stimulate a better and more extensive offer of financial instruments and ultimately greater liquidity in secondary markets.

Figure 5.1 Building blocks for efficient bond markets



Sources: Authors' elaboration based on Valiante (2016).

5.1 Price discovery

Price discovery ensures the determination of the price of a bond based on an information flow between a buyer and seller. An impaired information flow reduces the ability to discover prices and thus the incentive for a market transaction to take place, because counterparties may be unable to set a price. The information flow includes information about the issuers and the issued product (bond characteristics, risk profile, etc.).

5.1.1 Information about the issuers

Accounting standards

Objective: The accounting standards should reduce the information asymmetry between the management and the creditors. Moreover, it should allow for comparability of financial accounts between companies and countries.

Information about the issuers, especially for companies issuing bonds, is generally available in all three countries.

China and Indonesia have explicitly started a process of convergence of local accounting standards with International Financial Reporting Standards (IFRS), which would help to make data more comparable and allow investors to compare more companies and improve their pricing ability.

The Chinese Ministry of Finance launched a roadmap for IFRS convergence in 2010, still not completed, but accounting standards have been adopted by all enterprises since 2013, when accounting standards for SMEs were also implemented.

India, alternatively, has not officially launched a convergence process towards IFRS, but national accounting standards based on the IFRS framework set by the International Accounting Standards Board (IASB) were recently launched for implementation. Nonetheless, the IFRS transposition leaves room in some areas for a divergent implementation from international standards (ESMA, 2014). SEBI also gave the option to listed companies to directly use IFRS standards, with 11 companies currently exercising this option.

Indonesia has four types of accounting standards, but IFRS has been mandated for listed companies and it is gradually replacing national generally accepted accounting principles (GAAPs) (also with a version for SMEs).

The enforcement of accounting standards, however, is even more important than the existence of the rules in the first place.

In China, the Ministry of Finance is responsible for the development and improvement of accounting standards, while the China Securities Regulatory Commission oversees accounting information disclosure for listed companies. Despite their work, the reliability of accounting numbers in China is still not good enough to make a complete assessment of the credit quality of corporates (e.g. fair value recognition and measurement, impairment recognition, recoverable amounts and credit loan provision).

In India, SEBI implements financial reporting for listed companies and the Institute of Chartered Accountants of India (ICAI) takes care of the implementation for other companies. Their experience with IFRS is still fairly limited and the quality of the accounting professionals needs further improvement (ESMA, 2014).

Enforcement actions and supervision of the implementation of accounting standards in Indonesia is entrusted to a single local authority, (OJK).

Company data

Objective: Business registries hosting comprehensive company data on both listed and unlisted companies could further reduce the information asymmetry.

General company data for listed and unlisted entities, usually stored in local business registries, is not always publicly available or is only available for listed companies.

In China, this information is mainly available when the company issues a financial instrument, and hence CSRC requires the publication of additional information about the company.

India has created a business registry (available online) that collects relevant information about companies (the registrar of companies), especially listed ones. Nevertheless, there is still no single database with data on both listed and unlisted companies.

In Indonesia, the POJK No. 29/POJK.04/2015 regarding listed companies or public companies mentions three conditions for obtaining an exemption from the obligation to conduct reporting and publication. Nonetheless, the disclosure includes the balance sheet, an income statement and a statement of changes in the owner's equities, a cash flow statement and a credit record in Indonesian Financial Accounting Standard (PSAK) format. In practice, though, an online database is only available for listed companies, through the Indonesian Stock Exchange or OJK.

Credit scoring

Objective: Local credit bureaus should allow for a better assessment of the creditworthiness of bond issuers in a standardised format.

China has recently started a process to expand the Credit Registry Centre (CRC), set up by the PBoC in 2002, which covers around half of the population (the biggest dataset on credit reports worldwide), but it needs to be improved given the limited amount of individual data available. Pricing the risk of default in the country remains complex and the information is often insufficient to make a complete assessment.

Information about the credit scores of individuals and companies is increasingly available in India and Indonesia, through local credit bureaus.

India has four credit bureaus, with the Credit Information Bureau (or CIBIL) being the most important, for the provision and storage of credit scores for individuals and companies.

Bank Indonesia set up credit bureaus where information about the credit worthiness of the obligor is stored. In addition, private credit reporting firms are gradually accessing the country to provide more detailed credit information.

Data on conflicts of interest

Objective: Detailed conflicts of interest data should be disclosed to allow mitigation of risks and make a proper valuation.

Information on related-party transactions (RPTs) and other conflict-of-interest information (like data on ownership of companies) is partially available across the three countries. A consistent set of rules on governance to identify and manage conflicts of interest is still to be developed.

China, where the phenomenon is quite widespread, has introduced a regulation for RPT disclosure for listed companies (implemented by CSRC) and in general for tax disclosure.

India's SEBI requires RPTs to be approved by half of the minority shareholders for listed companies.

In Indonesia, RPTs are disclosed in annual and semi-annual reports. Auditing is mandatory for the annual financial report and optional for the semi-annual reports. If the RPTs contain conflicts of interest, these must be approved by the independent meeting of the shareholders. Such cases are very rare.

5.1.2 Information about the issued products

Prospectus rules

Objective: On the one hand, the prospectus should allow investors to obtain an informed view on the issued product and issuer. On the other hand, the rules should be simple enough to not present too much of a hurdle for potential issuers of bonds.

A prospectus is required for the issuance of bonds in all three countries.

China has also recently sought the introduction of a 'simpler' prospectus but the legislation is still not sufficiently detailed. In particular, Chapter Two (Basic Principles and General Provisions on Information Disclosure) of Rules Governing the Listing of Stocks on the Shanghai Stock Exchange provides, "A listed company and the relevant persons with disclosure obligations shall publicly disclose material information simultaneously to all investors to ensure that all investors have equal access to the same information, and shall not disclose or leak such information to any individual investor or any part of investors. Where a listed company sends to its shareholders, actual controllers, and other third parties any documents that contain unpublished material information, it shall report to the Exchange in a timely manner and make disclosure pursuant to the relevant regulations of the Exchange."

India, led by SEBI, has pushed for a more systematic approach, with the disclosure of templates to use. In May 2009, SEBI puts in place the simplified listing agreement for debt securities. In September 2011, it prescribed the structure, design, format, contents and organization of information in the application form and abridged prospectus to standardize it and to make it uniform for public issues of debt securities, namely design, structure, format and content. The Listing agreements have been repealed in the meantime. SEBI issued the Listing Obligations and Disclosure Requirements Regulations (the so-called Listing Regulations) on September 2, 2015, which came into effect in December 2015. The Listing regulations would consolidate and streamline the provisions of existing listing agreements for Non-Convertible Debt Securities, Non-Convertible Redeemable Preference Shares and Securitized Debt Instruments. The Regulations have thus been structured to provide ease of reference by consolidating into one single document across various types of securities listed on the Stock exchanges. These measures aimed at rationalising the listing norms, simplifying the issuance procedures and processes and pushing for more standardisation of market conventions.

In Indonesia, OJK is currently drafting revised regulation on corporate bond issuance for QIB (the so-called hybrid issuance process) and the simplification of IPO process by setting less stringent requirements for bond issuance prospectus compared to equity issuance prospectus.

All three countries could converge on a standardised prospectus, including a simpler and shorter one for retail investors, through the introduction of more detailed, dedicated legislation.

Ratings by credit rating agencies

Objective: The credit ratings should provide a fair assessment of the credit quality of the bonds and allow for comparison of the credit quality across bonds.

Bond ratings are available in all three countries. However, the quality of the ratings and the organisation of the industry differ significantly.

Rating agencies in China are still local and have not yet sufficiently developed standards for professional ethics and internal governance. More should be done to open up the market to international players to bring it to international standards.

In India, SEBI is set to tighten disclosure norms for rating agencies as well as the companies being rated, as it seeks to check the menace of 'rating shopping' and a 'pick-and-choose' approach in disclosing rating actions. While an issuer may seek a second rating if unsatisfied with the first rating, it has to disclose both. In September 2011, SEBI made third-party valuation by a credit rating agency mandatory and to be disclosed to the public. Still, the credit rating mechanism for corporate bonds needs to be improved and the market for lower grade ratings further encouraged.

Indonesia relies on two credit rating agencies, PEFINDO (locally owned) and Fitch (affiliated with recognised international entities). They rate several types of instruments, e.g. conventional senior and subordinated bonds, Islamic bonds (sukuk), mutual funds, medium-term notes and asset-backed securities. Yet while there have been claims about the independence of the oldest credit rating agency (PEFINDO), the quality of the ratings is generally considered to be good.

Pre and post-trade reporting

Objective: Robust pre- and post-trade transparency mechanisms should be in place to foster efficiency in the price formation.

Post-trade reporting

The post-trade reporting system allows centralised control over transactions in bonds and better pricing. Post-trade reporting mechanisms should include detailed reporting for financial market authorities (for oversight purposes) and more limited and standardised post-trade reporting for public disclosure.

There is so far no reliable and cost-effective mechanism for centralised post-trade reporting in China to support the transparency of the local OTC market, which accounts for around 90% of all transactions.

In India, the reporting of trades in corporate bonds on F-TRAX has been discontinued since 1 April 2014. Furthermore, in the SEBI circular dated 21 March 2014, SEBI advised that all OTC trades in corporate bonds are to be reported solely on any one of the reporting platforms provided in the debt segment of the stock exchanges, namely the NSE, BSE and MSEI within 15 minutes of the trade. RBI also revised its circular dated 24 February 2014 directing its regulated entities to report their OTC trades in corporate bonds and securitised debt instruments on any of the stock exchanges (NSE, BSE and MSEI) as of April 2014.

Indonesia has developed a dedicated reporting system (CTP-PLTE) for both on- and off-exchange transactions. On market data transactions are automatically taken from Jakarta Automated Trading System (JATS), whereas the off market data transactions should be reported by counterparties to PLTE. There is mandatory trade reporting to OJK for all trades executed, through the Trade Report Service of Penerima Laporan Transaksi Efek (PLTE), which is the platform supplied by the IDX and to which authorised market participants subscribe (IDX Fact Book, 2015). The reporting of securities transactions is conducted by the participant with the seller as an initiator and then confirmed by the buyer within 30 minutes after the transaction. The data from these reports will then be consolidated with the transaction settlement data from BI and KSEI. Post-trade reporting also applies to the OTC process flow (with a 30-minute delay) and should be done before the settlement is completed. Reporting agents are the banks, securities firms and custodians. Information is available to market participants through a reporting terminal with dissemination to all data vendors. Any delay in reporting is subject to an administrative fine. In order to bring more price transparency to the OTC segment, OJK will put in place a new reporting platform by the end of 2016 (to semi-automate and consolidate the transaction reporting).

Pre-trade reporting

Pre-trade reporting mechanisms exist in China and Indonesia, with so-called request-for-quotation (RFQ) systems, which display non-binding quotes on OTC secondary markets.

In China, the CSRC promulgated measures for the administration of securities issuance and underwriting to expand the range of eligible participants in the pricing enquiry process to include individual investors as eligible participants who have over five years of investment experience with a strong analytical ability and risk tolerance. Leading underwriters are to make recommendations in strict accordance with the established principles, standards and procedures of recommendation. In practice, only a limited set of investors can submit price enquiries and retail or small professional investors' participation is very limited.

India does not have a well-established pre-trade transparency mechanism, as 90% of the issuance is privately placed. Nevertheless, it should be noted that on 21 April 2016, SEBI issued a circular laying down a framework for the issuance of debt securities on a private placement basis through an electronic book mechanism, in order to streamline procedures and enhance transparency for the discovery of prices.

In Indonesia, a large amount of trading in domestic bonds is carried out over the counter. The primary dealers' system for government bonds also becomes important for price discovery in the primary market as well as in the secondary market for government bonds. Primary dealers are required to conduct mandatory bidding in the primary market, conduct mandatory transactions on the secondary market and provide executable two-way quotations for benchmark government bond series. The Indonesia Bond Pricing Agency (IBPA), the first institution authorised to determine the fair market price valuation of bonds, was initiated in 2006 by a self-regulatory organisation supported by OJK to address the issues of largely decentralised markets, opaqueness and illiquidity. There is pre-trade transparency in place for bid and ask quotes to a different degree and within various trading schemes.

Risk-free yield curve

Objective: The government bond yield curve is necessary to provide a risk-free rate and allow corporate bonds to be priced efficiently.

In all three countries, there is an insufficient (especially for long-term maturities) issuance of government bonds to support a liquid yield curve, market pricing and the liquidity operations of the local central banks to provide safe assets to investors and a market infrastructure with a robust payment/settlement system and legal framework. Despite the issuance of long-term bonds as well, the liquidity of the curve on the secondary market is still fairly low for longer maturities. For short-term maturities, liquidity is fairly good.

Most recently, the three-month benchmark interest rate of Chinese treasuries (T-bonds) has been included in the basket of special drawing rights (SDRs), and the T-bond yield curve has been a key pricing benchmark for RMB assets. China does not have an automatic procedure of issuance, which is a significant drag on the development of a liquid yield curve.

India removed a cap on government securities per issuance, but the coverage of the different maturities is still limited. The RBI, in consultation with the government of India, issues an indicative half-yearly auction calendar that contains information about the amount of borrowing, the type of security and the likely period during which auctions will be held. A notification and a press release giving the details about securities (name, amount, type of issue and procedure for auction) are issued by the government of India about a week prior to the actual auction date. The 2, 5 and 10-year government bonds are those most frequently issued. The government preference for the 10-year bond has resulted in a less liquid yield curve across maturities, which has in turn hampered the pricing of corporate bonds. Indian government bonds are generally 10-year bonds with a few longer issues stretching to 25 or 30 years. The corporate bond market mirrors this behaviour and maturities are typically in the 5 to 10-year range.

The government of Indonesia has also started to pursue a more active policy to construct a better yield curve through regular issuance of short-term bills (Surat Berharga Negara) and long-term ones of up to 30 years, with regular disclosure (in advance) of calendar issuance. They are allocated either through auction (with agents) or privately through a system of primary dealers. Indonesia has developed a Bond Index, which is a benchmark for the overall bond market in Indonesia. The Bond Index is used to measure and monitor bond performance as a part of portfolio investment. The Indonesian Composite Bond Index (ICBI) and Indonesia Sukuk Indexed (ISIX) were launched on November 2015. Indonesia is also currently designing Indonesian Government Bond Futures (IGBF) as a hedging instrument for government bonds to mitigate investment risks. The implementation of IGBF will be in two phases: the first phase would begin by the end of 2016 only for securities companies registered as dealers and the second phase is expected to be implemented in 2017 for dealer banks.

5.2 Execution

The execution of a bond transaction is the process through which an investor enters into a market transaction (contracting) or exits it (liquidation). It refers to all the barriers to market access. Barriers to entry (to invest) are perhaps those most diffused in Asian countries, after the bad experience with movements in capital flows at the end of the 1990s.

5.2.1 Barriers to entry

Capital controls

Objective: The opening of bond markets to foreign investors based on objective criteria may bring more market discipline and additional funds.

Capital controls in bond markets for foreign investors are often in the form of quotas, specific investment restrictions and burdensome authorisation procedures. However, there are initial signs of gradual intervention to open up capital accounts in bond markets, especially in

China, which is trying to further promote the RMB as an international reserve currency. In particular, China has recently started a process of gradually lifting quotas for foreign investors that want to access the local interbank bond market. Details are currently being defined, but it would be highly beneficial for the market if a roadmap were disclosed with reliable and detailed milestones. Access to bond futures, moreover, still remains limited, and hence provide only partial support for the management of dealers' inventories (with hedging tools), which can impact on liquidity.

In India, there are investment restrictions on both foreign and local investors. Restrictions are based on the nature of the entity and investment quotas. For instance, only professional investors can access the government bond market. The investment quotas are equal to USD 25 billion for government securities above three years and only USD 5 billion for securities above one year. For corporate securities, a quota of USD 51 billion applies to foreign institutional investors.

In Indonesia, there are no restrictions in the primary or secondary markets for foreign investors. Foreign investor participation, in effect, is an important contributor to the liquidity of the secondary market for government bonds. Access is possible through local financial intermediaries (with a business licence from OJK). The sale by the foreign investor is not prevented as long there is a buyer in the market.

Limits on the convertibility of local currencies produce secondary negative effects on the development of LCBMs. Nonetheless, improving the stability and liquidity of LCBMs can ameliorate convertibility (and increase international recognition) of the local currency.

Central and local governments' intervention

Objective: Disorderly public interventions should be avoided since they may impair the ability to price risk and discourage private investors from accessing markets.

The recent spike in default rates in China has again highlighted the role of government support in funding major issuers of corporate bonds. In all three countries, particularly accounting standards and credit reporting often overlook the role of government guarantees in the funding of a number of corporates. This often happens because of the inability to capture the discretionary procedures through which central and local governments intervene in the local economy. Policies should define objective criteria for government intervention in public markets, which can be mostly discounted by market mechanisms. A disorderly public intervention may impair the ability to price risk and discourage private investors from accessing markets (contracting).

Primary issuance access

Objective: The eligibility criteria for the entities to access the primary market should allow for both direct and indirect participation.

Allocation of primary issuance of government securities is primarily based on a list of selected primary dealers, which can then place these instruments across a wide range of investors. A similar environment exists for corporate bonds' primary issuance.

In China, issuance is often placed with government-owned banks. Investors generally purchase bonds through different channels. As for T-bonds, issued for the bank counter bond market, investors can buy them at bank counters during the issuance period. In addition, as for T-bonds issued on the exchange bond market, investors can entrust an eligible securities company to access them directly through the exchange trading system or from designated T-bond underwriters. Overall, individual investors are not able to purchase T-bonds or policy financial bonds, whereas corporates can buy from designated bond underwriters through settlement and agent banks.

In the case of corporate bonds in China, individual investors can obtain them through business outlets specified in the issuance announcements, while institutional investors can do so at locations designated by underwriters. If convertible bonds are offered through online pricing platforms, investors can buy them online through the securities trading system of stock exchanges. More specifically, on 15 January 2015, the CSRC released the administrative measures for issuing and trading corporate bonds, putting almost all types of corporate bonds in the same regulatory framework. Trading places for publicly issued corporate bonds have been extended from the Shanghai and Shenzhen Stock Exchanges to the NEEQ; trading places for corporate bonds by private placement have been extended from the Shanghai and Shenzhen Stock Exchanges to the NEEQ, the Inter-dealer Quotation and Transfer System for Private Placement Products, and securities companies' counters. Regarding publicly issued corporate bonds, the CSRC requires the Shanghai and Shenzhen Stock Exchanges and the NEEQ to implement a classification management and a differentiation trading mechanism, establish a corresponding investor-appropriateness management system, and make timely adjustments to the trading mechanism and the investor appropriateness arrangements in accordance with the changes in bond credit status. Corporate bonds for private placement can be transferred in the two exchanges, the NEEQ, the Inter-dealer Quotation and Transfer System for Private Placement Products, and securities companies' counters,

but the transfer is only limited to qualified investors and, after the transfer, the total number of qualified investors for the bonds issued at the same time should not exceed 200.

In India, auctions for government securities are conducted through the Negotiated Dealing System (NDS), introduced by RBI in February 2002 (see chapter 3). RBI also introduced the Negotiated Dealing System-Order Matching system in August 2005. The NDS-OM is an electronic, screen-based, anonymous, order-driven trading system for dealing in government securities. Corporate bonds, by contrast, remain largely confined to financial institutions. During 2011–12 to 2014–15, there was an increase in the proportion of private sector companies tapping into the corporate bond market. Overall, public issues are less frequent and private placements are the norm (over 90%), with a preference for fixed-rate bonds. Retail investors' participation is also fairly limited. Participation in the corporate debt market could be made mandatory for debt mutual funds (on the lines of tax exemptions for equity-linked savings schemes, ELSS) with a three to five-year lock-in period. This would provide investors a tax-efficient, higher-yield alternative to bank fixed deposits, if investor protection and price discovery mechanisms work well.

In Indonesia, government bonds are issued and subscriptions allocated either by competitive auction through agents or private placement through banks and securities companies registered as dealers. A handful of entities are also involved, including the central bank (BI), the financial services authority (OJK), the deposit insurance corporation (Lembaga Penjamin Simpanan) and local governments. Corporate bonds are issued through book building on the exchange or through private placements. The selling of government securities in primary market is conducted by selling agents. The selection of selling agents is carried out based on the eligibility criteria for selling agents. For corporate bonds selling agents (securities companies commonly act as financial advisors and underwriters), the selection of the selling agent is purely undertaken by the issuer without regulator intervention.

Taxation

Objective: Taxation differences between bonds and other financial instruments (mainly equity) are an important contributing factor to investors' participation in LCBMs.

In 2015, China introduced an income tax exemption for interest income resulting from a local government special bond.

In India, smoothing out tax discrepancies between capital gains and dividend/interest income for equities taxed at 0% compared with bonds taxed at 10 or 20% may help retail investors get involved in the bond markets. Currently, a long-term equity share held for more than one year is tax exempt. Similar provisions need to be made for corporate bonds as well. Section 80CCF of the Income Tax Act makes investment in certain classes of infrastructure bonds (up to INR 20,000) tax exempt; this section is in addition to section 80C of the Income Tax Act, which allows for a tax exemption on investment in mutual funds and bank deposits up to INR 150,000. Raising the tax exemption ceiling in section 80CCF, and including a special provision in section 80C that would allow for a tax exemption specifically for investments in the corporate debt market through debt mutual funds could create incentives for greater retail participation.

In Indonesia, there are no specific tax incentives for investors to invest in long-term savings products. There is income tax for bonds as a final tax at the rate of 15% applicable to Indonesian citizens. The applicable taxes for financial products are 20% for savings and time-deposit interest; 0.1% on stock transactions for listed companies, 10% for dividends, 15% for bond earnings for Indonesian and domestic companies, 20% for foreigners and 5% for mutual funds (until 2020).

5.2.2 Barriers to exit

Prudential requirements

Objective: Prudential requirements should not impede or disincentivise the participation of institutional investors in secondary markets.

Prudential regulation is often used to hold investors captive in certain local markets, even beyond the pure purpose of financial stability. Some prudential requirements are, in the end, too restrictive for investors like insurance and pension funds, which end up with concentrated exposure and 'buy and hold' strategies that do not help the development of secondary markets. There is a need to attract additional investors to lower-rated (investment grade) and high-yield bonds.

In China, at year-end 2015, for commercial banks the weighted, average, core tier 1 capital adequacy ratio was 10.9%, while the liquidity ratio of commercial banks was 48.0%. Since 2014, insurers' assets have been classified as liquid assets (cash, demand deposits and government debt with maturities shorter than one year), fixed-income assets, equity assets, real estate assets and other financial assets

(banks' wealth management products and trusts). The ceilings on fixed-income holdings have been removed. There are no restrictions on investment in liquid and fixed-income assets. The investment portfolio of the National Social Security Fund has the following investment specifications: bank deposits, treasury bonds and policy bank bonds must make up at least 40%, while local government bonds and corporate bonds up to 20% (an increased limit from 10% in April 2015). At least 20% of the assets should be invested in government bonds.

In India, the high statutory liquidity ratio of 21.25% and cash reserve requirements applied to banks contribute to the HTM bias within the bond market. In fact, banks hold over 30% of their securities portfolios in government securities, a clear sign that, despite the SLR, banks lack a concrete variety of remunerative projects to invest in. Moreover, banks that hold bonds in 'held-for-trading' (HFT) portfolios are not free to decide when to execute trading and are required to trade them at the cut-off of the 90th day. The holding period needs to be prolonged to the extent that it relieves investors from the pressure to sell off their bonds inefficiently. Institutional investors, such as insurance companies and pension funds, are not allowed to invest in securities that carry a grade lower than AA. At present, at least half of the exposure of insurance companies is required to be in government securities, 15% in infrastructure bonds and the rest in equity markets, mutual funds, debt and money market instruments. Furthermore, banks are not permitted to guarantee high-yield bonds issued by companies. Allowing banks to do so would foster higher-yield corporate bond issuance, thus lowering the cost of capital for companies.

In Indonesia, there are no restrictions in place with respect to the holdings of government and corporate bonds by the financial industry. Such holdings are risk weighted for the computation of the capital adequacy ratio or risk-based capital or net-adjusted capital for each segment. The different subsectors of the financial industry can build up their portfolios to the extent that their then computed regulatory capital is within the regulatory limits for each segment. Nonetheless, according to POJK No.1/POJK.05/2016, OJK mandates minimum holdings of government bonds for the following subsectors: life insurance and pension funds (20% of investable assets by the end of 2016 and 30% by the end of 2017); general insurance and reinsurance companies (10% of investable assets by the end of 2016 and 20% by the end of 2017) and health insurance companies (BPJS, 30% of investable assets by the end of 2016).

5.3 Enforcement

Enforcement of rules and private contracts are the most important aspects of a well-functioning financial market, as indicated by almost two decades of academic literature on the subject. Generally, emerging economies lack strong private and public enforcement mechanisms. China, India and Indonesia are no exception.

5.3.1 Public enforcement

Institutional set-up

Objective: The institutional set-up should contribute to efficient bond markets. For example, regulatory and supervisory fragmentation, and possibly overlapping efforts, should be avoided.

It is important to avoid that authorities have overlapping competencies on bond issuance and ongoing supervision. If this is the case, greater coordination among those authorities, with a more coherent supervisory framework, might be extremely beneficial for increasing legal certainty for investors and issuers alike. There is also scope for a rationalisation of the role of the different authorities in bond markets, perhaps moving from an entity-based approach (an authority for each type of entity issuing a bond, e.g. insurance, banks and so on) to a functional approach, i.e. a single authority that approves the issuance of bonds or other investment services based on objective criteria.

The main supervisors in the Chinese bond market are PBoC and CSRC. PBoC is responsible for supervising the interbank market and OTC market in commercial banks. CSRC supervises the exchange market and provides guidance for the bond business of institutional investors, regulating the financial bonds and bonds issued by international finance and development institutions. It authorises NAFMII's registration and administration of financing tools for corporate short-term financing bonds and MTNs and other non-financial enterprise bonds, and work with CSRC to supervise and administer issuance of short-term financing bond by securities companies. Apart from direct administration of interbank bond market, PBOC also specifies the duties of self-discipline organisations and intermediaries. In the primary market, the CSRC is mainly responsible for the issuance and management of corporate bonds, currently limited to corporate bonds and other bonds issued by listed companies. When it comes to the issuance of short-term financing bonds by securities companies, the CSRC and the PBoC implement a joint supervision. In the secondary market, under the guidance of the CSRC, the Shanghai Stock Exchange, the Shenzhen Stock Exchange, and the China Securities Depository and Clearing Corporation, and other intermediaries are responsible for specific supervisions. Moreover, the National Development and Reform Committee is responsible for review and approval of enterprise

bond issuance, and Ministry of Finance for issuance and management of government bonds, yet barely covering regulation of the secondary market. It even rarely gets involved in the management of the secondary T-bond market. It will offer rationalisation proposals and it has not participated in more practical regulation.

Supervisory responsibility for the bond markets is fragmented and at cross purposes in India as well. Corporate bonds having a maturity of more than one year are inter alia regulated by SEBI, whereas money market instruments, such as repos in corporate bonds and CDS, are regulated by RBI. Although SEBI is the primary regulator of corporate bonds, other regulators, such as Insurance Regulatory and Development Authority IRDA, RBI and EPFO, impose other investment restrictions on their respective regulated entities. The RBI supervises banks and primary dealers, while the IRDA and the PFRDA do it for insurance companies and pension funds respectively. Foreign investment has traditionally remained under controls, with SEBI and RBI imposing periodic limits on foreign participation.

In Indonesia, for government bonds, the Ministry of Finance takes care of issuance through the Debt Management Office, while the central bank is the main holder of the registry. Secondary market supervision of government bonds is conducted by OJK. For corporate bonds, the OJK is the supervisory body, while the Indonesian Central Securities Depository (KSEI) is the holder of the registry. All companies that want to issue bond must have approval from OJK, no matter company's type of business. The stock exchange (IDX) offers the trading and reporting system, with the KPEI providing the clearing and settlement infrastructure for both government and corporate bond transactions.

Securities laws

Objective: Securities laws (including collateral, netting, etc.) are essential for the enforcement of any financial contract.

Securities laws in these countries are not generally a reason for concern in LCBMs.

Since 2008, the PBoC in China has fully liberalised delivery-versus-payment (DvP) settlement and it has gradually become the mainstream institution for settlement in the interbank bond market. In September 2013, the PBoC officially announced that the settlement method in the interbank bond market would be unified as DvP. At that time, the PBoC set a three-month transition period, after which bond transactions settled with the non-DvP approach would be banned. The NAFMII could strengthen the self-regulation of market players in the DvP settlement process. The Business Management Department of the PBoC is responsible for daily monitoring of DvP settlement special funds accounts. The PBoC also calls for strengthening relevant monitoring and bond registration. Depository and clearing institutions conduct daily monitoring of the DvP settlements of bond transactions in the interbank bond market; any abnormal situations are to be reported to the PBoC. The China Government Securities Depository Trust & Clearing Co. Ltd. and the Shanghai Clearing House, two institutions handling bond registration, depository and clearing, are to provide market players with DvP settlement services through the linkage of their own bond business systems and the PBoC's payment system. On 12 May 2015, the PBoC, the Ministry of Finance and the CBRC jointly issued a notice on related matters concerning the issuance of local government bonds through directional underwriting. They have formally included local government bonds in the cash management collateral scope of the central and local treasuries. In addition, local government debt was admitted in the collateral scope of the PBoC's market operation tools, such as standing loan facilities, medium-term lending facilities and pledged supplementary lending and the repo transactions on the stock exchanges.

DvP is the mode for the settlement of securities transactions in India as well. The Clearing Corporation of India Ltd is the clearing and settlement agency exclusively for the government securities market. Since 2009, all trades in corporate bonds between specified entities, namely mutual funds, foreign institutional investors, venture capital funds, foreign venture capital investors, portfolio managers and RBI-regulated entities, have mandatorily been cleared and settled through the clearing houses of exchanges on a DvP basis. More specifically, this has taken place through the National Securities Clearing Corporation Ltd of the NSE or the Indian Clearing Corporation Ltd (ICCL) of BSE and the MSEI CCL. This approach has been applicable to all corporate bonds traded over the counter or on the debt segment of stock exchanges.

In Indonesia, national laws recognise local currency bonds as collateral for other financial transactions. In addition, local currency bonds can be lent and traded (except for non-tradable ones). Settlements and title transfer mechanisms are different for each trading system but involve the central custodian (KSEI) and BI. The transfer of the security takes place through the DvP method. There is a custody system in place to support the investor's depository mechanism by using the system provided by KSEI (C-BEST). KPEI handles the clearing mechanism for exchange transactions and after matching data from the seller and buyer is confirmed. Settlement is undertaken by KSEI. Thus depository and settlement are handled by KSEI, while clearing and guarantee activities are tackled by KPEI. BI holds the final registry only for government bonds. In the OTC market, the settlement takes place through either a DvP or free-of-payment method.

Sanctions

Objective: Sanctions are important instruments to enforce compliance with the legislative framework. The strength of the sanctions regime (ranging from administrative sanctions to criminal charges) lies in the credibility of the enforcing authorities.

Policy-makers should ensure that the enforcement mechanisms (e.g. administrative sanctions and revocation of the business licence) are up to international standards. The same applies to the quality of the judicial process (in conducting an independent investigation, filing a case with the courts and imposing any criminal penalties) [8]

5.3.2 Private enforcement

Insolvency proceedings

Objective: A robust and efficient insolvency framework and the quality of the judicial process are important for investors, creditors, and debtors alike to recover as much of their investments as possible in case of default.

Bankruptcy (insolvency) laws are often cumbersome, with multiple authorities involved.

In China, the competent financial authority may step in to take over the financial institution if the insolvency of a firm is considered to have a systemic impact. The result is that no one bank has ever failed in China and normally only few companies fail. In effect, the number of bankruptcies remains very low in the country, due to the diffused, implicit state guarantees (through ownership of companies) and public intervention (explicit guarantees) if the failure of a company or bank could increase 'social instability'. While it is important to preserve financial stability, such intervention to avoid bankruptcy should occur in exceptional circumstances and with well-defined criteria. In this regard, the recent spike in default rates has added uncertainty to the outlook of LCBMs, as it may suggest lack of clarity about whether local authorities will still be able to support local bond issuers.

The absence of robust bankruptcy laws is also reckoned one of the major reasons for lack of investor interest in corporate bonds. The cumbersome approach to insolvency resolution is one of the key reasons for India's low ranking of 130 on the World Bank's ease of doing business index. India is currently ranked at 136 on this specific measure in the 189-country ranking. Resolving a bankruptcy case can take on average over four years in India. Due to the lack of an efficient recovery mechanism for the bond market, investors are not willing to participate in the high-yield market. A reform of bankruptcy laws may be conducive to greater development of corporate debt markets. Current regulations, such as SARFAESI (Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interests), and the BIFR (Board for Industrial and Financial Reconstruction) protect the interests of banks, financial institutions and companies against bankruptcy petition, which is not an ideal situation for the development of broad-based credit participation. A new Insolvency and Bankruptcy Code was proposed in December 2015, and passed by both houses of the Indian parliament in 2016. The Code sets out a legal framework for resolving the insolvency of companies and individuals, but has yet to be implemented. At present, four different agencies, the high courts, the Company Law Board, the BIFR and the Debt Recovery Tribunals (DRTs), have overlapping jurisdiction, giving rise to potential systemic delays and complexities in the process. In order to achieve the objective behind the Bankruptcy Code, such issues as early notification of the rules, the development of insolvency professionals as well as tribunal/court infrastructure and information utilities, and quick redress of the transitional problems may need to be addressed with priority.

In Indonesia, Law No. 37 of 2004 on Bankruptcy and Suspension of Obligation for Payment of Debts (the 'Bankruptcy Law') regulates the procedures. Bankruptcy proceedings and the settlement process in Indonesia are conducted in the commercial courts. The information is available to the public. With the entering into force of Law No 21/2011, OJK was given the power to give but also revoke the licence for all financial institutions. OJK has also the authority to file a bankruptcy petition against the banks, securities companies, stock exchanges, clearing and underwriting institutions, depository and settlement and institutions, insurance companies, reinsurance companies, and pension funds.

Redress procedures

Objective: Redress procedures are important private-enforcement mechanisms that stimulate investors' activism through a direct tool for protection.

8 See rankings for China, India, and Indonesia in the 2016–17 Global Competitiveness Report (World Economic Forum) or Doing Business Report (World Bank).

The alternative of dispute resolution through arbitration (outside the courts system) could be further developed in each jurisdiction. The number of claims that can be processed and resolved in a reasonable time could be the way to assess the quality of such procedures.

The development of China's system for financial dispute arbitration began during the 1990s. In 2003, the China Council for the Promotion of International Trade (CCPIT) and the China Chamber of International Commerce (CCIC) passed the arbitration rules applicable to financial disputes, prescribed in the Financial Dispute Arbitration Rules of the China International Economic and Trade Arbitration Commission. In 2008, China's Arbitration Commission founded the Tianjin International Economic and Trade Arbitration Center. In addition, arbitration commissions in Shanghai, Guangzhou, Hangzhou and other cities successively developed financial arbitration rules, and founded financial arbitration courts or centres.

In India, SEBI has put in place an Arbitration Mechanism and Investor Grievance Redressal Mechanism[9]. Arbitration is defined as a quasi-judicial process of settlement of disputes between trading member, investor, clearing member, sub-brokers etc. Arbitration aims at quicker legal resolution for the disputes. When one of the parties feels that the complaint has not been resolved satisfactorily either by the other party or through the complaint resolution process of the exchange, the parties may choose the route of arbitration.[10]

Indonesia has developed its own dispute resolution mechanism through self-regulation. The BAPMI (Badan Arbitrase Pasar Modal Indonesia, the Indonesian Arbitrage Capital Market Board) is a self-regulatory organisation established in 2002 by the Jakarta Stock Exchange (JSX), Surabaya Stock Exchange (SSX), KSEI, KPEI and other capital market-related associations for settling non-criminal disputes in capital market activity outside the court. The decisions must be notified to OJK.

5.4 Conclusions

A sound framework is crucial to creating efficient capital markets that are attractive to both issuers and investors. The capital markets framework for China, India and Indonesia was assessed across three building blocks: price discovery, execution and enforcement. All three jurisdictions have made some important steps towards the development of their bond markets in recent years. There is nevertheless still quite some room for improvement.

The main obstacle for an efficient price discovery is the availability and quality of credit ratings. In China, the methodologies of the domestic rating agencies should be aligned with international practices, and/or international rating agencies should be allowed to enhance credibility for both domestic and foreign investors. In India, the credit rating mechanism for corporate bonds needs to be improved and the market for lower-grade ratings more developed. In Indonesia, the quality of credit ratings is, in general, considered good, but the market is very concentrated, with only two participants. Additionally, despite the efforts of various governments in recent years, yield curves are not sufficiently spread across several maturities to function as a reliable benchmark for pricing various financial instruments.

Turning to execution, the bond markets are generally becoming more accessible to foreign and non-bank investors. In China, investment restrictions for foreign entities are gradually being removed. In Indonesia, there are no restrictions to participating in the primary and secondary market; foreign bond holdings are the highest among the assessed emerging markets. In India, there are still investment quotas in place, which are not fully loaded. There are several factors that may explain the limited interest of foreign investors, such as lack of yields and discriminatory tax treatment. Moreover, secondary bond markets in China, India and Indonesia lack depth and liquidity. Accounting, liquidity and investment mandates encourage bank and non-bank investors to hold securities to maturity. Authorities could assess whether thresholds for liquid assets could be reduced, eligibility broadened to include lower-rated bonds, and the initial trading period extended, without jeopardising financial stability. Trading and post-trading market infrastructures are at different stages of development.

Finally, both public and private enforcement represent a major challenge for emerging countries. In China and India, supervision of bond market activities are very fragmented. Even in Indonesia, where bond markets are much smaller, there are regulators for, respectively, government and corporate bond markets. Coordination and cooperation between supervisors should be improved; moving from an entity-based approach to a functional approach for supervision could also be considered. Additionally, both in- and out-of-court insolvency and arbitration procedures can be improved in order to enhance investor certainty regarding procedures and recovery value. Particularly in China, this will become even more important given the increasing default ratios.

9 More information here: http://www.sebi.gov.in/sebiweb/home/detail/26494/yes/undefined, http://www.sebi.gov.in/cms/sebi_data/commondocs/ch15_p.pdf

10 Retrieved from: NSE: https://www1.nseindia.com/invest/content/about_arbitration.htm , https://www1.nseindia.com/invest/content/IG_res_panel.htm

BIBLIOGRAPHY

Allen, F. and D. Gale (1995), "A welfare comparison of intermediaries and financial markets in Germany and the US", European Economic Review, Vol. 39, pp. 179–209.

Andrews, M. (2003), "Issuing Government Bonds to Finance Bank Recapitalization and Restructuring: Design Factors that Affect Banks' Financial Performance", IMF Policy Discussion Paper, IMF, Washington, D.C.

Asia Securities Industry & Financial Markets Association (2013a), "India Bond Market Roadmap", Hong Kong, October.

Asia Securities Industry & Financial Markets Association (2013b), "China Bond Market Roadmap", Hong Kong, June.

Asia Securities Industry & Financial Markets Association, King & Wood Mallesons and JP Morgan (2016), "Access Programmes and Reforms in the Cross-Border RMB Market", RMB Series, Hong Kong, 13 April.

Asian Development Bank (ADB) (2012), ASEAN+3 Bond Market Guide, Manila.

Asian Development Bank (ADB) (2013), Broadening the Investor Base for Local Currency Bonds in ASEAN+2 Countries, Manila (www.adb.org/sites/default/files/publication/30255/broadening-investor-base.pdf).

Asian Development Bank (ADB) (2015a), Asia SME Finance Monitor 2014, Manila.

Asian Development Bank (ADB) (2015b), Local Currency Bonds and Infrastructure Finance in ASEAN+3, Mandaluyong City.

Asian Development Bank (ADB) (2016), Asia Bond Monitor, Mandaluyong City, March.

Association of Mutual Funds in India (2016), "Mutual fund data for the month – April 2016", Mumbai, April.

Bank of International Settlements (2012), "Payment, clearing and settlement systems in China", CPSS Red Book 2012, Basel.

Bhattacharyay, B.N. (2010), "Estimating Demand for Infrastructure in Energy, Transport, Telecommunications, Water, and Sanitation in Asia and the Pacific: 2010-2020", ADBI Working Paper No. 248, Asian Development Bank Institute, Tokyo.

Bhattacharyay, B.N., M. Kawai, and R.M. Nag, eds. (2012), "Infrastructure for Asian Connectivity", Cheltenham, UK and Northampton, US: Edward Elgar.

Canning, D. and P. Pedroni (2008), "Infrastructure, Long-run Economic Growth and Causality Tests for Cointegrated Panels", The Manchester School, Vol. 76, No. 5.

CARE Ratings (2014), "Indian Bond Market: Striking a Chord with Asian Peers", Mumbai, 10 June.

Chakrabarti, M. (2014), "The role of municipal bond market for urban infrastructure in India: An empirical assessment", Abhinav: National Monthly Refereed Journal of Research in Commerce & Management, Vol. 3, No. 4, p. 50.

Chaudhari, K., M. Raje and C. Singh (2014), "Corporate Bond Markets in India: A Study and Policy Recommendations", IIM Bangalore Working Paper No. 450, Indian Institute of Management Bangalore, February.

China Banking Regulatory Commission (2015), 2014 Annual Report, Beijing.

Della Croce, R. (2011), "Pension Funds Investment in Infrastructure: Policy Actions", OECD Working Paper on Finance, Insurance and Private Pensions No. 13, OECD, Paris.

Delmon, J. and V. Delmon (2011), International Project Finance and PPPs: A Legal Guide to Key Growth Markets, Alphen aan den Rijn: Kluwer Law International.

Deloitte (2015), "Indian GAAP, IFRS and Ind AS: A Comparison", February.

Deutsche Bank (2016), "Asia infrastructure financing: Getting it right would lift medium-term growth", Current Issues: Emerging Markets, Frankfurt.

Edelman, C., T. Pittaway and R. Chua (2014), Asset management in China: The awakening of the dragon, Oliver Wyman, Hong Kong, August.

Ehlers, T., F. Packer and E. Remolona (2014), "Infrastructure and Corporate Bond Markets in Asia", in A. Heath and M. Read (eds), Financial Flows and Infrastructure Financing, Reserve Bank of Australia, Sydney.

Eichengreen (2006), "Asian Bond Markets: Issues and Prospects", BIS Paper No. 30, Bank of International Settlements, Basel, pp. 1–12.

Ekberg, J., R. Chowdhuri, M.P. Soejachmoen and B. Hermanus (2015), Financial deepening in Indonesia – Funding infrastructure development and catalysing economic growth, Oliver Wyman, Hong Kong, February.

Employees' Provident Fund Organisation (2015), Annual Report 2014–2015, New Delhi.

European Central Bank (2010), "Securities Clearing and Settlement in China Markets, Infrastructures and Policy-Making", Occasional Paper Series No 116, July 2010.

European Securities and Markets Authority (ESMA) (2014), Report on the equivalence of the Indian Accounting Standards, No. ESMA/2014/1278, Paris, 21 October.

EY (2015), "Unmasking India's NPA issues – Can the banking sector overcome this phase?", Kolkata (www.ey.com/Publication/vwLUAssets/ey-unmasking-indias-npa-issues-can-the-banking-sector-overcome-this-phase/$FILE/ey-unmasking-indias-npa-issues-can-the-banking-sector-overcome-this-phase.pdf).

Financial Stability and Development Council Sub-committee (FSDC-SC) India (2016), Report of the Working Group on Development of Corporate Bond Market in India, Security and Exchange Board of India, Mumbai, August (http://www.sebi.gov.in/cms/sebi_data/attachdocs/1471519221779.pdf).

Gandhi, R. (2015), "Corporate debt market: What needs to be done", Inaugural address at the CARE Ratings Debt Market Summit, Mumbai, 23 March.

Gandhi, R. (2016), Special address the seminar on "Challenges in Developing the Bond Market in BRICS", held jointly by the Confederation of Indian Industry and the Ministry of Finance, Government of India, Mumbai, 27 September (https://www.bis.org/review/r160930i.pdf).

Gürkaynak, R.S., B. Sack and J. Wright (2007), "The U.S. Treasury Yield Curve: 1961 to the Present", Journal of Monetary Economics, Vol. 54, No. 8, pp. 2291–2304.

Hale, G.B. and M.M. Spiegel (2009), "Who Drove the Boom in Euro-Denominated Bond Issues?", Working Paper 2009-20, Federal Reserve Bank of San Francisco.

HM Treasury (2014), National Infrastructure Plan, London.

Inderst, G. (2009), "Pension Fund Investment in Infrastructure", OECD Working Paper on Insurance and Private Pensions No. 32, OECD, Paris.

Inderst, G. (2016), "Infrastructure Investment, Private Finance, and Institutional Investors: Asia from a Global Perspective", ADB Institute Working Paper No. 555, Asian Development Bank Institute, Tokyo.

Indian Ministry of Finance (2013), Report of the Committee on Investment Pattern for Insurance and Pension Sector, New Delhi.

Indonesia Stock Exchange (IDX) (2015), IDX Fact Book 2015, Research and Development Division, Jakarta (www.idx.co.id/Portals/0/

StaticData/Publication/FactBook/FileDownload/20150918_FB-2015.pdf).

Indonesia Stock Exchange and Indonesia Bond Pricing Agency (2015), Indonesia Bond Market Directory 2015–2016, Jakarta.

Insurance Regulatory and Development Authority of India (2015), Handbook on Indian Insurance Statistics 2014-15, Basheerbagh, Hyderabad.

International Monetary Fund (2013), "Local Currency Bond Markets – A Diagnostic Framework", Washington, D.C. (www.imf.org/external/np/pp/eng/2013/070913.pdf).

International Monetary Fund (2015), "Indonesia: Selected issues", IMF Country Report No. 15/75, Washington, D.C. (www.imf.org/external/pubs/ft/scr/2015/cr1575.pdf).

Kothari, V. (2015), "Policy issues in corporate bond market in India – Regulator's perspective", July.

Kwon, T. (2006), "For the Advent of a Promising and Sound Asian Bond Market", in Asian Bond Markets: Issues and Prospects, BIS Paper No. 30, Bank of International Settlements, Basel, pp. 13-15.

McKinsey Global Institute (MGI) (2015), "The infrastructure conundrum: Improving productivity", McKinsey Global Institute, July.

McKinsey Global Institute (MGI) (2016), Bridging global infrastructure gaps, McKinsey Global Institute, June.

MCX-SX (MSEI) (2014), "Development of Corporate Bond Market Lessons in India – Global Lessons", Research Digest, Vol. 2, No. 2, February.

Ministry of Finance, Department of Economic Affairs (2015), Handbook of Statistics on Central Government Debt, New Delhi, November.

Nath, G. (2012), "Indian Corporate Bonds Market: An Analytical Perspective", MPRA, Munich University Library, May.

National Stock Exchange of India (2016), "Debt Market Review", Highlights for the Month of February, Mumbai.

Natixis (2016a), "China Corporate Debt Monitor", Hong Kong, May.

Natixis (2016b), China's corporate leverage: The tale of Beauty and the Beast, Special Report, Economic Research, Hong Kong, 6 May.

Pension Fund Regulatory and Development Authority (2015), Annual Report 2014–2015 (National Pension System), New Delhi.

People's Bank of China (2015), 2014 Annual Report, Beijing.

PWC (2014), "Destination India 2014: Unleashing the Prowess".

Rachuri, S. (2013), "Corporate Bond Market in India – Issues and Challenges", Financial Vision, May.

Ray, S. (2015), "Infrastructure Finance and Financial Sector Development", ADBI Working Paper No. 522, Asian Development Bank Institute, Tokyo.

Reserve Bank of India (2014), "Government Securities Market in India – A Primer", Mumbai, 17 October.

Reserve Bank of India (2015), Report on trend and progress of banking in India 2014-15, Mumbai.

Schwab, K. (ed.) (2016), The Global Competitiveness Report 2015–2016, WEF Insight Report, World Economic Forum, Geneva.

Securities and Exchange Board of India (2015), Annual Report 2014–15, Mumbai, June 2015.

Securities and Exchange Board of India (2016), Handbook of Statistics 2015, Mumbai.

Spiegel, M.M. (2009), "Developing Asian Local Currency Bond Markets: Why and How?", ADBI Working Paper No. 182, Asian Development Bank Institute, Tokyo.

United Nations Conference on Trade and Development (UNCTAD) (2014), World Investment Report 2014 – Investing in the SDGs: An Action Plan, United Nations, Geneva.

Valiante, D. (2016), Europe's Untapped Capital Market: Rethinking financial integration after the crisis, CEPS Paperback, London: Rowman & Littlefield International.

Wagenvoort, R., C. De Nicola and A. Kappeler (2010), "Infrastructure Finance in Europe: Composition, Evolution and Crisis Impact", EIB Papers, Vol. 15, No. 1, pp. 16–39.

Walsh, J., C. Park and J. Yu (2011), "Financing Infrastructure in India: Macroeconomic Lessons and Emerging Markets Case Studies", IMF Working Paper No. WP/11/181, IMF, Washington, D.C., August.

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AMC	Ahmedabad Municipal Corporation
AMFI	Association of Mutual Funds in India
APRDI	Association of Indonesian Mutual Fund Managers
ASEAN	Association of Southeast Asian Nations
AuM	Assets under management
BI	Bank Sentral Republik of Indonesia
BIFR	Board for Industrial and Financial Reconstruction
BIS	Bank for International Settlements
BJPS	Indonesian Social Security Agency
BoJ	Bank of Japan
BSE	Bombay Stock Exchange
C-BEST	Central Depository and Book Entry Settlement System
CBRC	China Banking Regulatory Commission
CCIL	Clearing Corporation of India Ltd
CDC	China Government Securities Depository Trust & Clearing Co. Ltd
CDSL	Central Depository Services Ltd
CFETS	China Foreign Exchange Trade System
CIBIL	Credit Information Bureau
CIBM	China interbank bond market
CIC	China Investment Corporation
CIIC	China Insurance Investment Company
CIRC	China Insurance Regulatory Commission
CN	China
CRA	Credit rating agency
CRC	Credit Registry Centre
CRISIL	Credit Rating Information Services of India Ltd
CROMS	Clearcorp Repo Order Matching System
CSDC	China Securities Depository and Clearing Co.
CSRC	China Securities Regulatory Commission
CTP	Centralised trading platform
CTP-PLTE	Centralised trading platform – Penerima Laporan Transaksi Efek

DMO	Debt management office
DPLK	Financial Institution Pension Fund
DPPK	Employer's Pension Fund
DRT	Debt Recovery Tribunal
DTL	Demand and time liabilities
DvP	Delivery versus payment (system)
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
ELSS	Equity linked savings scheme
EPFO	Employees' Provident Fund Organisation
ERIA	Economic Research Institute for ASEAN and East Asia
ESMA	European Securities and Markets Authority
ETF	Exchange-traded fund
EU	European Union
EUR	Euro
FESE	Federation of European Securities Exchanges
FII	Foreign institutional investor
FIMMDA	Fixed Income Money Market and Derivatives Association of India
FMC	Fund management companies
FPI	Foreign portfolio investor
F-TRAC	Fixed Income – Trade Reporting and Confirmation System
G20	The Group of Twenty
GAAPs	Generally accepted accounting principles
GDP	Gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoI	Government of Indonesia
G-secs	Government securities
HFT	Held for trading
HNWI	High-net-worth individuals
HTM	Held to maturity
IAMC	Insurance asset management company
IASB	International Accounting Standards Board
IBPA	Indonesia Bond Pricing Agency
ICAI	Institute of Chartered Accountants of India
ICCL	Indian Clearing Corporation Ltd
ICT	Information and communications technology

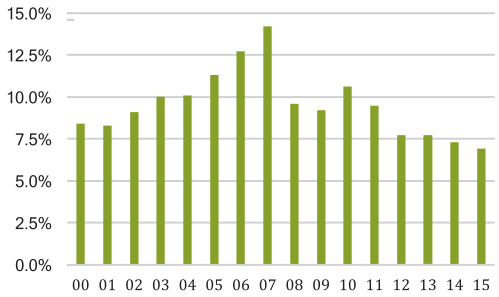
ID	Indonesia
IDR	Indonesian rupiah
IDX	Indonesia Stock Exchange
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IN	India
INR	Indian rupee
IRDA	Insurance Regulatory and Development Authority
ITA	Income Tax Act
JSX	Jakarta Stock Exchange
JP	Japan
KPEI	Kliring Penjaminan Efek Indonesia (Securities Underwriting Clearing Indonesia)
KSEI	Kustodian Sentral Efek Indonesia (Indonesian Central Securities Depository)
LCBMs	Local currency bond markets
LGFVs	Local government financing vehicles
MGI	McKinsey Global Institute
MM	Market makers
MoF	Ministry of Finance
MoFIDs	Ministry of Finance Dealing System
MPC	Monetary Policy Committee
MSEI CCL	Metropolitan Stock Exchange of India, Clearing Corporation Ltd
MTNs	Medium-term notes
NAFMII	National Association of Financial Market Institutional Investors
NAV	Net asset value
NDRC	National Development and Reform Committee
NDS	Negotiated dealing system
NDS-OM	Negotiated dealing system-order matching
NDTL	Net demand and time liabilities
NEEQ	National equities exchange and quotations
NGO	Non-governmental organisation
NIFC	National Interbank Funding Centre
NPS	National Pension System
NSAP	National Social Assistance Programme
NSE	National Stock Exchange (India)
NSSF	National Social Security Fund
OECD	Organisation for Economic Cooperation and Development

OJK	Otoritas Jasa Keuangan (Financial Services Authority of Indonesia)
ORF	Observer Research Foundation
ORI	Obligasi Ritel Indonesia
OTC	Over the counter
PBoC	People's Bank of China
PCE	Partial credit enhancement
PFRDA	Pension Fund Regulatory and Development Authority
POE	Privately owned enterprise
PRC	People's Republic of China
PSU	Public sector undertakings
RBI	Reserve Bank of India
RFQ	Request for quotation
RMB	Renminbi
RoC	Registrar of companies
RPTs	Related-party transactions
SAC	Securities Association of China
SAFE	State Administration for Foreign Exchange
SARFAESI	Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interests
SCH	Shanghai Clearing House
SDRs	Special drawing rights
SGL	Subsidiary general ledger
SEBI	Securities and Exchange Board of India
SLR	Statutory liquidity ratio
SMEs	Small and medium-sized enterprises
SOE	State-owned enterprise
SSE	Shanghai Stock Exchange
SSSS	Scriptless Securities Settlement System
SSX	Surabaya Stock Exchange
SWF	Sovereign wealth fund
SZSE	Shenzhen Stock Exchange
T-bond	Treasury bond
ULB	Urban local bodies
UNCTAD	United Nations Conference on Trade and Development
US	United States
USD	US dollar
WFE	World Federation of Exchanges

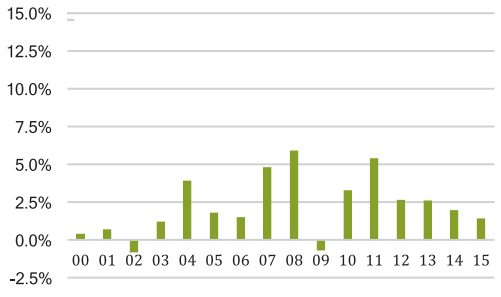
ANNEX

Figure A.1 Key macroeconomic indicators: China

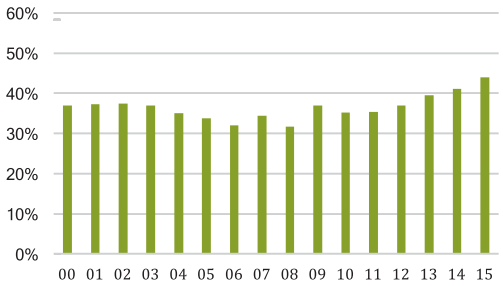
a) Real GDP growth (%)



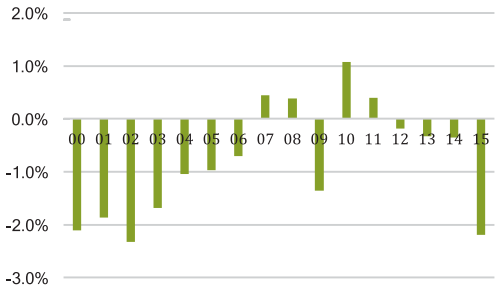
b) Inflation (%)



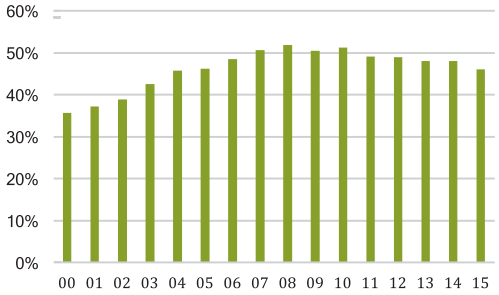
c) General government debt (% of GDP)



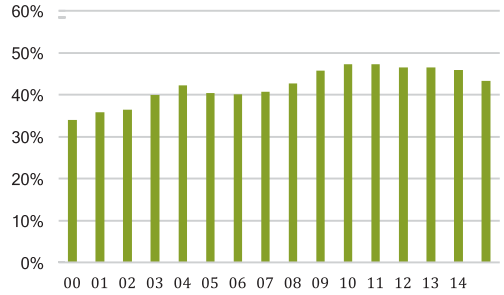
d) Primary balance (% of GDP)



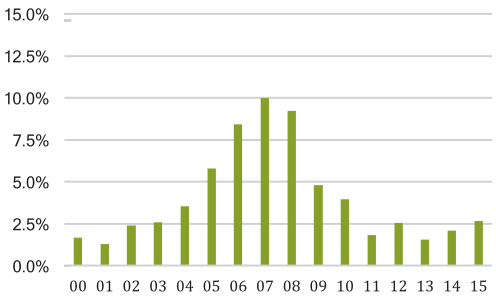
e) Gross national savings (% of GDP)



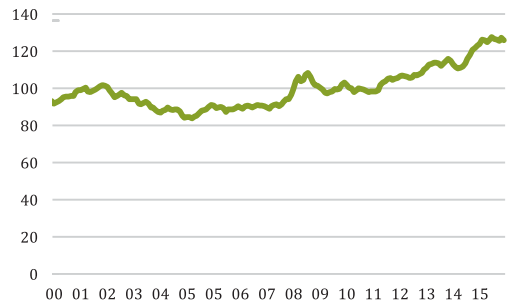
f) Total investment (% of GDP)



g) Current account balance (% of GDP)

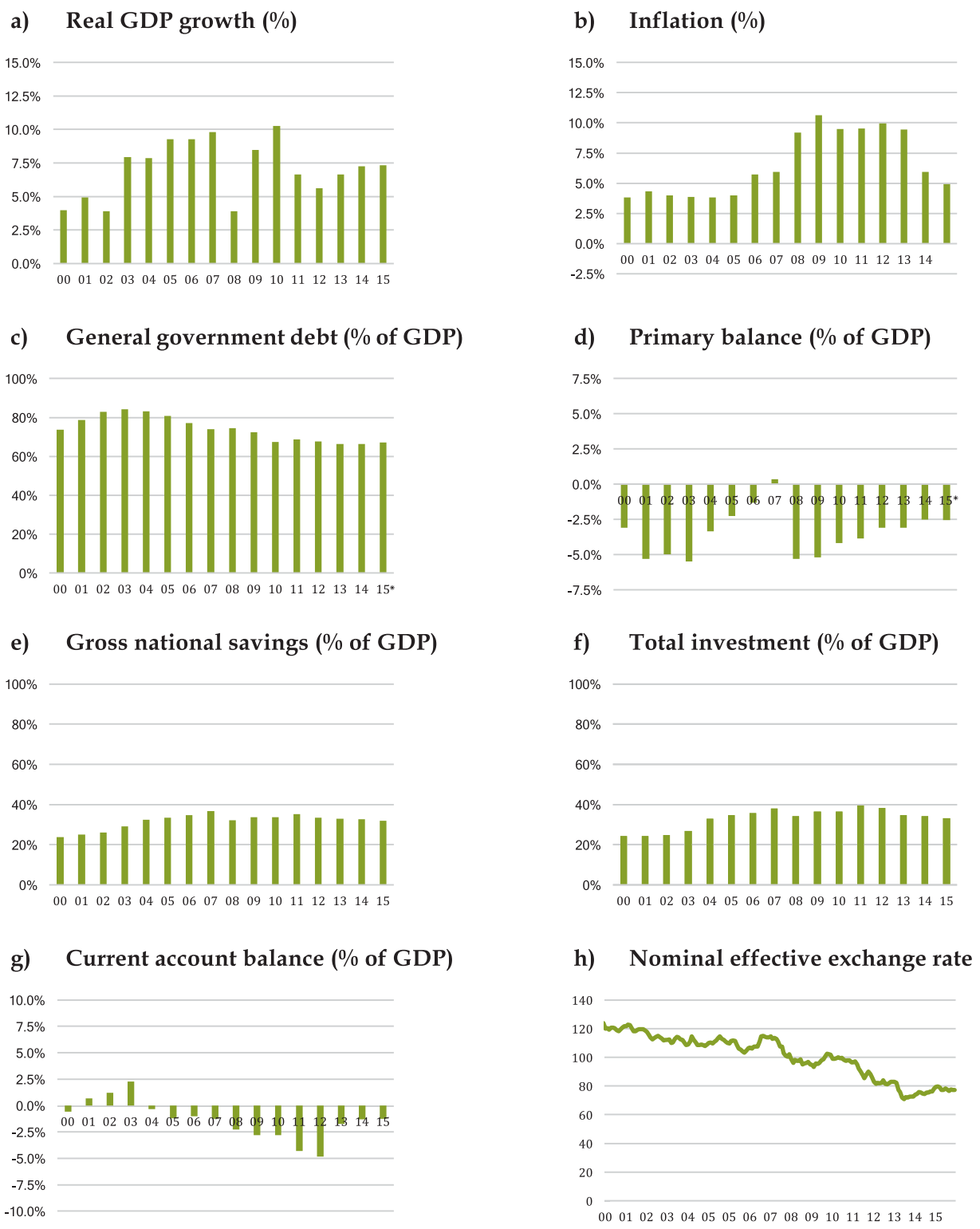


h) Nominal effective exchange rate



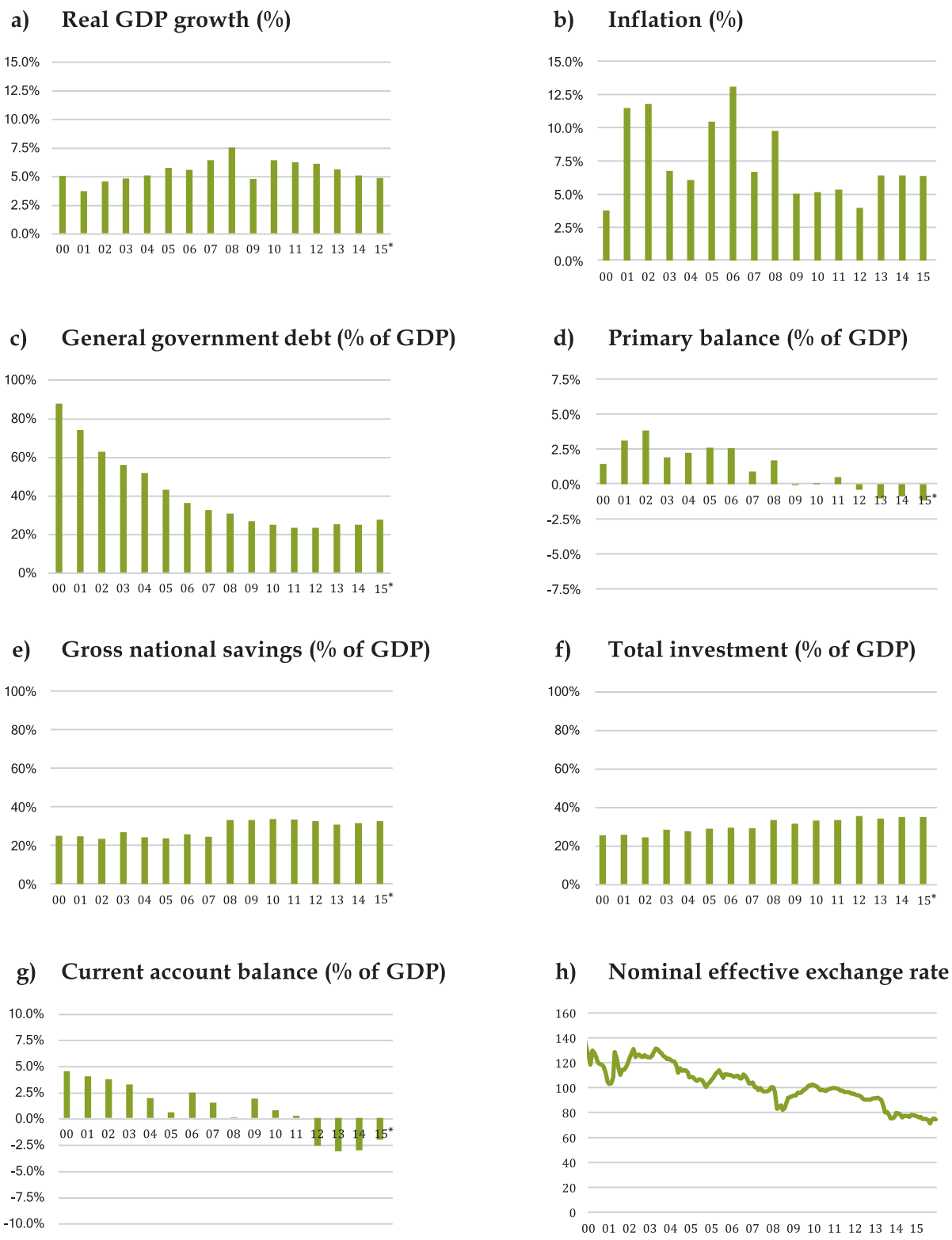
Sources: BIS, IMF WEO and World Bank WDI (2016).

Figure A.2 Key macroeconomic indicators: India



Note: *Estimates.
Sources: BIS, IMF WEO and World Bank WDI (2016).

Figure A.3 Key macroeconomic indicators: Indonesia



Note: *Estimates.
Sources: BIS, IMF WEO and World Bank WDI (2016).

China, India and Indonesia need to develop their local currency bond markets (LCBMs) to serve as alternative sources of finance for sustainable growth. In the coming years, these three countries need to raise vast sums of funding to enable the creation of, among other things, necessary infrastructure. This report looks at the possibility to further develop the local currency bond markets in general, and ways to broaden and deepen the institutional investor base in these three emerging G-20 markets, in particular. It presents several recommendations to make the local currency bond markets more attractive to both issuers and investors, in relation to three main areas of analysis: price discovery, execution and enforcement.

This report was prepared within the framework of the Emerging Market Dialogue on Finance (EMDF), which is implemented by the German Agency for International Cooperation (GIZ). It was carried out by CEPS, in cooperation with the Research Bureau of the People's Bank of China (PBoC), the Observer Research Foundation (ORF) in India and the Economic Research Institute for ASEAN and East Asia (ERIA), based in Indonesia.