



LOCAL CURRENCY BONDS AND INFRASTRUCTURE FINANCE IN ASEAN+3

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Notes:

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Currency Equivalents

(as of 1 March 2015)

\$1.00	=	B\$1.34
\$1.00	=	KR4,020
\$1.00	=	CNY6.16
\$1.00	=	€0.89
\$1.00	=	Rp12,953
\$1.00	=	¥119.53
\$1.00	=	W1,100
\$1.00	=	KN8,085
\$1.00	=	RM3.61
\$1.00	=	MK1,017
\$1.00	=	₱44.00
\$1.00	=	S\$1.36
\$1.00	=	B32.27
\$1.00	=	D20,984

Foreword

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

The need for infrastructure investment among ASEAN+3 members is well documented, with estimates for needed investment through 2020 reaching as high as \$550 billion. Local currency financing of infrastructure projects has the important advantage of avoiding the currency risk that can arise when a project generating revenues in the domestic currency has foreign currency-denominated debt service requirements. Without hedging, which comes with a cost and may not be available for long tenors in all currencies, adverse exchange rate movements can increase debt service requirements relative to domestic currency revenues, potentially threatening the viability of a project.

The challenge holding back the increased use of local currency financing in a number of countries across the region is the small size of the domestic finance sector, particularly the lack of nonbank institutional investors, relative to needed infrastructure investment. At the same time, there is significant demand among institutional investors across the region for high-quality local currency bonds. Evidence suggests that investors would purchase more local currency bonds if the supply were greater. Given the demand for local currency corporate bonds on one side, and the need for infrastructure investment on the other, surely there is scope to expand the use of local currency bonds for infrastructure finance.

This study was undertaken under ABMI and funded by the Government of the PRC. It addresses two key questions: (i) Why is local currency bond financing not more widely used for infrastructure projects in ASEAN+3? and (ii) What can be done to promote infrastructure bond financing?

The study was prepared by A. Michael Andrews and Phil Braginetz, under the direction of A. Noy Siackhachanh, Senior Advisor, Sustainable Development and Climate Change Department (SDCC). Assistance was provided by Noritaka Akamatsu, Senior Advisor, SDCC; and Richard D. Supangan, Senior Economics Officer, SDCC. Yvonne C. Osonia, Margarita Tirona, and Alison Xu provided research assistance and logistical support. Special thanks are extended to officials of ASEAN+3 member countries; market participants, who

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Ma. Carmela D. Locsin

Director General

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Executive Summary

The need for as much as \$550 billion in infrastructure investment across the Association of Southeast Asian Nations (ASEAN) countries through 2020 far exceeds the amounts that might be financed through government budgets, prompting increased interest in Public-Private Partnerships (PPPs) or other vehicles to attract private investment. Institutional investors across the region would hold more local currency bonds if the supply were greater, prompting the question of how to increase the use of local currency bonds to finance infrastructure investment.

Project financing, in which the project alone provides the cash-flow and there is limited or no recourse to the project sponsors, is widely used in Malaysia and is more limited in other countries across the region. Project bonds, which may be used to finance an entire project or as part of a financing package, bear a number of risks relating to the preparation, construction and operational phases of the project, requiring specialized skills on the part of project sponsors to present an attractive investment and for investors to assess the risks of project bonds. Project bonds may be used at project commencement—the greenfield stage—or may be issued to take out the initial financing, typically after the operational phase begins—the brownfield stage.

Recent Experience in the Region

Local currency project bonds and *sukuk* are widely used in Malaysia. There are a few other examples across the region, and a more limited number of foreign currency project bonds. In common with international experience, bank debt finances most private infrastructure investment across ASEAN.

Despite the dearth of project bonds, a significant portion of ASEAN local currency bonds are issued by infrastructure-related entities. They account for 20%, 25%, and 18% of the local currency corporate bond markets in the Philippines, Singapore, and Viet Nam, respectively, providing a vehicle for local institutional and retail investors to finance infrastructure investment. State-owned infrastructure-related companies rank among the largest corporate bond issuers in many countries across the region.

Local currency bonds also provide indirect infrastructure financing. Commercial and specialized banks are among the largest bond issuers in most ASEAN countries. While typically driven by capital management considerations, bond funding can be used by banks for long-term loans. Public financing vehicles such as Danainfra Nasional in Malaysia, local government financing vehicles in the People's Republic of China, and local government

agencies and corporations in Japan are all major sources of infrastructure investment, and all tap the local currency bond markets for funding.

Common challenges across the region include the limited appetite for lower rated (higher risk) bonds. This may require larger equity investment by project sponsors or credit enhancement from a national, regional, or international credit guarantor. The cost of these options may contribute to the preference for bank debt, as ASEAN banks typically will price aggressively for the business of well-established corporate or state-owned names.

The small size of nonbank financial institutions limits the institutional investor market in many countries. Measures to promote the insurance, pension and funds management sector are required to support the growth of local currency bond markets, and in particular specialized issues such as high-yield debt and project bonds.

Many institutional investors across the region lack expertise in infrastructure investment. One solution is to partner with other investors. Ratings agencies in many countries also need to develop project finance expertise.

Accommodative prudential standards for bank lending can inhibit the growth of the bond market. Enforcing a single exposure limit in line with international standards can encourage infrastructure project sponsors to pursue bond financing, and contribute to financial stability.

Infrastructure funds of various types have been used in a number of countries across the region. Some have been established in response to tax incentives, while others combine international expertise in infrastructure investment with significant fund commitment by domestic and international institutional investors.

Credit enhancement agencies have been established in several countries in addition to the regional Credit Guarantee and Investment Facility. Other direct policy interventions include government owned or sponsored entities to promote PPPs and infrastructure finance, and fiscal incentives for infrastructure investment generally or project finance specifically. The challenge in many countries is the relatively small capacity of credit enhancement vehicles and other government initiatives relative to the needed infrastructure investment.

Lessons from Other Markets

Revenue bonds which securitize the cash flow from a government enterprise or tax receipts are widely used in the United States. These have a higher default rate than municipal bonds overall, and have a fiscal cost due to the exemption of interest from federal income tax in the hands of investors, but do provide a vehicle for governments to finance specific projects.

The experience of Latin America, where the growth of domestic institutional investors was central to the development of bond markets more generally and project bonds specifically, offers insights applicable elsewhere. A robust foundation for PPPs and a well-developed nonbank finance sector are important preconditions. Peruvian Infrastructure Debt Trust Funds provide a vehicle for pension funds to pool expertise, a potentially useful model for

other jurisdictions. Certificates of Capital Development—a Mexican structured product listed on the stock exchange to provide liquidity—provide another potential model.

The European Union Project Bond Initiative (PBI) provides an alternative to the monoline insurance credit enhancement previously common in European infrastructure projects. The capacity of the PBI is small relative to the required infrastructure investment across the EU, highlighting the capacity challenges that generally face government-sponsored initiatives.

Promoting Infrastructure Bond Financing

Experience across ASEAN and around the world highlights the importance of two preconditions—a robust PPP framework and a well-developed domestic currency bond market—for project bond financing.

Beyond the basic preconditions for the domestic bond market—a modern legal framework with a disclosure-based regime, international standards for securities regulation and capital market oversight, and the financial markets infrastructure for bond pricing, trading, clearing and settlement—the development of domestic institutional investors and the bond markets is inextricably linked. An appropriate framework for nonbank financial institutions is required.

Jurisdictions with well-developed bond markets generally have adopted full or at least partial funding for government pensions, together with a sound framework for private pensions. The prudent person approach to regulating investments can encourage pensions and life insurance companies to invest in a range of asset classes. Use of external funds managers by large pension funds and giving individuals the option to place part of their pension entitlement with approved external funds can stimulate demand for a broader range of instruments.

Tax neutrality between bonds and bank debt is crucial to the development of the bond market. Tax incentives to promote the bond market may be useful, but have to be carefully weighed against the fiscal cost and risk of promoting a market which is not sustainable in the absence of the incentives. Sound bank regulation, particularly enforcement of single exposure limits, can help to develop bond markets as true alternatives to bank financing.

Even with the preconditions in place project bond finance will not necessarily develop. Specific expertise is required on the part of issuers, domestic ratings agencies and investors. For issuers, there is international expertise available which can, as in Malaysia, lead over time to establishment of a domestic advisory business. Ratings agencies can draw on international partners or pool expertise. Institutional investors can develop the expertise in-house, pool their knowledge, or partner with international investors and fund managers.

Large domestic institutional investors can play a catalytic role in developing expertise and ensuring success of project bond issues. Projects sponsored by government or government-related entities can play a pioneering role by including a domestic bond tranche in the financing package. Credit enhancement can also play a role in bringing project bonds to market at a price attractive to issuers with a rating acceptable to generally conservative institutional investors.

Abbreviations

ABF	Asian Bond Fund
ABO	<i>AsianBondsOnline</i>
ADB	Asian Development Bank
AIMC	Association of Investment Management Companies
AMBD	Autoriti Monetari Brunei Darussalam
APRDI	Association of Indonesian Mutual Fund Managers
AUM	assets under management
BAPEPAM-LK	Indonesian Capital Markets and Financial Institutions Supervisory Authority
BNM	Bank Negara Malaysia
BOL	Bank of Lao PDR
BOT	Bank of Thailand
BSP	Bangko Sentral ng Pilipinas
ASEAN	Association of Southeast Asian Nations
ASEAN+3	ASEAN plus the PRC, Japan, and the Republic of Korea
BI	Bank Indonesia
BIA	Brunei Investment Agency
BOJ	Bank of Japan
CBRC	China Banking Regulatory Commission
CIC	China Investment Corporation
CIRC	China Insurance Regulatory Commission
PRC	China, People's Republic of
CMNP	PT Citra Marga Nusaphala Persada
CPF	Central Provident Fund
CUTA	corporate unit trust adviser
ECA	export credit agency
EDC	Energy Development Corporation
EIB	European Investment Bank
EPF	Employees Provident Fund
ETF	exchange-traded fund
EU	European Union
FMC	fund management company
FSA	Financial Services Agency
FSS	Financial Supervisory Service
GDP	gross domestic product
GIC	Government Investment Corporation
GIF	Global Infrastructure Fund
GII	Government Investment Issue

GPIF	Government Pension Investment Fund
GPF	Government Pension Fund
G-SIFI	Global Systemically Important Financial Institution
GSIS	Government Service Insurance System
HOSE	Ho Chi Minh Stock Exchange
HSX	Hanoi Stock Exchange
IAMC	insurance asset management company
IDB	Islamic Development Bank
IFC	International Finance Corporation
IFF	infrastructure financing fund
IFI	international financial institution
IIGF	Indonesian Infrastructure Guarantee Facility
IPP	independent power producer
IUTA	institutional unit trust adviser
JGB	Japanese Government Bond
KEXIM	Korea Export–Import Bank
KICGF	Korea Infrastructure Credit Guarantee Fund
KOFIA	Korea Financial Investment Association
KTB	Korean Treasury Bond
LGFV	local government financing vehicle
LSX	Lao Securities Exchange
MAS	Monetary Authority of Singapore
MIFC	Malaysian International Islamic Financial Centre
MNTC	Manila North Tollways Corporation
MOF	Ministry of Finance
MRT	mass rapid transit
MTN	medium-term note
NAFMII	National Association of Financial Market Institutional Investors
NPF	National Pension Fund
NAV	net asset value
NISA	Nippon Investment Savings Account
NPL	nonperforming loan
NSSF	National Social Security Fund
OIC	Office of the Insurance Commission
OJK	Indonesian Financial Services Authority
OMERS	Ontario Municipal Employees Retirement System
ORI	Obligasi Ritel Indonesia
PBOC	People’s Bank of China
PBI	Project Bond Initiative
PDEx	Philippine Dealing and Exchange Corporation
PIMAC	Public and Private Infrastructure Investment Management Center
PLN	Perusahaan Listrik Negara
PLUS	Projek Lebuhraya Usahasama
PNB	Permodalan Nasional Bhd.
PNOC	Philippine National Oil Company
PPP	public–private partnership
PSE	Philippine Stock Exchange
REIT	real estate investment trust

SAFE	State Administration of Foreign Exchange
SBT	specific business tax
SBV	State Bank of Viet Nam
SC	Securities Commission
SDA	special deposit account
SEC	Securities and Exchange Commission
SECC	Securities and Exchange Commission of Cambodia
SIDC	Securities Industry Development Corporation
SMI	PT Sarana Multi-Infrastruktur
SMR	solvency margin ratio
SPV	special-purpose vehicle
SRC	Securities Regulation Code
SRO	self-regulatory organization
SSC	State Securities Commission
SSF	Social Security Fund
ThaiBMA	Thai Bond Market Association
UEPS	Urban Enterprise Pension System
UITF	unit investment trust fund
UK	United Kingdom
URR	unremunerated reserve requirement
US	United States
UTC	unit trust consultant
UTF	unit trust fund
UTMC	unit trust management company
VAMC	Vietnam Asset Management Company
VSD	Vietnam Securities Depository
WMP	wealth management product

Introduction

The need for infrastructure investment among members of the Association of Southeast Asian Nations (ASEAN) is well documented, with estimates of the investment required through 2020 reaching as high as \$550 billion.¹ This presents a major financing challenge as the amounts required far exceed what might be provided through government budgets, and thus is also a major financing opportunity for the private sector.

Participants in markets across the region unanimously agree that the largest bottleneck holding back increased infrastructure investment is the challenge of bringing viable projects to market. This reflects obstacles in the project preparation phase, including lack of expertise and capacity within government, an inadequate legal framework for public-private partnerships (PPPs), uncertainty regarding concessions and offtake agreements, extended and often unclear licensing and permitting processes, and difficulties with land and right-of-way acquisition.

Approaches to infrastructure financing vary across the region. Project financing has seen limited use in ASEAN member countries with the exception of Malaysia, where it is quite common.² Financing through the government budget has been the predominant approach in most countries in the region, often with development partner assistance in the case of Cambodia, the Lao People's Democratic Republic (Lao PDR), and Viet Nam. PPPs have been widely used in Malaysia, and to a lesser extent in the Philippines, Singapore, Thailand, and Viet Nam. Subnational governments and their related financing entities have played a major role in infrastructure finance in the People's Republic of China and Japan. Even countries with a limited history of private investment in infrastructure are now pursuing PPPs and other means of attracting private capital, including off-budget government financing, because of the impracticality of meeting infrastructure investment requirements through budget expenditures alone.

Local currency financing of infrastructure projects has the important advantage of avoiding the currency risk that can arise when a project generating revenues in the domestic currency has foreign currency-denominated debt service requirements. Without hedging, which comes with a cost and may not be available for long tenors in all currencies, adverse exchange rate movements can increase debt service requirements relative to domestic currency revenues, potentially threatening the viability of a project. The challenge in a number of countries across the region, however, is the small size of the domestic finance

¹ Goldman Sachs. 2013. ASEAN's Half a Trillion Dollar Infrastructure Opportunity. *Asian Economics Analyst*. No. 13/18. 20 May.

² Further details on individual countries are provided in Appendix 1.

sectors, particularly nonbank institutional investors, relative to the needed infrastructure investment.

There is significant demand among institutional investors across the ASEAN region for high-quality local currency bonds. Almost universally they would purchase more bonds if the supply were greater.³ Given the demand for corporate bonds on one side, and the need for infrastructure investment on the other, surely there is scope for expanding the use of local currency bonds for infrastructure finance, even if the funds supplied by local institutional investors were insufficient to meet the entire demand for infrastructure finance.

This report addresses two key questions:

- (i) Why is local currency bond financing not more widely used for infrastructure projects in ASEAN+3?
- (ii) What can be done to promote infrastructure bond financing?

The answers are linked in large part to more general issues of local currency bond market development and PPP frameworks. The bulk of private infrastructure investment takes place through PPP structures, making a robust framework a precondition for the development of project bond financing. Even with this precondition in place, use of local currency project bond financing is seen only in countries with well-established bond markets and sizable institutional investors. There is a range of specific actions that can contribute to the growth of project finance, but many of the necessary initiatives are those needed for PPPs and bond market development more generally. While this report focuses on issues specific to infrastructure bond financing, it will also comment where appropriate on more general issues of bond market development. The examples and most of the description and analysis are drawn from the country notes included in Appendix 1, which also contains observations and recommendations relevant to each country.

The rest of this introductory chapter provides an overview of project financing and project bonds. This is followed by a review of project finance experience in the region and lessons from other experience elsewhere. The final chapter summarizes the preconditions and possible initiatives taken to promote local currency bond financing for infrastructure investment.

Project Financing

Project financing has a distinct set of characteristics that differentiate it from infrastructure investment financed through the general corporate resources of an infrastructure operator such as an electric utility. The project is established as a stand-alone legal entity, with the cash flow from the project meeting the debt service requirements and providing the return to equity investors. This contrasts with general obligation debt, where the funds are raised for general corporate purposes and repayment relies on the full faith and credit of the borrower.

³ Michael Andrews, Robert Hannah, and Brent Sutton. 2013. *Broadening the Investor Base for Local Currency Bonds in ASEAN+2 Countries*. Manila: ADB.

The project sponsors are typically governments, construction firms, or infrastructure operators such as electric utilities or large conglomerates. Project sponsors invest in the project company, usually in the form of equity or junior debt, and may provide some guarantees or limited recourse as a means of reducing the risks assumed by other investors such as banks and bondholders. This can improve the rating and attractiveness to other investors, and thus reducing the cost of debt financing. The investors in the project share in the inherent risks, including construction, operation, political, and revenue risk. Credit enhancements in the form of guarantees from export credit agencies (ECAs) or specialized guarantee facilities such as Malaysia's Danajamin may also be used to reduce the risk assumed by the investors providing the debt financing for the project. Guarantees may be either full (credit wraps) or partial.

Projects may be financed with a range of instruments, but the ASEAN experience of banks being the predominant financing source is consistent with the worldwide finding that up to 90% of project finance is composed of bank loans.⁴ As overextended banks, particularly in Europe, have reduced their exposure to the longer-tenor loans required by infrastructure projects, and in anticipation of the impact of Basel III, which is expected to further reduce banks' appetite for project lending, there has been increased interest in project bonds in Europe. In the ASEAN region, interest in project bonds has been spurred by the desire to link the accumulation of long-term savings with the infrastructure investment needed in the region and to further develop local currency bond markets as an alternative to bank financing.

Project Bonds

Project bonds are a special type of debt issued to finance all or part of a project. Unlike a general obligation corporate bond, where repayment is dependent on the overall creditworthiness of the issuer, repayment of a project bond is dependent on the success of the project. This introduces a number of specific risks, requiring expertise on the part of the issuer and its advisers to present an attractive investment, and on the part of investors to understand the project bond's risks.

Assessing the quality of the project sponsors is crucial to investing in a project. While there is generally no recourse to the sponsors, investors can draw comfort from sponsors with a track record in similar projects and sufficient financial and operational resources, including reserves for contingencies, to meet their commitments to the project. Once the project has passed the preparation stage and reached financial close—that is, the needed financing for the project has been committed—the construction phase introduces a number of factors that could lead to delays, higher-than-budgeted costs, or even abandonment of the project. These factors, collectively termed completion risk, can be as simple as increased prices for materials and higher wage rates, or as complicated as an untested technology failing to perform as expected or design deficiencies that become evident only during construction. Delays in completion from whatever cause introduce financial risk since extending the cash-outflow construction period delays the start of operations, when cash flow should

⁴ Allen & Overy. 2014. *Our Market-Leading Project Bonds and Bank/Bond Financing Capabilities*. London; Standard and Poor's. 2013. *Global Project Finance Funding Environment: 2012–13*. New York.

begin to be positive. A key mitigant of completion risk is the quality and track record of the contractor.

Even when the construction phase is complete, there are still a number of operational risks facing investors over the typically long-term payback period. These include the failure of the operator to meet performance criteria, resulting in lower-than-expected output. There are supply price risks, as higher-than-projected costs for the resources and products required for operation can impair profitable operation. There is technology risk in that equipment may become obsolete or have a shorter economic life than projected. Revenue risk arises from uncertainty over the ability of the offtake agreement counterparty, for example, an electric utility, to honor the terms of the agreement. It is also a typical risk in toll roads or any other project where revenues are based on projected traffic or demand—actual revenues may fall short of projections. Early-termination risk arises if the concession agreement or other revenue arrangements end prematurely, thereby affecting the revenue stream.

Broader risks also affect projects. These include country and political risks, as well as the threat from macroeconomic instability. In a high-inflation environment, the real value of the revenue stream may not keep pace with inflation, while input costs such as fuel for a generating plant may increase rapidly. There may be industry-specific risks and social and environmental factors such as pressure for the closure of coal-fired generating plants because of concerns about emissions.

Project bonds may be used in a number of ways. One is as the primary financing source for an entire project. Bonds would be issued at the start of the project (the greenfield stage) or more often in a series of tranches to minimize the negative carry from investing bond proceeds until the funds are actually needed for the project. Project bonds may also be used as part of a financing package that may include syndicated bank debt or participation by ECAs, bilateral development partners, and international financial institutions (IFIs) such as the Asian Development Bank (ADB) and the International Finance Corporation (IFC). Probably the most common use of project bonds is to takeout the initial financing when construction is complete or the original syndicated debt matures (the brownfield stage).

Recent Experience in the Region

Throughout the ASEAN region a combination of factors has resulted in the limited use of project finance. In many countries investment in infrastructure has been financed primarily through the government budget. When the private sector has been involved the investment has often originated with large domestic firms or state-owned entities, which draw on their general financial resources rather than specific project finance structures. Other common approaches to financing rely on the involvement of development partners for loans and guarantees. Foreign banks are frequently involved because of a lack of project finance expertise in domestic markets and because of the small size of emerging-market finance sectors, which makes it difficult to raise the needed capital domestically. Unsurprisingly, countries making the greatest use of local currency bonds for infrastructure finance are those with well-established nonbank institutional investors.

Project Bonds and *Sukuk*

Project bonds compose only a very small portion of ASEAN local currency bond markets. The use of local currency project bonds and *sukuk* (Islamic bonds) for infrastructure finance is well developed in Malaysia, particularly for power generation and toll roads. There are only a few other examples throughout the region of domestic currency project bonds in addition to a small number of foreign currency-denominated project bonds.

The Malaysian experience has included bond financing at the construction phase as well as postconstruction takeout financing.⁵ In addition to the basic preconditions of the necessary legal and institutional framework for project finance, the Malaysian approach has several key elements. These include the involvement of state-owned or well-established Malaysian companies as project sponsors, long-term concession agreements, and the catalytic role of the Employees Provident Fund (EPF), the national pension fund and largest domestic institutional investor, in purchasing *sukuk* and project bonds.

An initial round of five independent power producer (IPP) projects in the early 1990s established a general template for Malaysian project finance. An independent entity controlled by a state-owned enterprise or established Malaysian conglomerate was formed to build and operate a generating plant. Long-term power purchase agreements with Tenaga Nasional, the national electric utility, provided the revenue stream for a financing package including a large component of domestic debt. The involvement of the EPF as a

⁵ Table A19 in Appendix 1 provides details on 18 outstanding infrastructure-related conventional bonds and *sukuk* in Malaysia.

major investor ensured the success of debt issues, often *sukuk*, which were sold to a wide range of domestic institutional investors.

The general approach to toll road financing in Malaysia was also established in the 1990s along lines similar to the IPP template. An independent entity with strong ties to a state-owned entity or large conglomerate would build and operate a toll road under a long-term concession agreement. Financing was generally through domestic currency bonds or *sukuk* sold to a variety of domestic institutional investors.

The first private sector toll road operator in Indonesia, PT Citra Marga Nusaphala Persadam, issued local currency project bonds in the 1990s. There have also been a number of foreign currency-denominated project bonds issued by financing vehicles for Indonesian IPP projects. Difficult and prolonged financial restructurings of these projects in the wake of the 1997/98 Asian financial crisis highlighted the project finance risks, effectively closing the domestic and foreign currency project bond market.

Box: *Sukuk* for Infrastructure Financing

Sukuk (Islamic bonds) are well suited to infrastructure financing, as illustrated by their extensive use in project finance in Malaysia. The sharing of risk between project sponsors and investors and the creation of tangible assets that generate revenue align well with the principles of *sharia* (Islamic law) financing. *Sukuk* can also be combined with conventional financing options in project structures.

Three main Islamic instruments have been used for infrastructure projects. *Musharakah sukkuk* share the profits and losses of the infrastructure project between the investors and issuers, while *sukuk* based on *ijarah* (rental) and *murabahah* (profit) are more similar to conventional bonds as the rental and profit rates are fixed. The *ijarah* structure can be used for the brownfield refinancing of an existing project as its structure is similar to that of a conventional lease.

Sukuk can also be used for greenfield financing. The *istisna* structure allows an asset to be sold before it has been built, with the purchase price paid in installments during the construction phase. This can be combined with an *ijarah*, allowing investors to receive lease prepayments, and thus a return, during the construction phase.

Recent project *sukuk* in Malaysia include the 2014 Tenaga Project 3A thermal plant (with *sukuk* composing three-quarters of the total project financing package), Tanjung Bin Energy, and TNB Northern Energy. *Sukuk* have also been used for toll road and rapid transit construction.

The *sukuk* market is at an earlier stage of development in other countries in the region, and *sukuk* is thus less likely to be used for project finance. One option for regional projects would be to issue in the Malaysian market, which already attracts a significant number of international issuers and has project finance expertise.

Source: ADB. 2014. *Asia Bond Monitor March 2014*. Manila.

Infrastructure-Related Corporate Bond Issues

While project bonds are relatively rare in the region, with the exception of Malaysia, a significant portion of local currency corporate bonds are issued by infrastructure-related companies (Table 1). These are usually bonds issued for general corporate purposes, although in some cases the proceeds are intended to finance specific projects. Even when earmarked for specific projects, as in the Energy Development Corporation (EDC) examples outlined below, these bonds differ from project bonds. Project bond repayment is dependent on the cash flow of the stand-alone project entity, while holders of these general obligation issues by infrastructure-related companies have a claim on all corporate revenue, not just that from a specific project.

Table 1: Infrastructure-Related Issuer Bonds Outstanding

Item	Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam
% of total corporate bond market	7.3	22.8	19.8	25.0	2.5	18.0
\$ billion	1.3	29.6	2.6	23.0	1.5	0.7

Note: Most of the corporate bonds identified by Vuong and Tran (the authors of the source document for the Viet Nam estimates; see below) were issued by state-owned companies and classified as government bonds by *AsianBondsOnline*.

Sources: *AsianBondsOnline* and author's estimates, except for Viet Nam, which the author estimated on the basis of Q. H. Vuong and T. D. Tran. 2010. Corporate Bond Market in the Transition Economy of Viet Nam, 1990–2010. *Centre Emile Bernheim Working Paper No. 10/001*. Brussels.

EDC, a privately owned Philippine power generation company, illustrates possibilities for the use of local currency bond issues as part of a larger financing package. This can contribute to local currency bond market development while at the same time tapping larger international pools of capital. EDC used general corporate bond issues in 2013 as part of the financing package for the greenfield Burgos wind farm project. The IFC provided a \$75 million loan facility, EDC obtained a \$175 million syndicated bank loan on commercial terms, and the company issued ₱7 billion (about \$155 million) in local currency bonds in addition to a \$300 million dollar bond issue. The involvement of the IFC, including a technical review of the Burgos project and concessional-rate loan financing, provided additional comfort to the private banks and bond investors, helping to facilitate private sector financing.

EDC has also used local currency bonds for refinancing after the construction phase of a project. In 2009 EDC issued local currency bonds to refinance an outstanding JPY-denominated loan originally provided by Japan's Export-Import Bank for investment in geothermal generation plants. The bonds were general corporate obligations of EDC rather than specific project bonds; however, refinancing followed the widely used project finance model of bank financing during construction followed by a bond takeout. The refinancing was motivated in part by the advantages of eliminating the need to hedge currency risk since EDC's revenues are local currency-denominated.

Bangkok Expressway in Thailand draws about one-third of its total funding from corporate bond issues. This includes the B7 billion issued in 2013 to finance the construction of the Si Rat Outer Ring Road Expressway. Although earmarked for a specific project with a 30-year concession agreement providing a revenue stream to support the bonds, the bonds are general corporate obligations rather than project bonds. The company's equity base and other revenue, primarily from other concession agreements, provide comfort to investors with respect to construction phase risks. This is another illustration of an established company tapping local currency debt markets for infrastructure investment, even for greenfield projects.

A feature of bond markets across the region is that many of the largest corporate issuers, including infrastructure-related issuers, are state-owned entities (Table 2). Although these issues do not have explicit government guarantees, and repayment is dependent on the business revenues of the entities, investors and ratings agencies often draw comfort from the government relationship. This may offer opportunities for infrastructure-related state-owned entities to sponsor suitable project structures to pioneer the use of project bonds. Governments as shareholders could consider whether a bond market development mandate would be appropriate for some state-owned commercial entities, much as Cagamas in Malaysia combines this role with its commercial mandate to mobilize funds to support the national home ownership policy.

Table 2: State-Owned Infrastructure-Related Companies among the 30 Largest Corporate Issuers, by Country

PRC	Indonesia	Rep. of Korea	Malaysia	Singapore	Viet Nam
China Railway State Grid	Jasa Marga	Korea Land and Housing	PLUS	Housing and Development Board	Electricity Viet Nam
China Guodian		Korea Electric Power	Danainfra	Public Utilities Board	
China Power		Korea Rail	Sarawak Energy	Board	
China Three Gorges Project		Network Authority	1Malaysia Development	Land Transport Authority	
Southern Power Grid		Korea Gas	KL International Airport	PSA	
China Datang		Korea Water		International	
Huaneng Power		Korea Railroad		Singtel Group Treasury	

PRC = People's Republic of China, KL = Kuala Lumpur, PLUS = Projek Lebuhraya Usahasama Bhd.

Note: The Philippines has no state-owned entities among its 30 largest corporate issuers. Thailand has 10, but none are infrastructure related.

Source: ADB. 2014. *Asian Bond Monitor March 2014*. Manila.

Infrastructure-Related Government Bond Issues

Governments sometimes link specific bond issues to specific projects, for example, to finance infrastructure reconstruction after severe typhoons, as the Philippines did in 2010. Therefore, even though government revenues are generally fungible, at least notionally governments may use general government debt issues to fund infrastructure investment.

The link between financing and investment in infrastructure is much stronger when the bond issues are by infrastructure-linked government agencies or state-owned corporations, as is common in infrastructure finance in Japan, and with local government financing vehicles (LGFVs) in the People's Republic of China (PRC).

Indirect Bond Financing for Infrastructure

Bonds issued by financing entities not directly involved in the construction or operation of infrastructure assets provide additional avenues for tapping domestic savings for infrastructure investment. There are examples across the region of public and private entities including various types of banks, nonbank financial institutions, specialized financing vehicles, and infrastructure investment funds.

Banks and Other Financial Institutions

Commercial banks are among the largest local currency bond issuers in every ASEAN market. Often issuance is driven more by capital management considerations; however, the longer-term funding from subordinated and other debt issues makes banks better able to accommodate the longer tenors sought by infrastructure project sponsors. Raising additional long-term funding may help banks address the Basel III capital charges for funding mismatches, and the continued availability of bank debt financing will be attractive to project sponsors. However, if the expansion of local currency bond markets is led by bank issues, then the bond markets are not actually fulfilling the “spare tire” role of providing an alternative to bank financing.

Development or policy banks play a major role in infrastructure finance in a number of countries across the region, and are often among the largest issuers of local currency bonds. The PRC's three state-owned policy banks collectively have CNY8.8 trillion in outstanding bonds, or about one-third of the total PRC local currency bond market. Both the China Development Bank and the Agricultural Development Bank are involved in domestic infrastructure finance. The third policy bank, Export-Import Bank of China, supports Chinese contractors and manufacturers in infrastructure projects internationally. Two of the largest Korean corporate bond issuers, Korea Finance Corporation and Industrial Bank of Korea, are state-owned financial institutions that include support for infrastructure finance in their mandate. Similarly, the Japan Finance Corporation and the Japanese Bank for International Cooperation, which support infrastructure investment, raise significant funds through bond issues.

Public Financing Vehicles

A variety of government-sponsored entities have issued bonds to finance infrastructure investment in countries across the region. In Japan, bonds issued by local government agencies or corporations are a common source of infrastructure finance. LGFVs in the PRC have financed a significant portion of infrastructure investment, with total debt outstanding equivalent to about 22% of gross domestic product (GDP). Typically, they are capitalized by cash injections from local governments, the transfer of existing assets, or the transfer of land use rights. This capital base is then leveraged through equity or bond issuance, or other borrowing.

Danainfra Nasional is a financing vehicle owned and guaranteed by the Malaysian government, which was established in 2011 to raise funds through bond and *sukuk* issues for infrastructure projects. Despite its recent establishment, it is already the 10th-largest local currency corporate bond issuer in Malaysia. One innovative initiative taken by Danainfra was the 2013 introduction of a retail *sukuk* offering. *Sukuk* were sold directly to individual investors in the initial offering and listed on the Bursa Malaysia to facilitate secondary market trading. The two retail issues to date compose about 6% of Danainfra's outstanding bonds and *sukuk*.

The largest Malaysian bond issuer after the government is PLUS Malaysia (PLUS), which is jointly owned by the UEM Group, an investment holding company wholly owned by Khazanah Nasional (the government-owned investment holding company) and the EPF. PLUS acquired highway concessions through privatization to become the largest tollway operator in Malaysia. Although the highway concessions have been partially privatized, the government retains a controlling interest through Khazanah Nasional's ownership of the UEM Group, which owns 51% of PLUS. In addition, the government provided significant financing support through a guarantee facilitating a rating of AAA for the nonguaranteed portion of the financing.

Common Challenges

One of the major challenges in the way of increasing domestic institutional investor participation in infrastructure financing in general, and project bonds specifically, is a typically conservative approach to investment policy. Across the region, there is limited appetite for issues rated lower than domestic A or even AA. Achieving the necessary rating may be quite challenging for a typical infrastructure project, requiring either a higher equity investment than sponsors would prefer or some form of credit enhancement. The costs of these options may contribute to the preference for bank financing, as throughout the region it is common for banks to aggressively price the risk of well-known corporate names.

One option for addressing the conservative bias of investors is credit enhancement mechanisms. As outlined below in the review of recent initiatives, a number of national and regional entities have been established or are planned. However, as the capacity to provide credit enhancement is limited and has a cost to the issuer, it would also be worthwhile to pursue options for developing a market for higher-yielding securities.

For countries that have not already done so, adopting the prudent-person approach to regulating the investment policies of institutional investors, such as pension funds and insurance companies, is an important first step. Investment policy regulations incorporating a minimum rating or prescribing a legal list of investments can inhibit financial innovation and the development of high-yield markets. Under a prudent-person approach, domestic institutional investors might opt to create small mandates for high-yield or infrastructure-related investments, thus creating demand for these securities. Provident funds and government pension funds can play a pioneering role, as did Malaysia's EPF with its initial purchases of project bonds in the 1990s.

Similarly, the development of high-yield or infrastructure bond funds could stimulate demand for lower-rated instruments. A robust disclosure-based regime permits these

higher-risk and higher-return funds to be sold to investors with an appetite for risk and the capacity to bear the risk. Regimes that require mutual funds or unit trusts to invest in securities with minimum ratings, or that limit investment in unrated securities, inhibit the innovation that could bring more infrastructure-related bonds to the market.

The relatively small size of domestic institutional investors limits the near-term potential for infrastructure bond finance in many countries in the region. The fund management, pension, and insurance sectors collectively have assets of less than 30% of GDP in the PRC, Indonesia, and the Philippines (Figure 1), and have far smaller shares in Cambodia, Lao PDR, and Viet Nam. Considering the needed infrastructure investments exceeding 5% of GDP annually, it is clear that banks and foreign investors will need to continue to play major roles while the domestic nonbank sectors develop further. A detailed discussion of policy initiatives to develop domestic institutional investors is beyond the scope of this report but, briefly, such initiatives include establishing the appropriate regulatory and supervisory frameworks for private and public pensions, insurance, and the fund management industry.

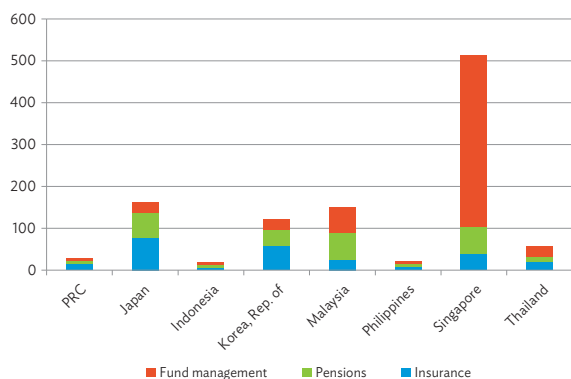
Development of the fund management industry—private equity, mutual funds, unit trusts, and exchange-traded funds (ETFs)—offers the potential to attract retail investors as well as institutional investors to infrastructure finance. While bond funds are well established in many countries in the region, there are no dedicated infrastructure bond funds. This is hardly surprising given the relative dearth of infrastructure project bonds. The few publicly available infrastructure funds tend to focus on equity investment in infrastructure-related companies, often construction, technology, and engineering businesses, as well as actual infrastructure operators.

Another common challenge is the lack of expertise in infrastructure among many domestic institutional investors. One solution would be to partner with other investors that can provide the needed expertise. A recent example from the region is the Philippine Investment Alliance for Infrastructure, launched in 2012. The largest investor is the Philippine Government Service Insurance System, the largest pension fund in the country, which has partnered with Macquarie Infrastructure and Real Assets, the Dutch Algemene Pension Group, and ADB.

While domestic credit rating agencies in some countries in the region have considerable experience and expertise in infrastructure projects, in the countries where domestic project finance and infrastructure bonds are rare or unknown, the ratings agencies themselves may lack expertise. Ratings agencies with international partners can draw on expertise from elsewhere in the group, while others will need to develop their domestic capacity, possibly in partnership with other ratings agencies in the region, as domestic and regional ratings will be an important element of developing a project bond market.

In many countries, project sponsors have little incentive to consider alternatives to bank financing. As noted above, bank pricing is often aggressive for well-known names, and in a number of countries across the region the large conglomerates engaged in infrastructure projects typically include one or more banks within the group. Basel III may provide additional incentives to consider project financing, as it will be more costly for banks to fund long-term loans with shorter-term deposits. However, this impact may be muted as

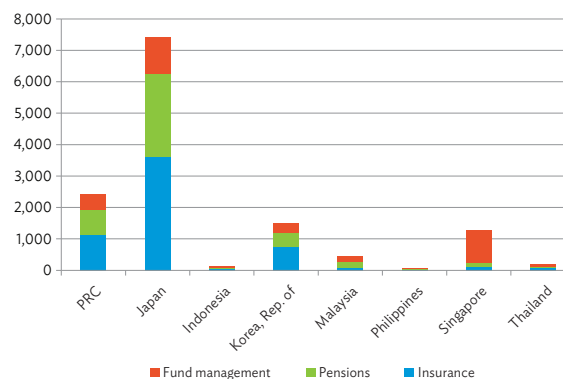
Figure 1: Institutional Investor Assets
(% of GDP)



PRC = People's Republic of China, GDP = gross domestic product.

Source: AsianBondsOnline.

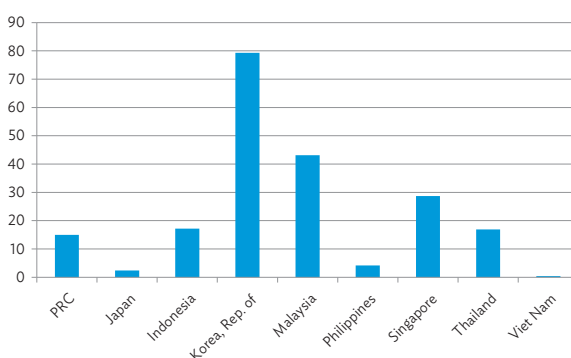
Figure 2: Institutional Investor Assets
(\$ billion)



PRC = People's Republic of China.

Source: AsianBondsOnline.

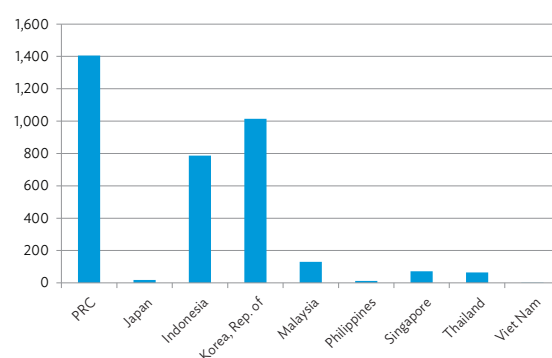
Figure 3: Local Currency Corporate
Bond Markets (% of GDP)



PRC = People's Republic of China, GDP = gross domestic product.

Source: AsianBondsOnline.

Figure 4: Local Currency Corporate
Bond Markets (\$ billion)



PRC = People's Republic of China.

Source: AsianBondsOnline.

project sponsors, especially when dealing with related banks, may be comfortable with the refinancing risk of bank loans with a much shorter tenor than the project life.

Another disincentive to the development of the project bond market is accommodative prudential limits for the banking sector. For example, in 2013, the Philippines' single-borrower exposure limit was amended to allow a bank to extend loans of up to 25% of its capital to a single borrower for infrastructure projects, in addition to the normal 25%-of-capital limit. In practice, the limit is even more generous, as market participants interpret the restriction as excluding joint ventures, where the borrower does not have de jure control. While it is consistent with government policy to encourage banks to finance

infrastructure projects, the very liberal single-borrower limit raises a financial stability issue since a bank could easily be exposed to a multiple of its capital for a single group of related borrowers. Enforcing a limit more in line with international standards—exposure to a maximum of 25% of capital for any one group of related borrowers—would provide greater incentive for project sponsors to pursue bond financing, as well as contribute financial stability.

Recent Initiatives

There have been a number of recent initiatives in countries across the region to stimulate infrastructure finance. A few, such as the creation of Danainfra Nasional as an infrastructure financing entity, have directly contributed to an increase in local currency bond financing. Most take different approaches to providing additional infrastructure finance, and many are motivated by policy considerations that extend beyond mobilizing domestic savings for infrastructure investment.

Infrastructure Funds

Various types of infrastructure funds have been introduced in recent years in countries across the region. While the specifics vary, the governments of the Republic of Korea and Thailand have provided tax incentives for the establishment of infrastructure funds. The funds offer a favorable income tax rate for investors, and in the case of the Thai Infrastructure Financing Funds, a favorable tax treatment for assets transferred from existing infrastructure operators to the fund. To date, the Thai funds have been used by individual infrastructure operators, providing a means to securitize the cash flows of existing infrastructure assets. The Korean funds have invested in diversified portfolios of infrastructure projects. Structuring these funds as mutual funds (Thailand) or listed companies (Republic of Korea) provides opportunities to attract individual investor participation in infrastructure financing, broadening the investor base.

The attractiveness of infrastructure assets has spurred the creation of a number of infrastructure funds investing in jurisdictions not offering specific tax incentives. Typically operating as closed-end private equity funds, these include the Macquarie Everbright Greater China Infrastructure Fund and the Philippine Investment Alliance for Infrastructure. These funds combine international expertise in infrastructure investment with a significant financing commitment by domestic and international institutional investors.

Credit Enhancement

Credit enhancements are common in the financing structure of infrastructure projects. These can include partial or full guarantees help attract private investment for all or part of the financing package. The main providers of credit enhancements have been monoline insurance companies specializing in providing guarantees (“wraps”) for bond issues, ECAs that provide support for their country’s manufacturers and contractors in international projects, development banks, government agencies, and the IFIs. In the less developed ASEAN countries infrastructure projects commonly involve bilateral and multilateral

development partners, which may make an equity or junior debt investment, often on concessional terms, or provide a guarantee, to make private bank financing more attractive. Monoline insurers were never very active in the region, and worldwide they have become much less prominent in the wake of losses incurred during the global financial crisis.

A number of countries across the region have established entities to provide credit enhancements, whether specifically for infrastructure projects, or for private sector financing more generally. The Korea Infrastructure Credit Guarantee Fund (KICGF) was established in 1994 to guarantee bank loans and infrastructure bonds. As part of the response to the global financial crisis, the guarantee limit of the KICGF was increased from W200 billion to W300 billion (from \$190 million to \$285 million) and the eligibility of infrastructure bond issuers was expanded.

Indonesia has introduced a credit enhancement vehicle targeted specifically at infrastructure finance, while Malaysia's Danajamin includes a portion of infrastructure-related companies and projects in its portfolio. The Indonesian Infrastructure Guarantee Facility (IIGF), established in 2009, has so far provided two guarantees and six others are in various stages of review. Five infrastructure-related issuers are included in Danajamin's portfolio of 23 deals.

The experience with the IIGF and Danajamin illustrates some of the challenges related to the provision of credit enhancement. In both cases, it has taken a number of years from initial establishment to build a portfolio, in part because of the time required to establish the operational and risk-management structures of the fund, and in part because of the time required to bring projects to the financing stage. The capacity of a credit enhancement vehicle is limited by the need to retain its AAA rating, thus limiting the leverage of the initial investment. An alternative to allow higher leverage would be an explicit sovereign guarantee of the agency providing the credit enhancement; however, this contingent exposure may have fiscal implications and could affect the sovereign's own rating. These same issues are evident in the establishment of the regional Credit Guarantee and Investment Facility.

Direct Policy Interventions

Governments across the region have employed a number of direct policy interventions to support infrastructure project finance. Government and entities owned or sponsored by government have played catalytic roles ranging from providing technical assistance to offering financing advice, financing assistance, and direct debt or equity investment. A range of fiscal incentives have also been deployed. Selected examples are outlined below.

PT Saran Multi Infratraktur (SMI) is an Indonesian government-owned entity established in 2009 to promote PPPs, provide funding, and be a shareholder—together with ADB, the World Bank, and private shareholders—in Indonesian Infrastructure Finance (IIF). At the end of 2013, SMI had an infrastructure loan portfolio of Rp5.1 trillion (\$418 million) and had just begun to provide advisory services. IIF is a nonbank financial institution intended to provide long-term financing, guarantees, and advisory services for infrastructure projects. By the end of May 2014, it had completed or was in negotiations for seven projects.

Korean public investment in infrastructure has been leveraged by a range of initiatives since the mid-1990s to attract private investment in infrastructure projects. The Public and Private Infrastructure Investment Management Center (PIMAC) serves as a gatekeeper to public procurement and private infrastructure investment projects in the Republic of Korea. PIMAC's role includes conducting feasibility studies and assisting the government with PPP project implementation by formulating requests for proposals, evaluating tenders, and negotiating with bidders.

The 1997/98 Asian financial crisis led to a number of Korean initiatives to further support private investment in infrastructure projects. The Minimum Revenue Guarantee, introduced in 1998 and significantly reduced in 2006, ensured minimum cash flow to concessionaires despite actual volumes well below forecasts. Government assumed additional risk by offering a buyout option on the termination of construction or during operation. Land was provided free of charge or financial support was made available for land acquisition, and construction subsidies were provided.

Various tax incentives were part of the original Korean PPP framework, with additional measures provided in the 1998 revision in response to the Asian financial crisis. These fiscal programs included a 0% value-added tax for the construction of facilities to ultimately be transferred to the government, exemption from specific taxes for build–operate–transfer projects, a favorable income tax rate for investors in infrastructure bonds with a tenor of 15 years or longer, and favorable tax rates for investors in infrastructure funds.

In Malaysia, a number of government-owned entities participate directly in project financing, and are also active as owners and operators of infrastructure. Many of these entities gain access to the bond market for general financing activities, as well as for project bonds and *sukuk*. The government also catalyzes private investment through its long-established approaches to PPPs, which include long-term revenue commitments to private operators.

Syarikat Prasarana Negara, an infrastructure company wholly owned by the Malaysian Ministry of Finance through the Minister of Finance Incorporated, owns and operates, through a group of related companies, several public transport providers. Pengurusan Air is a government-owned water utility, and KL International Airport, the airport concessionaire, is government owned. Sarawak Energy is a state-owned electric utility. These companies all raise funds through conventional bonds and *sukuk* to finance operations and investment, ranking among the 30 largest Malaysian issuers. Bank Pembangunan Malaysia, the government-owned development bank, has a mandate to focus on infrastructure finance. With total assets of RM29 billion (\$8.1 billion) it is a relatively small player compared with the debt markets (conventional and *sukuk*) and commercial and Islamic banks; however, it can play an important role in providing financing for smaller infrastructure projects.

Danainfra Nasional is a government-owned and government-guaranteed special-purpose entity established in 2011 to finance infrastructure projects. While Danainfra is treated as an off-budget entity, given the noncommercial nature of its initial project, the Kuala Lumpur–Klang Valley Mass Rapid Transit (MRT) project, some portion of the debt repayments associated with the MRT is likely to be funded eventually through the budget.⁶ The

⁶ IMF. 2014. Malaysia: Staff Report for the 2013 Article IV Consultation. *IMF Country Report 14/80*. Washington, DC: International Monetary Fund.

newly established government investment fund, 1Malaysia Development, includes some infrastructure projects in its portfolio.

Clifford Capital, established in 2012 at the initiative of the Government of Singapore, is 40% owned by Temasek, the government investment company, with the balance held by a consortium of major financial institutions. Its mandate is to promote the role of Singapore-based companies in infrastructure projects worldwide by acting as a specialist investor for qualifying companies and projects. It is funded by a €1 billion medium-term note program fully guaranteed by the Government of Singapore.

Lessons from Other Markets

Project bonds have been commonly used in North America and Europe, and have relatively recently gained prominence in Latin America. Key lessons from this experience in other markets are the need for a well-developed approach to PPPs and for a robust domestic currency bond market. Credit enhancements have also played a key role in many markets.

Revenue Bonds

Revenue bonds are commonly used by governments, primarily municipalities, in the United States (US). These bonds essentially securitize an underlying revenue stream, and thus conceptually offer guidance for project financing in other jurisdictions, although a number of features are unique to the US market.

Unlike the general obligation bonds issued by governments, debt service from a revenue bond is tied to the income stream generated by a specific enterprise. Revenue bonds may also be securitizations of fiscal receipts such as a county sales tax. Conduit revenue bonds are issued by the municipal government on behalf of a third party to finance nonprofit and for-profit borrowers such as hospitals, colleges and universities, housing projects, and local development corporations. Depending on the specifics of the structure, conduit revenue bonds can have the same tax-advantaged status as other municipal bonds—the interest payments are not subject to federal income tax. Some revenue bonds have payment guaranteed by the municipal government in addition to the revenue stream of the enterprise and are known as double-barreled bonds.

The municipal bond market in the US is subject to a less stringent level of oversight than the corporate bond market. There is no statutory requirement for issuer registration and reporting, so oversight of brokers and broker-dealers provides the primary means of enforcing disclosure and investor protection requirements.⁷ While default rates have historically been at a lower level in the municipal bond market than in the corporate market, the majority of defaults in the municipal securities market have been revenue bonds issued for nongovernment purposes, such as multifamily housing, health care (hospitals and nursing homes), and industrial development bonds (footnote 7).

The combination of tax incentives for investors in municipal bonds and the relatively low issuer costs arising from lack of registration and disclosure requirements has

⁷ Securities and Exchange Commission. 2012. *Report on the Municipal Securities Market*. Washington, DC: Securities and Exchange Commission.

undoubtedly contributed to the growth of the municipal bond market to more than 1 million issues outstanding, totaling \$3.7 trillion. However, this comes at a fiscal cost because of the forgone federal tax revenue. Concerns have also been raised about appropriate investor protection, leading to recommendations for enhanced disclosure and oversight (footnote 7). Individual investors hold about 75% of outstanding US municipal securities—50% directly and the balance through mutual and money market funds.

Infrastructure Bond Financing in Latin America

The experience in Latin America with project bond financing for infrastructure offers insights that are applicable in other regions including ASEAN. The extent of infrastructure bond financing varies across Latin America, with the reasons for the variation highlighting the importance of bond market development more generally as well as putting in place the essential preconditions for PPPs. Brazil, Chile, Colombia, Mexico, and Peru have been the most active in Latin America in seeking PPPs,⁸ with the degree of success highly linked to the necessary foundation for PPPs.

Since most private infrastructure investment is made through PPPs, having a robust foundation in place is a necessary precondition for the development of a project bond market. Among Latin American countries, Chile had the most highly rated foundation for PPPs in the 2012 Infrascope Index, followed by Brazil, Peru, and Mexico, which are all classified in the index as “developed” PPP markets, while Colombia is classified as “emerging.” In comparison, according to the same methodology, Japan and the Republic of Korea are classified as developed; Indonesia, the Philippines, and Thailand are classified as emerging; and Viet Nam is classified as “nascent.”⁹

A second precondition is a well-developed corporate bond market. Before the 1980s, there was virtually no domestic corporate bond market in Latin America, but today there are several countries in the region with highly developed domestic markets. Specialized issues such as project bonds and high-yield debt are unlikely to develop if the corporate bond markets are not broad and deep. This requires appropriate capital market regulation and supervision, the necessary financial market infrastructure, and the symbiotic development of institutional investors.

Chile is a Latin American leader in terms of having well-developed financial institutions and markets (along with Brazil, Peru, and Mexico). One of the keys to Chilean financial market development, and consequently to the development of the project bond market, was the 1981 reform that established the basis for private pension plans. Private pension funds in Chile have assets equivalent to about 70% of GDP, compared with about 20% in Colombia, Peru, and Mexico.¹⁰

⁸ J. L. Vittor and T. R. Samples. 2011. PPPs and Latin American Infrastructure Markets. *Latin American Law and Business Report* 7 (19): pp. 1–5.

⁹ Economist Intelligence Unit. 2013. *Evaluating the Environment for Public–Private Partnerships in Latin America and the Caribbean*. London: EIU.

¹⁰ https://www.bbvaresearch.com/wp-content/uploads/migrados/120221_Pensionfundsasaninvestorininfrastructureprojects_tcm346-311821.pdf (accessed 4 October 2014).

In contrast with Chile, the Brazilian project bond market is much smaller. This seems somewhat surprising, given the size and sophistication of its banking and corporate sectors. One contributing factor may be that, unlike other countries in the region, Brazil did not undertake pension reform in the 1980s or 1990s. As a result, Brazilian institutional investors are smaller than their counterparts in other countries in the region. Pension funds often play an important role in capital market development by creating demand for products and developing expertise in new financing areas.

Infrastructure bonds in Chile account for about one-fifth of all outstanding corporate bonds, with about 90% held by pension funds and insurance companies.¹¹ Chilean infrastructure bonds generally have a credit enhancement in the form of a guarantee by a monoline insurance company or a multilateral agency. The decline of the monoline guarantee business in the wake of the global financial crisis has led to a sharp reduction in the issuance of Chilean infrastructure bonds. PPP concessionaires in Chile also typically benefit from a government minimum revenue guarantee, mitigating the risk that revenues will fall short of projections.

As in Chile, pension funds in Peru have been among the major investors in infrastructure bonds. Additionally, substantial infrastructure investments have been made through private equity funds. A potentially useful model is the Infrastructure Debt Trust Fund, a type of private equity fund established by Peruvian pension fund managers to pool expertise. Four of these funds undertake due diligence and make the actual investment in the project, while the pension funds and other institutional investors invest in the Debt Trust Fund rather than individual debt or equity securities.

Mexican structured products known as certificates of capital development (CCDs) provide a vehicle for investors to indirectly fund infrastructure projects. CCDs are listed on the Mexican stock exchange to provide liquidity and invest directly in one or more projects, or in the securities issued by companies engaged in infrastructure activities. Two of the early CCDs were the Macquarie funds for Mexican infrastructure investment. Virtually, all of the outstanding CCDs are held by Mexican pension funds. Conceptually, Mexican CCDs and Peruvian infrastructure debt trust funds offer models that could be replicated in the ASEAN region.

European Project Bond Initiative

Increased European interest in project bonds has resulted from several developments since 2007–2008. Overextended banks have sought to reduce their exposure, particularly to the longer-tenor loans required for infrastructure projects. Increasing capital requirements and capital charges for funding mismatches have also made longer-term bank loans less attractive. While Solvency II has affected insurance company demand for lower-rated debt, at the same time, the prolonged low-interest-rate environment has encouraged institutional investors to search for yield. The monoline insurers that previously provided credit enhancements for infrastructure projects have sharply curtailed their activities.

¹¹ C. A. Mbeng-Mezui. 2012. Accessing Local Markets for Infrastructure: Lessons for Africa. *African Development Bank Working Paper No. 153*. Abidjan: African Development Bank.

Taken together, these factors have increased the attractiveness of project bonds for project sponsors because of the reduced availability of bank financing, and increased the appetite of institutional investors for higher-yielding investments, while at the same time placing a premium on higher-rated instruments. The European Union Project Bond Initiative (PBI) provides a credit enhancement alternative to the monoline insurers. In the absence of credit enhancements, project sponsors require additional equity or junior debt investment to create a financing structure that includes sufficiently highly rated debt to attract conservative institutional investors.

Under the PBI, the European Investment Bank (EIB), owned by the member states of the European Union (EU), provides eligible infrastructure projects with a Project Bond Credit Enhancement (PBCE). The credit enhancement takes the form of a subordinated loan or contingent credit facility to support senior bonds issued by a project company, enabling the senior bonds to obtain a higher credit rating than would be possible without EIB participation.

The PBI is being rolled out in a pilot phase, under which projects must be approved by the EIB by the end of 2014 and reach financial close by the end of 2016. The EIB had approved nine projects in six different countries by the end of September 2014. The first PBCE transaction took place in July 2013 in Spain for the Castor underground gas storage project. On the basis of a positive interim evaluation in 2013 and subject to the final evaluation of the pilot phase, the PBI is expected to be fully rolled out as part of the EU 2014–2020 Multiannual Financial Framework.

While the PBI can play a catalytic role, the EIB has limited capacity to support infrastructure across Europe. Although its current portfolio of 130 infrastructure projects totaling about €30 billion is a substantial size, in the context of 28 EU member countries with a combined GDP of about €14.3 trillion, the EIB provides a very small portion of the required infrastructure investment across the EU.

Promoting Infrastructure Bond Financing

Experience in ASEAN and elsewhere demonstrates two important sets of preconditions that must be met before specific initiatives to promote domestic currency project bond financing can succeed. Without a solid framework for PPPs and a well-developed domestic currency bond market, project bond financing will not take off.

Public–Private Partnership Framework

The bulk of global private sector investment in infrastructure takes place through PPPs, with a concession or a purchase agreement from a government or government-owned entity generally providing the revenue stream needed to finance the project. While detailed discussions of the requirements for successful PPPs are beyond the scope of this report, briefly, those requirements include an appropriate legal framework with clear contracting arrangements and reliable judicial or nonjudicial dispute resolution, and sufficient capacity within government and the private sector to plan, analyze, and implement PPPs. Macroeconomic stability and a sustainable fiscal position are also important to provide certainty of the revenue stream and to mitigate the risks inherent in the long-term investment typically required for infrastructure projects.

Domestic Currency Bond Market

The jurisdictions within ASEAN and elsewhere where project bonds are common all have well-developed local currency corporate bond markets. The current state and required regional and country-specific initiatives to support bond market development in the ASEAN region have been well documented by the Asian Bond Markets Initiative.¹² Addressing all of the preconditions for bond market development is beyond the scope of this report, but some of the most important considerations are recapped below. Further details with respect to individual countries are provided in Appendix 1.

Key preconditions are a modern legal framework; a disclosure-based regime meeting international standards for securities regulation and capital market oversight; and the financial markets infrastructure for bond pricing and trading, and clearing and settlement. Beyond these basic preconditions, the development of domestic institutional investors and bond markets is inextricably linked. Without large pools of domestic capital outside

¹² ADB. 2012. *ASEAN+3 Bond Market Guide*. Manila; Michael Andrews, Robert Hannah, and Brent Sutton. 2013. *Broadening the Investor Base for Local Currency Bonds in ASEAN+2 Countries*. Manila: ADB.

the banking sector, there will be limited demand for corporate bonds. Even if the market does develop, bonds will not provide a true alternative to bank loans unless there are other significant institutional investors. This requires putting in place the legal and regulatory framework for nonbank financial intermediaries, including insurance and pension funds.

Adopting a full or at least partial funding model for government pensions and finding an appropriate framework for private pensions are important measures in developing domestic institutional investors. For pensions and insurance, adopting the prudent-person approach to investment policies rather than prescribing specific limits and exclusions via regulation is important to encourage investment in a range of asset classes. The conservative investment bias reflected in restrictions on lower-rated or unrated investments can constrain capital market development as well as limit the returns of institutional investors. The prudent-person approach supports diversity in the investor base. Markets where investors have a range of strategies and styles will be more liquid and dynamic than markets dominated by investors all using similar buy-and-hold approaches.

An option for broadening the market, even those where there is a small number of large institutional investors, is the use of external fund managers. Large pension funds can potentially stimulate demand for higher-yield instruments and encourage secondary trading with appropriately designed mandates for external managers, placing portions of the total portfolio under external management. A further option, available in Singapore and Malaysia with the Central Provident Fund (CPF) and EPF, respectively, is to allow individuals to allocate a portion of their government pension plans to an approved range of externally managed funds.

Tax neutrality between bonds and bank debt is another important precondition. Unless corporates have the same ability to deduct bond interest from income for tax purposes as is provided for bank debt, bond market development will obviously be impaired because of the higher after-tax cost of bond financing. Similarly, the tax regime for income in the hands of investors needs to be neutral. Some jurisdictions have provided tax incentives—reduced income taxes or exemptions from stamp duties—to promote bond and *sukuk* markets. These may be a useful catalyst, but need to be carefully weighed against the fiscal cost and potential distortions in the financial market.

Perhaps paradoxically, appropriate prudential regulation of the banking system and measures to enhance financial stability can contribute in an important way to bond market development. If the single-exposure limits for banks are generous or not stringently enforced, this can reduce the incentives for corporates to develop alternative financing sources such as corporate bonds subscribed by individuals or nonbank institutional investors. If banks' exposure limits are not appropriate and enforced, financial distress in one or more large corporate borrowers could threaten the stability of individual banks or the entire system. The development of the corporate bond market thus provides a means of diversifying the funding sources, and hence the risk exposure, of a country's nonfinancial corporates, contributing to financial stability.

Project Bonds

Even with the preconditions for PPPs in place and the development of domestic bond markets, project bonds will not necessarily become common in infrastructure finance. Specific expertise is required on the part of issuers, domestic ratings agencies, and investors. If the preconditions are put in place, then the major remaining barriers to local currency project bonds are rooted in the chicken-and-egg problem of limited project bond issuance due to lack of prior experience with project bonds. Many market participants have noted that the binding constraint is not the lack of funds. Viable projects can be financed. If this financing is to include project bonds, then the needed expertise has to be developed or made available throughout the region.

For issuers, professional advisers available in the international market can bring the needed expertise to countries where domestic advisory businesses have yet to develop these skills. Over time, this will lead to knowledge transfer, as in the case of Malaysia, which has established a significant domestic advisory business capable of supporting project bonds and *sukuk*. Some government initiatives in the region, most notably Clifford Capital in Singapore and SMI and IIF in Indonesia, are providing infrastructure-focused advisory services.

Ratings agencies with international affiliations can draw on their partners to develop the needed methodologies for project finance. Throughout ASEAN, the Association of Credit Rating Agencies in Asia offers a potential vehicle for domestic agencies to pool their resources and adopt similar approaches.

Not all institutional investors across the region have the necessary expertise to assess the risks of project bonds, or project finance more generally. This can be the result of narrow investment mandates, as with Japan's Government Pension Investment Fund, which historically has invested primarily in government debt, or the limited opportunities for project investments, as in the case of Indonesian institutional investors. There are a number of examples of how the needed expertise can be developed or provided.

One option is for domestic institutional investors to work with international partners, as in the case of the Philippine Investment Alliance for Infrastructure. This is a fund managed by Macquarie and jointly sponsored by the Philippines' Government Service Insurance System, the largest pension fund in the country, together with ADB and a large Dutch pension fund manager. The international partners provide needed expertise as well as their investment, potentially catalyzing the infrastructure project financing market. Another option is the Peruvian model, where local pension fund managers have pooled their expertise to create investment funds.

Retail investors can directly hold project bonds and *sukuk*, either in the form of specifically targeted retail issues as pioneered in Malaysia, or by reserving a portion of issues for retail sale. The experience of Thai corporates in cultivating the retail bond market might be replicated for project bonds. Retail investors may also invest indirectly in project bonds through the various types of managed funds including mutual funds, ETFs and, for high-net-worth individuals, private equity funds.

The Malaysian experience illustrates the catalytic role that can be played by large institutional investors. The EPF, the largest Malaysian institutional investor, was a major investor in the projects that established the templates for domestic project financing. As the largest institutional investor, it was best placed to develop the required expertise, and with deep pockets could ensure the success of the issue even if other investors were reluctant to participate. This support was not actually required, as demand for project bonds and *sukuk*, like that for other corporate issues in Malaysia, exceeds supply, with institutional investors commenting that they would purchase more bonds if available.

Infrastructure projects sponsored by government or government-related entities can play a pioneering role in the use of project bonds by including a domestic currency bond tranche in the financing structure. Once the template is established, more purely private sector projects may pursue domestic bond financing.

Credit enhancement has played an important role in project bond issuance because the stand-alone ratings may be below the A or above local rating typically sought by ASEAN investors. Regional arrangements such as the Credit Guarantee Investment Facility and national guarantee facilities like those found in Indonesia, the Republic of Korea, and Malaysia can play a role in supporting project bond issuance.

Appendix: Country Overviews

Brunei Darussalam

Financial and Capital Markets Overview

Brunei Darussalam's bank-dominated finance sector is relatively large as a share of gross domestic product (GDP), but reflecting the small size of the country—a population of about 425,000—is small in absolute terms. There are six commercial banks and two Islamic banks serving the domestic market, with an average size of less than \$2 billion. Five of the commercial banks are branches of large foreign banks from Hong Kong, China; Malaysia; Singapore; and the United Kingdom. Both Islamic banks and one commercial bank are domestically incorporated. There are also four offshore international banks

Table A1: Brunei Darussalam Financial and Capital Markets Overview

	Number	Assets (B\$ million)	Assets (\$ million)	Assets (% of GDP)
Total domestic banks	8	18,627.0	14,632.4	95.4
Commercial banks	6			
Islamic banks	2			
Total insurance	12	1,338.0	1,051.06	6.9
General insurance	8	335.0	263.2	1.7
Conventional	6	127.0	99.8	0.7
<i>Takaful</i> (general)	2	208.0	163.4	1.1
Life insurance	4	1,003.0	787.9	5.1
Conventional	3	826.0	648.9	4.2
<i>Takaful</i> (family)	1	177.0	139.0	0.9
Mutual funds ^a	25			
Employees Trust Fund ^a	1			
Registered agents and trust companies ^a	11			
Investment advisers ^a	7			
Government securities outstanding		700.0	549.9	3.4

^a Number of entities/firms as of the end of 2012.

Notes: Data as of the end of 2014. Exchange rate at the end of 2014 (\$1 = B\$1.273) and 2014 GDP (B\$19,533 million).

Sources: Autoriti Monetari Brunei Darussalam; Ministry of Foreign Affairs and Trade; Oxford Business Group. *The Report: Brunei Darussalam 2013*.

operating in the Brunei International Financial Centre. These banks may offer a full range of banking products and services but they may not accept deposits from residents.

One of the commercial banks, Brunei Investment and Commercial Bank, is wholly owned by the Brunei Investment Agency (BIA), the sovereign wealth fund. Data on the BIA or its banking subsidiary are not publicly available, but the BIA is estimated to have total assets of \$30 billion, about a third again as large as the Bruneian domestic finance sector. The government is a significant shareholder in both Islamic banks, Tabung Amanah Islam Brunei Darussalam and Bank Islam Brunei Darussalam, and indirectly has a significant interest in the other domestic bank, Bank Baduri, but the extent of its shareholding via the government-owned Royal Brunei Airlines and other shareholders in the bank is not owned.

Insurance penetration in Brunei Darussalam is low for a high-income country, with only an estimated 20% of the population having life insurance. This is, in part, due to the extensive social insurance system, which reduces incentives for individual saving. Despite the low penetration, total conventional life insurance and family *takaful* (sharia-compliant life insurance) assets total about 20% of GDP. The Employee Trust Fund—the state-run provident fund—is one of the largest financial institutions, although it releases no data with respect to its investment holdings and performance.

Significant recent changes have been made in the regulatory and supervisory structure as part of financial reforms intended to enhance stability and support government plans to develop Brunei Darussalam as a regional financial center. In 2011, the Autoriti Monetari Brunei Darussalam (AMBD) was established as a full-fledged central bank, assuming the role of the previous monetary board and the supervisory responsibilities of the Ministry of Finance. The AMBD is a unified supervisory authority, with responsibility for banking, insurance, and the capital markets.

The regulatory framework for capital market activities derives from the Securities Order 2001 (as amended in 2001, 2003, and 2005) and the Mutual Funds Order 2001. These established the licensing requirements and supervisory authority of the Ministry of Finance, were transferred to the AMBD in 2011.

Local Currency Bond Markets

Domestic capital markets are at an early stage of development. A first step was the launch in 2006 of the government short-term *sukuk al-ijarah* securities; at end-2013, there were B\$500 million outstanding. The government does not have ongoing financing needs as it has consistently run fiscal surpluses on the back of oil royalties. With the fixed exchange rate and currency convertibility agreement with Singapore backed by a currency board, government debt instruments are not required for monetary policy purposes. The government's *sukuk* issuances are expected to set benchmarks for rental rates (the Islamic equivalent of interest rates) that prospective issuers in the private sector can use. There have been periodic public statements regarding the possibility of extending the tenor of *sukuk*, but so far all issuances have been short term (generally 91 days).

A few Bruneian corporates have issued *sukuk* in the form of private placements. There is no regulatory regime aside from the Companies Act, and no supporting infrastructure such as securities clearing and settlement systems or a central depository.

Bond Funds

There are 25 mutual funds licensed in Brunei Darussalam, mostly domiciled and managed elsewhere. These are offered by international banks and investment firms to provide vehicles for foreign investment by Bruneian residents. A number of bond funds invest primarily in foreign issues.

Infrastructure Financing

Infrastructure construction, finance, and operation in Brunei Darussalam is generally undertaken by government or government-owned entities. PPPs or other vehicles for private participation have not been established.

Brunei Darussalam has participated in infrastructure funds through its membership in the Islamic Development Bank (IDB). The IDB launched its second infrastructure fund in June 2014 with an initial commitment of \$750 million from the Brunei Darussalam Ministry of Finance, the Public Pension Agency, and the Public Investment Fund of Saudi Arabia, and the Bahrain Ministry of Finance. Managed by Bahrain-based ASMA Capital Partners, the fund will invest in projects chosen from the 57 member countries of the IDB. It is expected to raise \$2 billion, with final closing scheduled for early 2015. It follows from the IDB Infrastructure Fund I, which raised \$730 million in 2001 and invested in 10 projects.

Expanding the Use of Bond Financing

Project bond financing is unlikely to develop domestically in Brunei Darussalam, although the BIA and other government-related and private institutional investors may seek regional and global infrastructure investment opportunities. Developing a domestic debt market beyond the current handful of privately placed corporate instruments and short-term government *sukuk* market faces a number of challenges. Considering the size of the economy and exchange and currency agreements with Singapore, local debt markets may not be a priority in the context of finance sector development.

The broad requirements for a domestic bond market have already been identified, but the limited progress so far is indicative of some of the challenges. The small size of the Bruneian economy limits the potential to achieve critical mass in domestic issuers, bond market infrastructure, and professional market participants. It also makes it difficult for the government to offer benchmark issues across a range of maturities to establish a yield curve, although given the fixed exchange rate and currency convertibility agreement with Singapore, interest rates should be anchored on the Singaporean yield curve.

The well-established Singaporean regime for foreign issuers coupled with the fixed exchange rate and currency convertibility agreement might be expected to make Singapore the market of choice for potential Bruneian corporate issuers. There may be a niche opportunity for Brunei Darussalam to focus on Islamic issues, although Malaysia is

already well established as a regional and global Islamic center. There may be additional opportunities for Brunei Darussalam to explore areas of cooperation with Singapore in capital market policy.

Prerequisites for a domestic bond market include the completion of the regulatory framework with provisions for public offerings of securities, and the growth of the newly established AMBD into a capable capital markets supervisor. Infrastructure—including arrangements for securities clearing and settlement, and a large value transfer system meeting international standards—will have to be put in place.

If domestic issuers were to come to the market, there is a potential domestic investor base for local currency bonds. Insurance companies are well established and have the potential to grow, given the current low penetration rate. The Brunei Employees Trust Fund is a very large pool of capital that could contribute to capital market development in several ways. Using external managers for portions of the portfolio could help to promote the fund management industry. Adopting provisions similar to those in Malaysia permitting participants to withdraw a portion of their contributions for investment in approved funds could help to promote a domestic mutual fund market. The newly introduced Supplementary Contributory Pension Schemes will over time provide an additional publicly administered pool of capital, which could be a significant institutional investor.

The major obstacles to foreign investment in local currency bonds would be the absence of clearing, payment, and settlement infrastructure meeting international standards, and the limited issue size and liquidity that would be expected given the very small size of the Bruneian economy. There are no foreign exchange controls, nonresident bank accounts are permitted, and there are no restrictions on nonresident borrowing. Interest paid to a nonresident is subject to 15% withholding tax.

Cambodia

Financial and Capital Markets Overview

The financial system in Cambodia has been evolving quickly, but remains bank dominated. The banking system has grown very rapidly in both nominal terms and relative to GDP. The number of banks has more than doubled since 2005, but many are very small—the smallest 25 collectively have less than 10% of total deposits, while the largest five account for more than 70% of the market. Cambodia is highly dollarized, with foreign currency deposits accounting for about 95% of bank deposits, and the dollar is in widespread use for cash transactions. Microfinance institutions play an important outreach role as the banks largely focus on urban areas, and have total assets equivalent to more than 10% of GDP. There were no life insurance companies until 2012. Two foreign-owned life insurers and one partially government-owned life insurer have since entered the market. All of the insurance companies are small. The National Social Security Fund was established in 2007, but has yet to develop into a significant institutional investor. Mutual funds, exchange-traded funds (ETFs), and private fund management all have yet to develop in Cambodia.

Table A2: Cambodia Financial and Capital Markets Overview

Financial Institution	Number	Assets (KR million)	Assets (\$ million)	Assets (% of GDP)
Total banks	43	50,928,703	12,748.1	82.9
Commercial banks	35	50,182,311	12,561.3	81.7
Specialized banks	8	746,392	186.8	1.2
Total insurance companies	11			
Life insurance	3			
General	6			
Reinsurance	1			
Micro-insurance	1			
Microfinance institutions	36	6,381,096	1597.3	10.4
Microfinance deposit-taking institutions	7	5,408,352	1353.8	8.8
Microfinance institutions	29	972,744	243.5	1.6
Securities underwriters	7			
Securities brokers and dealers	4			
Listed companies, stock market capitalization (end of 2014)	2	659,000	163.1	1.0

Notes: Data as of end of 2013. Exchange rate at the end of 2013 (\$1 = KR3,995), at the end of 2014 (\$1 = KR4,040); GDP at the end of 2013 (KR61,414 billion), at the end of 2014 (KR67,772 billion).

Sources: National Bank of Cambodia, Cambodia Securities Exchange.

The Securities and Exchange Commission of Cambodia (SECC) is the capital markets regulator with licensing, surveillance, enforcement, and regulation-making authority. The National Bank of Cambodia is responsible for bank supervision, and the Ministry of Economics and Finance, for insurance supervision.

There is an ambitious program for finance sector development. The first phase of the Financial Sector Development Plan 2001–2010 was a stocktaking exercise, which was followed by the Financial Sector Development Strategy 2006–2015 to address identified priorities and sequencing, taking into account the experience from 2001 to 2006. With respect to capital market development, key achievements include the following:

- (i) Law on the Issuance and Trading of Non-Government Securities, 2007;
- (ii) Law on Government Securities, 2007;
- (iii) Establishment of the SECC in 2008;
- (iv) Establishment in 2011 of the Cambodia Securities Exchange, a joint venture between the government and the Korea Stock Exchange, with the first listing in April 2012; and
- (v) Memorandum of Understanding between the SECC and the Securities Exchange of Thailand in 2014.

Local Currency Bond Markets

Bond markets have yet to develop in Cambodia. Short-term Treasury bills are currently issued through auctions run by the National Bank of Cambodia. Treasury bills are not traded, although steps have been taken to put a master repurchase agreement in place to facilitate the development of a secondary market. There have also been recapitalization bonds of about KR44.2 billion (\$11 million) issued directly to financial institutions in payment for equity purchased by the government as part of a restructuring process. These bonds are not tradable.

The Law on the Issuance and Trading of Non-Government Securities, 2007, provides for both debt and equity instruments. Issues require the approval of the SECC, based on a determination of whether the issuance would be in the interest of the people of Cambodia. Article 13 of the law provides criteria for use in reaching this determination, which include the governance and financial history of the issuer, the needs of the securities and capital markets, the likelihood of success of the offer, compliance with the exchange listing requirements and disclosures specified by law, and any other matter relevant to protecting the public interest. There have been two equity issue and no debt issues so far.

Infrastructure Financing

Cambodia requires infrastructure investment estimated at \$12–\$16 billion (90%–110% of 2013 GDP) over the next 10 years.¹ This far exceeds available government resources. Private sector participation and international and bilateral development partner assistance will be required to meet the need for power generation and transmission, transportation, sewerage, water, and telecommunications. Elements of the necessary framework for PPPs have been established, but gaps remain. Despite this, the bulk of electricity is generated by independent power producers and various types of PPPs have been undertaken in transportation—airports, seaports, rail, and road—as well as water and solid waste management.

Financing for Cambodian infrastructure projects has generally been provided by international consortia, usually with the participation of one or more of the international financial institutions (IFIs), an export credit agency, or a bilateral development partner. The effective implementation of the Law on Concessions, 2007, is an important prerequisite for project structures to attract financing on a stand-alone basis. Pure project finance is unlikely to be tenable in Cambodia for some time; participation by the IFIs, export credit agencies, and bilateral development partners will therefore continue to be crucial. Over time, including domestic financing tranches for infrastructure projects could help promote the local financial and capital markets; however, this would be feasible only over the longer term as local institutional investors and local currency bond markets develop.

Expanding the Use of Bond Financing

The required measures for bond market development have been identified, at least at a high level, in the Financial Sector Development Strategy, 2006–2015. The highly dollarized

¹ <http://www.adb.org/projects/45424-001/details> (accessed 7 October 2014).

economy presents special challenges, as many investors currently appear to have little appetite for local currency instruments. Sequenced policy measures would be required to increase the use of local currency. As greater confidence in macroeconomic stability develops, use of the riel would increase, facilitating the development of local currency capital and financial markets.

The regulatory regime requires further development to provide a clear and consistent foundation for capital market development. The supporting market infrastructure, including a large-value transfer system (LVTS), a security clearing and settlement system, and a centralized depository, needs to be put in place.

Building a government debt market is an important element of bond market development. Over time, the current Treasury bill program needs to be supplemented with longer-term government bond issues. Key elements of an effective program are a preannounced issuance schedule; a primary dealer system to foster liquidity and secondary trading; and a focus on establishing benchmark issues, initially at the shorter end of the yield curve and then extending to longer tenors.

The domestic investor base for a prospective local currency bond issue is currently very limited. The only large financial institutions are banks and, given the high degree of dollarization, they would be exposing themselves to currency risk by purchasing local currency instruments. The National Social Security Fund could grow over time into a significant institutional investor and would be a natural purchaser of local currency bonds. A dominant institutional investor is not desirable, so the development of other potential investors is also important. A framework for private pension plans could potentially create additional pools of capital, as could the development of the life insurance industry and, in particular, market-linked savings products.

There are few formal barriers to foreign portfolio investment in Cambodia. The riel is freely convertible and there are no capital controls. However, if domestic bonds were to be issued, the current clearing payment and settlement arrangements would be problematic for major foreign institutional investors. Continued progress is also required with implementing International Accounting Standards, and improving governance and transparency.

While there is no capital gains tax, dividend and interest income is subject to a 14% withholding tax, with both resident and nonresident investors are eligible for a 50% reduction in the withholding tax for a 3-year period. Tax incentives have been introduced to encourage the listing of securities. All companies with debt or equity issues listed on the Cambodia Securities Exchange as of January 2015 are eligible for an exemption from income tax for a period of 5 years. Companies obtaining a listing by 2018 are eligible for a 50% reduction in income tax for 3 years.²

² Sub-decree No. 01 ANKR BK (08 January 2015).

People's Republic of China

Financial and Capital Markets Overview

The finance sector in the People's Republic of China (PRC) continues to be dominated by large state-controlled commercial banks despite the rapid emergence of other bank and nonbank financial institutions and the growth of capital markets (Table A3).³ The shadow banking sector—comprising a large number of informal credit providers, nonbank financial institutions, private equity firms, and wealth management products—has grown very rapidly as oversight of banks has been strengthened and the sustained low-interest-rate environment has led savers to seek higher-yielding alternatives. Nonbank lending accounted for about one-third of the total increase in credit in 2013.⁴

The PRC's capital markets have expanded rapidly to accommodate economic growth, and in response to the progressive liberalization of financial markets. The bond and equity markets have averaged double-digit growth for more than a decade, with total stock market capitalization at about 45% of GDP, and total bonds outstanding equal to about 50% of GDP.

While most savings flow into the banking sector, both the pensions and insurance sectors have been growing rapidly. This is a function of high savings rates, a range of reforms in the social security system, and ongoing finance sector reform. Life insurance company assets are equivalent to almost 12% of GDP, putting the PRC on a trajectory to reach the insurance penetration typically found in countries with well-developed financial markets.

Enterprise annuities, introduced in 2004 as voluntary defined contribution pension schemes managed by financial institutions, have accumulated assets of just over 1% of GDP over 9 years. The attractiveness of such plans increased dramatically with the 2014 announcement that employers could 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. Enterprise annuities are expected to rapidly grow into very significant pools of assets under management, increasing the size and diversity of the institutional investor base.

The main prudential regulatory authorities are the China Banking Regulatory Commission (CBRC) with respect to all types of banks, cooperatives, financial asset management companies, and other financial institutions including finance, trust, and leasing companies, and the China Insurance Regulatory Commission (CIRC) with respect to all classes of insurance. The China Securities Regulatory Commission (CSRC) oversees all capital market activities including investment funds, securities firms, and exchanges. The People's Bank of China (PBOC) oversees the interbank bond market, while new issuance in the interbank market is reviewed by a semiautonomous self-regulatory organization, the National Association of Financial Market Institutional Investors (NAFMII). The Ministry of Human Resources and Social Security has oversight responsibility for the National Social Security Fund, and for the Enterprise Annuities, a form of private pension plan.

³ Portions of this section draw on work completed by Robert Hannah for *Broadening the Investor Base for Local Currency Bonds in ASEAN+2*.

⁴ *The Economist*. 2014. Shadow Banking in China. 10 May.

Enterprise bonds may be issued by state-owned enterprises subject to case-by-case approval by the National Development and Reform Committee, whose mandate is to ensure compliance with and implementation of national economic development goals. Exchange-listed corporate bonds are regulated by the CSRC, with issuer criteria including a credit rating, the ability to meet a distributable profit requirement, and a leverage cap

Table A3: PRC Financial and Capital Markets Overview

Financial Institution	Number	Assets (CNY billion)	Assets (\$ billion)	Assets (% of GDP)
Banks	755	151,355	24,812	266.1
Policy banks and the China Development Bank	3	12,528	2,054	22.0
Large commercial banks	5	65,601	10,754	115.3
Joint-stock commercial banks	12	26,936	4,416	47.4
City commercial banks	145	15,178	2,488	26.7
Rural commercial banks	468	8,522	1,397	15.0
Rural cooperative banks	122	1,232	202	2.2
Insurance companies		8,129	1,332	14.3
Life insurance	68	6,825	1,119	12.0
Property insurance	64	1,094	179	1.9
Reinsurance		210	34	0.4
Pension and social insurance funds				
National Social Security Fund	1	1,254	206	2.2
Social insurance funds		4,559	747	8.0
Basic pension		3,127	512	5.5
Unemployment insurance		369	60	0.6
Basic medical care		911	149	1.6
Work injury insurance		100	16	0.2
Maternity insurance		51	8	0.1
Enterprise annuities				
Mutual funds	1,500+	2,900	480	5.1
Stock market: Listed companies (market capitalization)	2,613	37,255	6,088	58.5
Government debt securities outstanding		20,815	3,401	32.7
Of which, local currency		20,693	3,381	32.5
foreign currency (end of 2013)		122	20	0.2
Corporate debt securities outstanding		12,776	2,088	20.1
Of which, local currency		11,528	1,883	18.1
foreign currency (end of 2013)		1,248	205	2.2

PRC = People's Republic of China, GDP = gross domestic product.

Notes: Data as of the end of 2013, National Social Security Fund as of Nov 2014, stock market and bond data, end of 2014. Exchange rate, end of 2013 (\$1 = CNY6.10), end of 2014 (\$1 = CNY6.12); GDP, end of 2013 (CNY56,885 billion), end of 2014 (CNY63,646 billion).

Sources: China Banking Regulatory Commission, China Statistical Yearbook, *AsianBondsOnline*, Shanghai and Shenzhen Stock Exchanges, *Wall Street Journal*, National Bureau of Statistics.

of debt to net assets of 40%. A prospectus and continuous disclosure is required. The leverage cap is viewed by some small and growing businesses as restrictive. In June 2012, the Shanghai Exchange introduced high-yield bonds, sold as private placements to qualified investors. These bonds may be traded under the exchange on restrictive conditions. Unlike regular exchange-listed corporate bonds, they do not require a credit rating, net assets test, or distributable profit requirement.

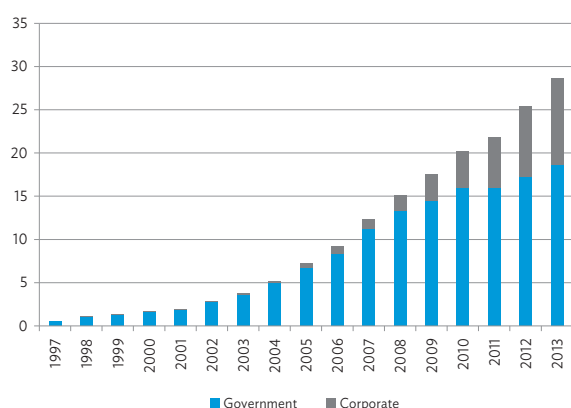
Medium-term notes (MTNs) may be issued by corporates that are members of NAFMII and have met the registration requirements. Once the MTNs are registered, issuance is flexible and approval time is shorter than the lengthy process needed for other securities. The issuance process was modeled after a similar shelf-filing process for commercial paper issued by the PBOC and NAFMII in 2005. MTNs trade on the interbank market, but are not listed on exchanges.

Local Currency Bond Markets

The PRC's bond market is the third largest in the world, with CNY29 trillion (\$4.7 trillion) in local currency bonds outstanding at the end of 2013. Government bonds dominate, but corporate issues, the vast majority of which are by state-owned entities, have grown significantly, both in nominal terms and relative to GDP, since 2008. In part this reflects the off-budget expenditures for the postcrisis stimulus package, including major infrastructure projects, as well as a more general search for alternatives to traditional bank financing. The CBRC is implementing Basel III in line with the agreed international timetable. In addition to the immediate impact from the requirements for the large Chinese banks to increase the quantity and quality of capital, increased capital charges for maturity mismatches may also make bond financing more attractive than bank financing over longer tenors.

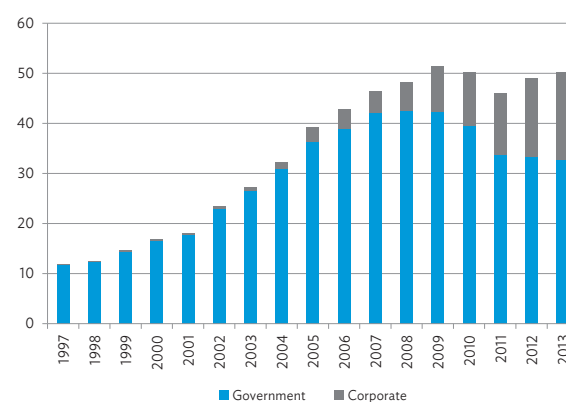
The PRC's bond market comprises three segments. By far the largest is the interbank market, dominated by the large banks, although it also includes a wide variety of other participants. The exchange-listed bond market serves listed companies using the facilities

Figure A1: Local Currency Bonds Outstanding (CNY trillion)



Source: AsianBondsOnline.

Figure A2: Local Currency Bonds Outstanding (% of GDP)



Source: AsianBondsOnline.

of the Shanghai and Shenzhen exchanges. These issuers tend to be smaller than those in the interbank market, and the volume of trading is small relative to that in the interbank market. Most issuers that list on the exchanges can and do have their securities traded in the interbank market. The bank counter or over-the counter (OTC) market, in effect a subsector of the interbank market, serves retail investors.

Government debt instruments include Treasury bonds, savings bonds, PBOC discount bills issued for monetary operations, bonds issued on behalf of local government by the central government, and bonds issued by the three policy banks. 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 nonbank financial institutions, as well as a limited number of convertible issues. Asset-backed securities were first issued in 2005, although the global financial crisis dampened the growth of this market. Small and medium enterprise collective notes are issued with a credit enhancement provided by the underwriter or China Bond Insurance Company, allowing a group of between 2 and 10 small and medium-sized businesses to collectively tap the interbank bond market.

Bond Funds

Overview

The PRC's extraordinary economic growth over the past 2 decades has made it a global powerhouse of savings, at both at the private and government levels. The PRC has also seen a corresponding surge in bond issuance and is now Asia's second-largest bond market after Japan.⁵

The CSRC considers the development of institutional investors as a strategic priority. The PRC's growing bond markets attract both domestic and international institutional investors, the latter including Qualified Foreign Institutional Investors (QFIIs) and RMB Qualified Foreign Institutional Investors (RQFIIs).

Institutional investors that purchase and manage bonds as a distinct asset class or operate pooled fund regimes in the PRC include commercial banks, pension funds, insurance companies, sovereign wealth funds, trust companies, and asset management firms. Most institutional bond investors operate through the interbank and exchange-traded bond markets. Individual investors most commonly participate in the bond market by way of collective investment schemes such as mutual funds.

Size and Scope

The investor profiles for local currency Treasury bonds and corporate bonds as of the end of June 2014 are shown in Figure 3. Commercial banks dominate government bond holdings, but hold a relatively smaller proportion of corporate bonds. Compared with more developed economies, contractual savings institutions in the PRC, such as pension funds

⁵ [asianbondsonline.adb.org/china/data/bondmarket.php?code=LCY_Bond_Market_\\$](http://asianbondsonline.adb.org/china/data/bondmarket.php?code=LCY_Bond_Market_$) (accessed 24 June 2014).

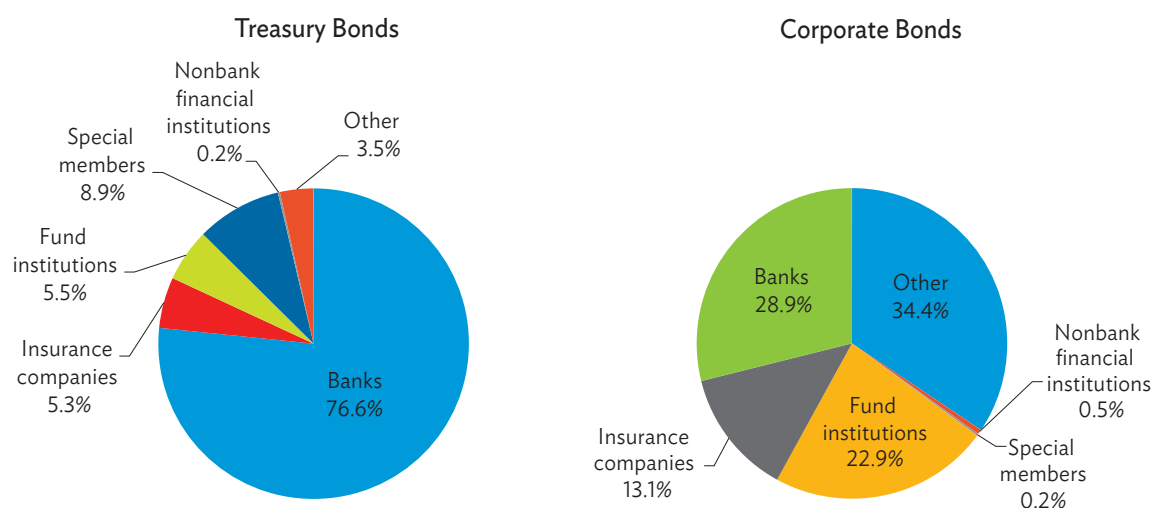
and life insurance companies, have yet to play a dominant role in the bond market, although recent years have seen emergent growth in these types of institutions.

The National Social Security Fund (NSSF) is the central government's reserve for the provision of a range of social welfare services, including the PRC's largest pension fund. The NSSF had total assets of CNY1.24 trillion under management at the end of 2013. Its funding is generated from four sources: funds allocated from the central government's budget, funds derived from state-owned enterprise share sales, other State Council-approved means such as state lottery license fees, and investment returns.

The NSSF reported a 6.2% (CNY 68.6 billion) return on investment for 2013. Since its inception in 2000, the NSSF has recorded an average annual investment return of 8.1%.⁶ The PRC's inflation over the same time period averaged 2.46% although the figure is likely to be understated. The two major plunges shown in the volatile historical returns (Figure A4) were driven by the financial crisis in 2008 and the crash of the PRC's equities market in 2010.

The Urban Enterprise Pension System (UEPS), which covered 322.2 million urban workers of large private enterprises and state-owned enterprises at the end of 2013, was introduced as part of pension reforms in 1997. Before that, employees of state-owned enterprises received a legacy pension at retirement without making any contributions during their working years. The NSSF was established in 2000 as a buffer mechanism in the event of funding shortfalls. The Rural Pension System was introduced in 2009 and by the end of 2013 covered 497.5 million rural residents.

Figure A3: Local Currency Bonds Investor Profile: Government and Corporate, as of 30 June 2014



Source: ADB. 2014. *Asia Bond Monitor September*. Manila.

⁶ National Social Security Fund. 2014. *Annual Report 2013*. Beijing.

Figure A4a: National Social Security Fund Total Assets under Management (Year-End) vs. Funding from Fiscal Resources, 2001–2013

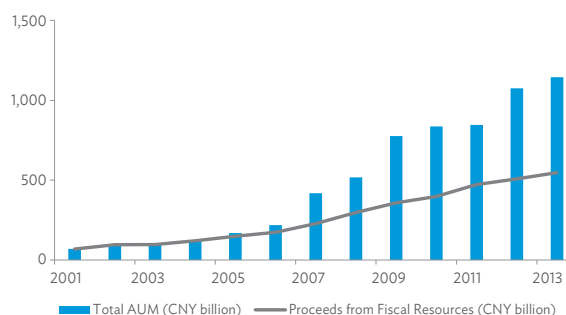
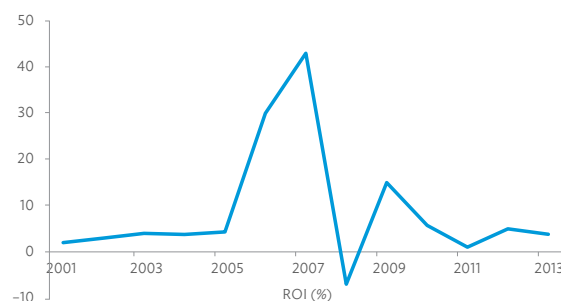


Figure A4b: Return On Investment, 2001–2013



AUM = assets under management, ROI = return on investment.

Source: National Social Security Fund Council. 2014. *Annual Report 2013*. Beijing.

Enterprise annuities, a supplementary corporate pension program analogous to the 401(k) account in the US, was rolled out in 2004 but has been slow to gain acceptance largely because of lack of tax incentives. At the end of 2013, aggregated assets of enterprise annuities under management were CNY603.5 billion, composing 21% of the UEPS' assets.⁷ However, in December 2013, tax incentives were sweetened, leading market observers to predict that enterprise annuities could realize a sixfold increase by 2020, making them a meaningful “second pillar” for the PRC's national pension system.⁸

The PRC's pension system essentially works on a pay-as-you-go basis. Pension contributions collected from employers (the “social pooling” component) are used toward payouts to current retirees, while contributions collected from employees are put into individual accounts. However, most provinces and municipalities have shortfalls in their social pooling to such an extent that they “borrow” from the individual accounts, leading to an estimated funding shortfall as high as 90%.

The PRC's pension system is greatly challenged by deteriorating demographics. Currently, 4.9 working-age people support each retiree. By 2050, if no major policy changes are made, this worker–retiree ratio will decline to 1.6:1.⁹ In addition, decentralized and fragmented management, inequities between urban and rural benefits, low investment returns, and limited investment vehicles all contribute to the system's vulnerability. Chinese authorities understand that they are in a race against time, and proposals to improve the pension system's performance have been approved to augment the pension reforms that began in the late 1990s.¹⁰

The PRC's shadow banking sector—including wealth management products (WMPs), trusts, and interbank lending—has estimated assets of CNY27.0 trillion, or 18% of the

⁷ Ministry of Social Security (mohrss.gov.cn).

⁸ Pensions and Investment. 2014. *China's 401(k) May See Vast Growth*. 3 March.

⁹ The Paulson Institute. 2014. *Tackling the Chinese Pension System*. Chicago.

¹⁰ CFA Institute. 2014. *Pension Reforms in China: A Race Against Time*. 19 February.

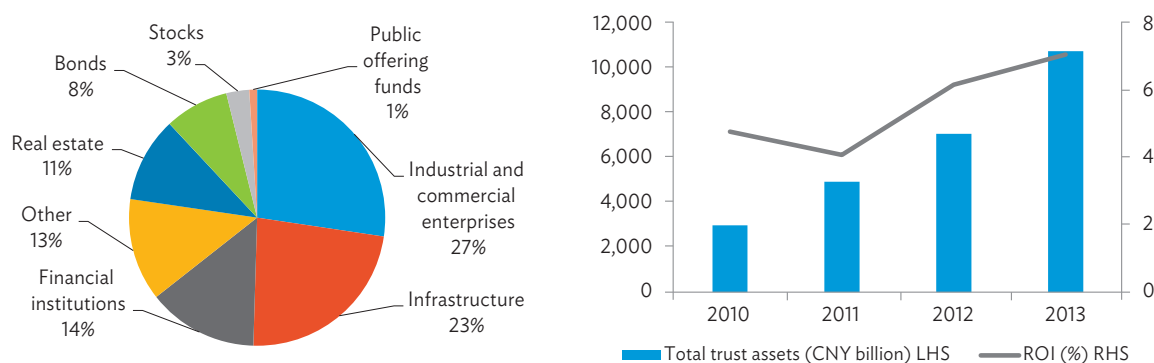
total assets of the regulated banking sector, according to the Chinese Academy of Social Sciences. By the end of June 2014, 498 banks nationwide were carrying a total book value of CNY12.7 trillion of WMPs. These products have been able to generate an annualized return of 5.2% on average, over 200 basis points higher than the country's 1-year bank deposit benchmark of 3.0%, explaining their high popularity.

The PRC's trust companies, which differ from those in other economies, are nonbank 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. Such borrowers include property developers, mining companies, and local governments. Trust companies surpassed insurers in 2014 to become the biggest sector of the PRC's financial system after commercial banks.

The top 68 trust companies currently have total assets of more than CNY12.0 trillion,¹¹ and are the most important players in the PRC's shadow banking sector. Trust products, often distributed by banks through their extensive networks, usually have a maturity of less than 1 year despite the fact that the underlying loans to infrastructure and real estate projects tend to be long term. At the end of 2Q14, bonds represented 8.1% of trust company assets. Figure A5 shows the asset allocation in the PRC's trust company industry and the industry's recent growth.

Following several high-profile defaults and the interbank lending liquidity squeeze in early 2014, and concern about credit risk and rollover liquidity risk arising from asset–liability mismatches, the CBRC has been tightening trust sector regulation, including raising the bar for approving new trust products. In 2014 alone, trust products worth CNY5.3 trillion are expected to mature, according to Haitong Securities, a major securities dealer based in Shanghai. The PRC's booming real estate market is of particular concern to the CBRC, considering that over 10% of the trust companies' assets are loans to property developers.

Figure A5: Trust Companies: Asset Allocation and Recent Growth



LHS = left-hand side, RHS = right-hand side, ROI = return on investment.

Source: China Trustee Association.

¹¹ China Trustee Association (ctxh.net).

As of March 2014, the PRC's foreign exchange reserves totaled over \$3.9 trillion. The two main entities that oversee the reserves are the State Administration of Foreign Exchange (SAFE) and the China Investment Corporation (CIC). SAFE is the policy arm and CIC is the investment agency and principal Chinese sovereign wealth fund.

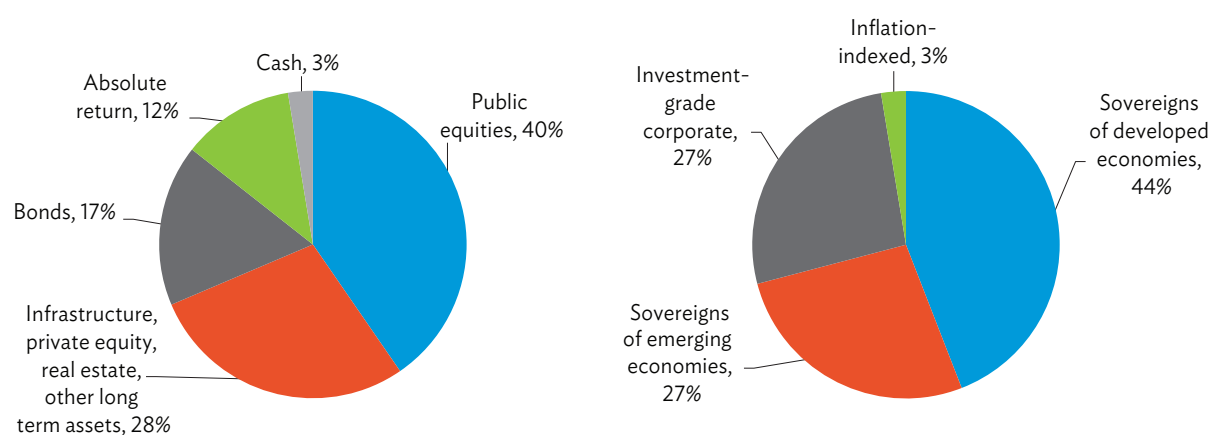
Founded in 2007, CIC was established as a vehicle to diversify and improve the investment returns of the PRC's fast-growing foreign exchange holdings. Its two subsidiaries, CIC International and Central Huijin, invest internationally and domestically, respectively. As of the end of September 2014, CIC was managing nearly CNY4 trillion in assets and ranked fourth globally by that measure.¹² CIC's asset allocations are shown in Figure A6.

Insurance was reintroduced in the PRC in 1979 following a 20-year period during which it was abolished.¹³ The PRC now ranks fourth in the world in terms of total premium income, after the US, Japan, and the United Kingdom (UK). However, insurance density (\$201 per capita in 2013) and penetration (3% of GDP in 2013) are significantly below the world averages of \$652 and 6.3%, respectively.¹⁴

As the result of years of steady growth, by August 2014, the PRC's insurance companies held total assets of CNY9.5 trillion (Figure A7). There is tremendous potential for growth for the PRC's insurance industry, not only as a safety net but also as an investment vehicle, given the tightening regulation of the shadow banking sector, the illiquid and uncertain nature of the property market, and the highly volatile performance of the PRC's equities markets.

Other East Asian economies with a similar savings culture to the PRC's—including Hong Kong, China; Japan; the Republic of Korea; and Singapore—lead the world insurance

Figure A6: China Investment Corporation: Overall Asset Allocation and Bond Segmentation

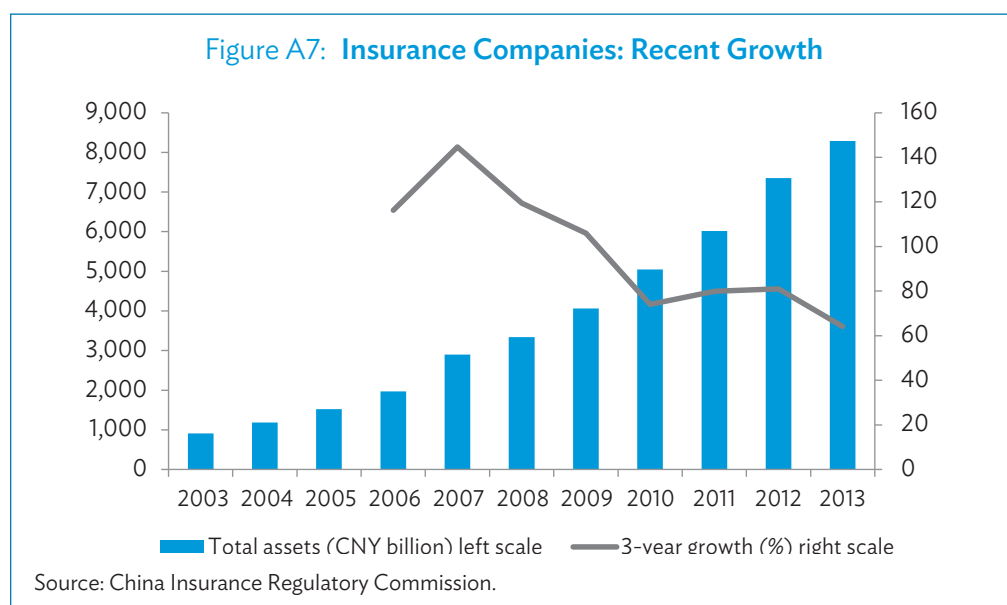


Source: China Investment Corporation.

¹² Sovereign Wealth Fund Institute. swfinstitute.org

¹³ China-insurance.com

¹⁴ Swiss Re. 2014. *Sigma Study on World Insurance in 2013*. 25 June.



rankings. Against this background, from 2014 to 2020, the insurance industry is forecast to achieve average annual growth of around 17%.¹⁵ By 2020, the national premium income will reach CNY5.1 trillion, with funds under management reaching over CNY20 trillion, or three times current levels.

The PRC's insurance companies have very conservative investment policies. The majority of investable assets consist of bank deposits and fixed-income assets. According to the CIRC, only 9% of the insurers' assets are allocated to equities and less than 1% to overseas investment. Investment-based, unit-linked-type insurance plans are not common in the PRC.

In recognition of the need for better asset–liability matching and improved investment returns, the CIRC in recent years has undertaken market-oriented reform and greatly expanded the investment scope for insurers. In 2014, the investment cap on fixed-income assets was removed and the percentage allowed on equities was raised from 20% to 30%.¹⁶

The PRC's fund management companies (FMCs) are similar to mutual funds. FMCs launch and manage securities investment funds for subscription by public investors. The Asset Management Association of China reported that, as of July 2014, 95 fund management groups—47 domestic ones and 48 joint ventures—were managing total assets of CNY5.6 trillion through 1,730 funds.¹⁷ FMCs are supervised by the CSRC. Mutual fund assets totaled CNY3.8 trillion, or 70% of the fund management industry.

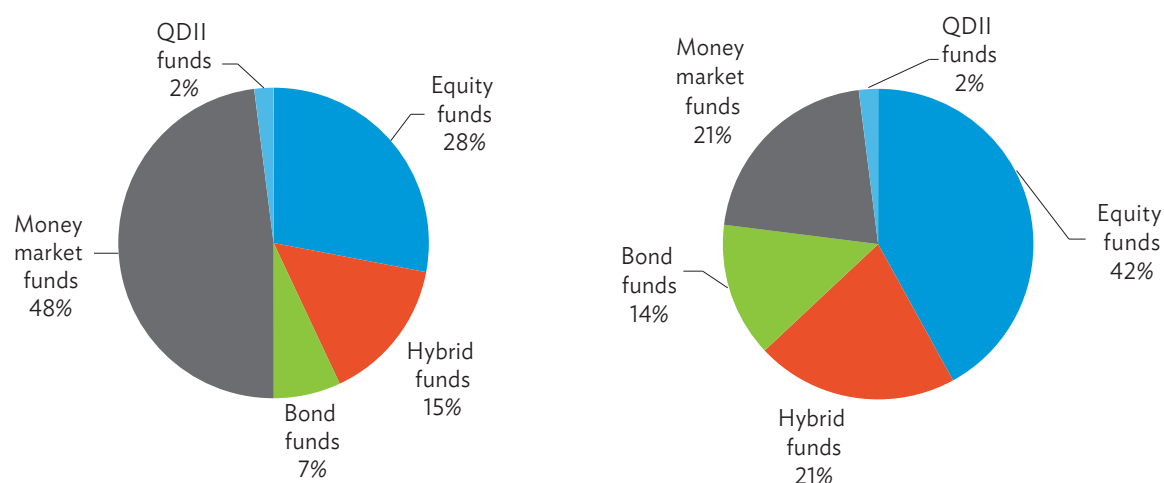
¹⁵ *China Daily USA*. 2014. China Insurance Regulatory Commission Expects Faster Insurance Premiums Growth. 5 September.

¹⁶ *China Daily USA*. 2014. Insurers Get More Freedom in Asset Allocation. 20 February.

¹⁷ Asset Management Association of China. amac.org.cn

Compared with trust funds and private funds, mutual funds in the PRC have grown more modestly. Money market funds make up the biggest proportion of the mutual fund sector, with a 48% share. Equity funds come second, with a 28% market share. Since 2012, equity- and bond-type funds have both shrunk significantly in asset size and market share, while money market funds have gained substantially, followed to a lesser extent by hybrid funds (Figure A8).

Figure A8: Mutual Funds by Asset Class, July 2014 vs. December 2012



QDII = qualified domestic institutional investor.
Source: Asset Management Association of China.

The Asset Management Association of China reports that, as of 31 July 2014, there were 381 publicly offered bond funds with net assets of CNY272 billion, accounting for a mere 7% of the total mutual fund assets under management. The PRC's 10 largest bond mutual fund managers are listed in Table A4.

Chinese investors flocked to mutual funds that focus on overseas investments shortly after the Qualified Domestic Institutional Investor program was launched in 2006. However, in recent years, the program's funds have seen large withdrawals since they posted an average loss rate of over 45% in 2008.

Structure and Regulatory Framework

Just over half of NSSF assets were self-managed and the other half were managed by 18 domestic and 22 foreign asset managers at the end of 2011.¹⁸ The investment activities are governed by the Interim Measures on the Investment Management of the National Social Security Fund and the Provisional Regulations on Overseas Investment and Management of the National Social Security Fund. The NSSF has a limit of 20% on

¹⁸ National Social Security Fund (ssf.gov.cn/eng_introduction/201206/t20120620_5603.html).

Table A4: The PRC's Largest Bond Fund Management Companies, by Assets under Management

FMC	Bond AUM (CNY billion)	Units Outstanding
ICBC Credit Suisse Asset Management	488.2	479.8
CCB Principal Asset Management	486.5	481.9
BOC Fund Management	424.0	416.9
Hua An Fund Management	192.2	189.2
Wells Fargo Funds Management	157.6	152.9
China Merchants Fund Management	137.4	133.7
Huaxia Fund Management	127.9	122.5
Harvest Fund Management	123.1	119.1
Guotai Fund Management	120.4	116.5
E Fund Management	116.7	109.5

AUM = assets under management, FMC = fund management company.

Source: Asset Management Association of China.

overseas investments. Bank deposits, Treasury bonds, and policy bank bonds must make up at least 40% of the portfolio.

The State Council and CBRC have tightened the regulation of the PRC's shadow banking system, in particular the management of the WMPs at banks. Through several policy documents released in the past few years, the CBRC now requires banks to separate their wealth management business from their regular deposit business with respect to accounting systems, information disclosure, and capital allocation.

Both insurance companies and their asset management subsidiaries, which are known as IAMCs, are regulated by the CIRC. In 2013, CIRC issued a circular allowing IAMCs to launch asset management products on a pilot basis. Qualified IAMCs, with at least CNY100 million in registered capital and CNY10 billion in AUM, are required to obtain a qualification from the CIRC and appoint a qualified custodian. IAMCs are expressly prohibited from publicly marketing their asset management products.¹⁹

In April 2014, China Life Insurance, the PRC's largest life insurer and largest IAMC, launched a search for asset management companies to manage its portfolio of CNY20 billion at a management fee of 5% and operating earnings of 20%.²⁰ The unprecedented outsourcing arrangement marked the opening to more professional management of insurance capital and investment assets. China Life gave instructions for the entire CNY20 billion to be invested in domestic equities.

¹⁹ CIRC. circ.gov.cn

²⁰ *China Times*. 2014. China Life to Outsource Asset Management Services. 22 April.

Infrastructure Financing

The PRC has become the world's largest infrastructure market over the last 30 years.²¹ Infrastructure construction and operation has generally been undertaken by government or government-related entities. The PRC has undertaken a range of PPP-type initiatives since the 1990s; however, these have typically involved government-related entities as the “private” partners. Greater private participation is expected to flow from the April 2014 decision by the State Council to permit private investment in 80 infrastructure projects in areas previously dominated by government and state-owned enterprises, including railways, ports, information technology, power generation, and pipelines.²² This may take the form of a special-purpose corporation established wholly by private investors or jointly with government. Government will provide long-term franchise or concession agreements, appropriate pricing agreements, and subsidies where required, with the resulting revenue stream supporting the raising of private debt and equity investment, which might include project bonds. The decision to invite greater private investment is driven in part by the unsustainability of the practice of relying on local government finance for infrastructure, and the central government's priority on controlling and reducing local government debt.

Current Approaches

Infrastructure in the PRC has been financed largely by government lending and land-transfer revenues. While many projects are undertaken on a national and regional basis by the central government and state-owned enterprises, much of the infrastructure investment over the last 30 years has been driven by large-scale urbanization. Local governments have thus been major players, most often indirectly, through related financing entities.

Local government financing vehicles (LGFVs), first established in 2005 as a type of municipal state-owned enterprise, are central to infrastructure development in the PRC.²³ LGFVs grew rapidly in conjunction with the off-budget financing of the infrastructure spending stimulus as part of the PRC's response to the global financial crisis. By the end of June 2013, LGFVs collectively had debt obligations amounting to about CNY12 trillion (\$1.9 trillion), or about 22% of GDP.²⁴ LGFVs are successors to the municipally controlled trust and investment companies that financed earlier infrastructure investment and development, serving to circumvent Budget Law restrictions on local government borrowing.

LGFVs typically receive capital from municipal governments through budget allocations, transfer of land use rights and existing assets, or funds from bonds issued by the central government on behalf of local governments. The LGFVs then leverage this capital base by obtaining loans or by issuing equity or bonds. Some LGFVs are self-sufficient, generating enough revenue from their investments to meet debt service requirements, while others are dependent on local government budget support. They are typically vulnerable to a decline

²¹ Z. Kun. 2014. Critical Issues in the Next Decade of China's Infrastructure Effort in *Rethinking Infrastructure: Voices from the Global Infrastructure Initiative*. New York: McKinsey & Company. pp. 55–57.

²² J. Song. 2014. *China Opens up Infrastructure to Private Capital*. *Finance Asia*. 25 April.

²³ Y. Lu and T. Sun. 2013. Local Government Financing Platforms in China: Fortune or Misfortune. *IMF Working Paper No. 13/243*. Washington, DC: International Monetary Fund.

²⁴ *The Economist*. 2014. Counting Ghosts. 4 January.

in land prices as revenue from land sales is a main source of income, and land is used as collateral for bank loans. Explicit, or more commonly implicit, municipal-government guarantees encourage bank lending to LGFVs.

A number of initiatives have been taken to strengthen the management of local government debt, including prohibitions against any increase in LGFV debt financing, and measures to repay or restructure existing debt. Local governments, with the approval of the State Council, have been empowered to raise debt directly within specified ceilings and subject to control measures, making local government directly accountable for borrowing and repayment. Local governments are able to issue “special bonds”—a type of revenue bond with debt service paid out of expected future cash flows, as well as “common bonds” to finance non-revenue-generating local government expenses and investment.

Bond Financing

Bonds have been used extensively to finance infrastructure development in the PRC; however, project bonds are virtually unknown. Nine of the 30 largest local currency bond issuers are infrastructure-related state-owned entities (Table A5), which generally raise funds for general corporate purposes rather than using project financing structures. Financing raised by LGFVs typically relies on explicit or implicit government guarantees, and land pledged as collateral, more than the expected revenue streams from infrastructure projects.

Government bonds are also used indirectly for infrastructure finance, with the central government issuing some bonds on behalf of local government in addition to Treasury issues. The commercial banks also provide an indirect source of bond financing for infrastructure as they are by far the largest purchasers of bonds, as well as being among the largest issuers.

Table A5: Infrastructure-Related Issuers among Top 30 Corporate Issuers, 31 December 2013

Issuer	State-Owned	Amount (CNY billion)	Amount (\$ billion)
China Railway	Yes	896.0	148.0
State Grid Corporation of China	Yes	354.5	58.6
China Guodian	Yes	112.3	18.6
China Power Investment	Yes	89.6	14.8
China Three Gorges Project	Yes	77.5	12.8
China Southern Power Grid	Yes	68.5	11.3
China Huaneng Group	Yes	60.0	9.9
China Datang	Yes	44.7	7.4
Huaneng Power International	Yes	43.0	7.1
Total		1,746.1	288.5
Infrastructure-related as % of top 30 local currency corporate bond issuers		42.2%	42.2%

Source: *AsianBondsOnline*.

The three state-owned policy banks are a further source of indirect bond financing for infrastructure. Collectively, they have CNY8.8 trillion worth of bonds outstanding, with both China Development Bank and Agricultural Development Bank involved in domestic infrastructure finance. The third policy bank, the Export–Import Bank of China, supports Chinese contractors and manufacturers in infrastructure projects globally. Chinese involvement in international infrastructure has been increasing at a rapid rate. In thermal power generation, for example, four large Chinese players collectively held about 15% of the world market in 2010.²⁵ (Note: According to the new Budget Law of the PRC and the Guidelines and Opinions on Strengthening the Management of Local Government Debt, effective September 2014, the financial functions of LGFVs were removed and LGFVs are no longer allowed to borrow.)

Expanding the Use of Bond Financing

A number of ongoing policy initiatives will make the use of bond financing more attractive for general corporate purposes and specific infrastructure projects. The introduction of Basel III and other elements of international prudential standards, including the global systemically important financial institutions (G-SIFI) capital buffer for Bank of China and the domestic systemically important financial institutions buffers for other large banks, will make provision of credit, particularly the longer-term loans required for infrastructure projects, more expensive. Efforts to contain risks in the shadow banking system and to curtail local government borrowing make the concept of stand-alone infrastructure projects more attractive. It will therefore be important to continue with the implementation of strong prudential standards to encourage greater use of bond financing.

The local currency bond markets are large and already include a range of instruments. One challenge is that in the PRC's segmented market and regulatory system there is not always clarity regarding which authorities should be responsible for ensuring adequate safeguards for investors when new products are developed. Ensuring a streamlined approach to capital market oversight will be important to facilitate the development of specialized instruments such as corporate bonds, while at the same time ensuring adequate supervisory oversight.

A further challenge is that the banks remain the dominant purchasers of corporate debt. The investor base must be diversified and some recent policy initiatives are important in this regard. The authorities should consider other options, such as external fund managers and discretionary investment options for individual members of public pension funds, as means of diversifying the investor base and creating additional demand for products such as project bonds.

Recent changes in the tax regime for enterprise annuities should help them develop into a true second pillar for the pension system, resulting in large pools of capital available for investment. Life insurance will also continue to increase in importance, paralleling the experience in other countries, where protection products grow in line with increasing per capita incomes. The mutual fund market offers potential to attract some of the savings currently flowing to the unregulated or lightly regulated shadow banking system.

²⁵ Shanghai Electric, Dongfang, Harbin, and Doosan. C. R. James. 2012. Chinese and Korean Contractors in Large Project Finance Transactions. In R. Morrison, ed. *The Principles of Project Finance*. Farnham, United Kingdom: Gower Publishing Limited. pp.147–162.

Despite the impetus for bond financing, at least in the near term any increase is likely to continue to be in the form of bonds for general corporate financing, or when used for projects, in structures reliant on guarantees (explicit or implicit) and other collateral rather than the assets and revenues of the project alone. This is in large part because the required stand-alone legal structures and a PPP model clearly identifying the rights, obligations, risks, and revenues of the public and private participants have yet to emerge.

Indonesia

Financial and Capital Markets Overview

Indonesia has put in place all of the key structural and institutional elements of modern financial and capital markets.²⁶ The finance sector is bank dominated (Table A6). Total finance sector assets are equivalent to about 73% of GDP, with banks accounting for four-fifths of the total. Mutual funds are well established and growing rapidly; however, the insurance and pension sectors remain small. Taken together, mutual funds, life insurance companies, and pension funds have total assets equivalent to about 18% of GDP.²⁷ The small size of these domestic institutional investors limits their ability to finance infrastructure projects, despite an appetite for long-term assets that exceeds the available amount of local currency government and private debt securities.

Capital markets in Indonesia are relatively young. Stock market activity was minimal until the 1980s, and now includes close to 500 listed companies with market capitalization equivalent to about 46% of GDP. The government had borrowed internationally from time to time before the 1997/98 Asian financial crisis; however, local currency government bond issuance did not begin to finance bank recapitalization until 1998. Over the last decade, bond market activity and its supporting infrastructure have developed rapidly.

The regulatory and supervisory structure was transformed with the move from Bank Indonesia (BI) to the Indonesian Financial Services Authority (OJK) of responsibility for banking oversight, effective at the end of 2013. The OJK, established in 2011 to become a unified financial services supervisor, had in 2012 assumed responsibility for capital markets and nonbank financial institutions from a predecessor government agency, the Indonesian Capital Market and Financial Institutions Supervisory Authority (BAPEPAM-LK). Indonesia began to phase in Basel III in January 2014. Details of the Basel III liquidity coverage ratio have yet to be finalized.

Local Currency Bond Markets

Although the local currency bond markets have grown steadily in value since 1999 (Figure A9), in relation to GDP the size of the Indonesian market has declined since its peak in 2000 (Figure A10). This reflects the heavy financing needs of the central government in the immediate aftermath of the 1997/98 Asian financial crisis, which moderated as growth resumed, bank restructuring bonds were retired, and government finances were put on a

²⁶ Portions of this section draw on work completed by Robert Hannah for *Broadening the Investor Base for Local Currency Bonds in ASEAN+2*.

²⁷ Compared with about 120% in Malaysia and 54% in Thailand.

Table A6: Indonesia Financial and Capital Markets Overview

Financial Institution	Number	Assets (Rp trillion)	Assets (\$ billion)	Assets (% of GDP)
Banks				
Conventional	121	5,502.8	463.6	52.2
Islamic (includes Islamic windows)	34	252.2	21.3	2.4
Insurance	140	638.2	52.4	7.0
Life insurance	49	278.6	22.9	3.1
General insurance and reinsurance	82	100.6	8.25	1.1
Professional reinsurers	4	6.5	0.5	0.1
Social insurer and Jamsostek	2	157.2	12.89	1.7
Civil servant and armed forces	3	95.4	7.83	1.1
Pension funds	269	534.9	45.1	5.1
Employer Pension Fund (DPPK)	242	151.0	12.7	1.4
Financial Institution Pension Fund (DPLK)	25	35.5	3.0	0.3
Jamsostek (provident fund and health) ^a	1	187.0	15.8	1.8
Taspen (civil service)	1	161.3	13.6	1.5
Mutual funds	794	642.8	54.2	6.1
Listed companies (stock market capitalization)	506	5,228.0	440.5	49.6
Total debt securities outstanding		2,407.9	202.5	22.8
Of which, local currency		1,529.8	128.9	14.5
foreign currency		878.1	67.8	8.3
Government debt securities outstanding		1,784.9	142.4	16.9
Of which, local currency		1,307.0	105.5	12.4
foreign currency (Sep 2014)		477.9	36.9	4.5
Corporate debt securities outstanding		622.3	48.9	5.9
Of which, local currency		222.8	18.0	2.1
foreign currency		400.2	30.9	3.8

Notes: Data as of the end of 2014 except for bank data as of September 2014 and insurance data as of the end of 2013. Exchange rate at the end of 2014 (\$1 = Rp11,869), end of September 2014 (\$1 = Rp12,951), and end of 2013 (\$1 = Rp12,189). GDP at the end of 2014 (Rp10,543 trillion) and at the end of 2013 (Rp9,084 trillion).

^a Since renamed BPJS Ketenagakerjaan.

Sources: Bank Indonesia, Indonesian Financial Services Authority (OJK), The Jakarta Post, AsianBondsOnline.

sound footing. While corporate debt securities outstanding have grown in nominal terms, outstanding bonds at the end of 2013 were virtually unchanged from 15 years earlier, at 2.5% of GDP.

While many of the preconditions for bond market development have been addressed, some significant impediments remain. Commendably, the approach to government debt management has laid the foundation for the issuance and trading of debt securities. The

Debt Management Office publishes an issuance calendar, holds regular auctions through a primary dealer network, and has designated benchmark bonds along the yield curve in 5-, 10-, 15-, and 20-year tenors.

The necessary supporting infrastructure for bond issuance and trading is in place. BI is the depository for government securities, and the Indonesia Central Securities Depository is the custodian and paying agent for equities and corporate bonds, and is a subregistry for government bonds. All bonds are required to be listed on the stock exchange; however, almost all trading takes place OTC. All OTC trades must be reported to the exchange within 30 minutes. Trades are linked to BI's Real-Time Gross Settlement System. Transactions are conducted on a delivery-versus-payment basis.

Indonesia has successfully targeted individual investors with government savings bonds known as Obligasi Ritel Indonesia (ORI). ORI are relatively short-term—between 2 and 4 years—with monthly or quarterly interest payments. ORI are priced above the interest rate on bank savings deposits and distributed through a wide network of banks and dealers, including the Post Office. Significant sales commissions are paid, making distribution an attractive option for participants in the retail network.

One of the main reasons why the corporate bond market in Indonesia is small and growing only in nominal terms is that the Indonesian fiscal regime is not conducive to corporate bond issuance. Unlike interest on bank loans, bond interest expense is not deductible from taxable income. Withholding tax on interest and capital gains is levied at 15%–20% on residents and 20% on nonresidents. Mutual fund income is taxed at 5%. Additional impediments for nonresident investors are currency controls and restrictions on cash accounts.²⁸

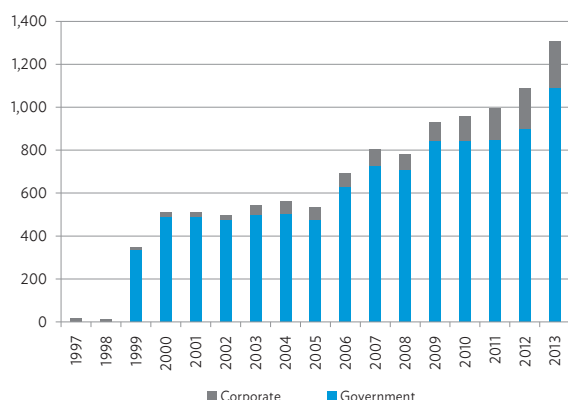
Another issue relates to legal infrastructure and predictability of judicial outcomes. Some institutional investors express reservations about bond covenants (undertakings by the issuer to secure the bond investment for the investor), viewing them as opaque and not consistently respected. The repurchase market,²⁹ an essential contributor to bond market liquidity, has been dampened by two court decisions involving repo transactions with an insolvent insurance company. The courts unwound the repo transactions and awarded ownership of the securities (the collateral) to the insurance company, with the lender incurring a loss. Improved legal certainty may be provided by the December 2013 adoption by BI and eight banks (including the three largest) of a master repo agreement.

Until recently, the large banks were generally liquid and ready to finance long-term projects. This, combined with the relatively small size of other institutional investors and the unaccommodating tax policy, has discouraged corporate bond financing. A further issue

²⁸ Rupiah transfers between nonresident accounts or a resident, and nonresident accounts, are permitted only upon documentation of economic activity in Indonesia, such as a securities trade. No overdrafts are permitted. Foreign exchange purchases through a commercial bank require documentation of each underlying transaction. All forex trades must be completed onshore. Forward purchases and sales of foreign exchange are permitted when supported by documentation similar to that required for spot trades.

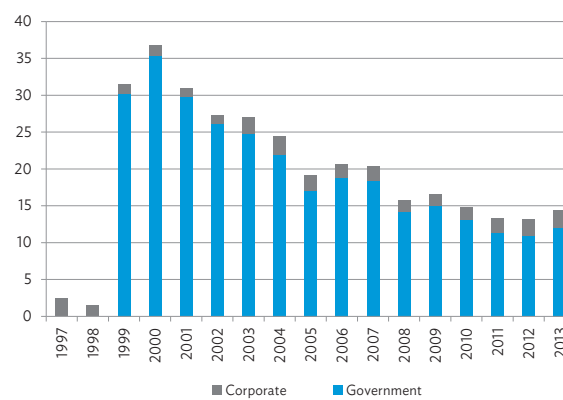
²⁹ Under a repurchase agreement, the owner of a security sells it to a lender and commits to repurchase (repo) the security at a future date. This provides the seller with cash, and the security collateralizes the loan provided by the lender—if the seller does not repurchase the security, the lender can then recover funds by selling the security.

Figure A9: Local Currency Bonds Outstanding (Rp trillion)



Source: AsianBondsOnline.

Figure A10: Local Currency Bonds Outstanding (% of GDP)



Source: AsianBondsOnline.

relates to disclosure, with unlisted conglomerates perhaps being reluctant to provide the disclosure required for bond issuance.

Bond Funds

Overview

Indonesia's managed fund industry has considerably increased in size since 2000, but not without growing pains. Before 2005, fixed-income funds valued their holdings on a historic cost-accrual basis. In 2005, BAPEPAM-LK issued new regulations requiring fixed-income funds to be valued on a mark-to-market basis, resulting in a near-collapse of the industry as investors withdrew significant amounts in the face of a sharp drop in valuations. As a consequence, the regulator introduced further provisions restricting investment in fixed-income securities with maturities greater than 1 year, and allowed fund managers to introduce principal-protected funds. Subsequent growth suggests that these measures stabilized the industry.³⁰

Size and Scope of Sector

Owing to the relative youth of the Indonesian capital markets, the Indonesian managed funds sector is small when compared with that of other ASEAN countries. A total of 178 domestic bond funds operate in Indonesia, with 150 funds denominated in rupiah (Table A7). Banks are the largest investors in bonds in Indonesia. Outside banks, collective bond fund schemes principally take the following forms:

- (i) **Pension funds.** There are an estimated 270 pension fund programs operating in Indonesia managing Rp101.6 trillion in bond assets. State-owned PT Jamsostek and PT Taspen are the country's two largest and manage the retirement assets

³⁰ ADB, 2011, *ASEAN+3 Bond Market Guide*, Manila.

Table A7: Indonesian Bond Funds Classification,
31 May 2014

Fund Classification	Number of Funds
Aggregate bond	117
Aggregate bond intermediate	8
Aggregate bond long	10
Aggregate bond short	2
Corporate bond	3
Government bond	10
\$ bond	28

Source: Bloomberg.

for civil servants and private sector workers, respectively. The two giants manage about 60% of Indonesia's pension assets between them, with the balance being held by private plans. Pensions hold about 12% of outstanding local currency bonds.

- (ii) **Insurance companies.** With a large yet young population and low penetration rates, Indonesia's small insurance market has strong growth potential. There are 47 life insurers currently operating in Indonesia, with Prudential and AXA Mandiri leading the way with a collective 40% market share. Along with the country's 87 general insurance companies, the sector manages bonds totaling about Rp163 trillion.
- (iii) **Mutual funds.** The mutual fund industry is small but relatively active and has grown substantially over the past 15 years. Major banks and securities firms market equity and fixed-income funds, and insurance companies sell unit-linked products similar to unit trust mutual funds. Bond portfolios totaling Rp80.6 trillion are managed by 74 mutual fund dealers.

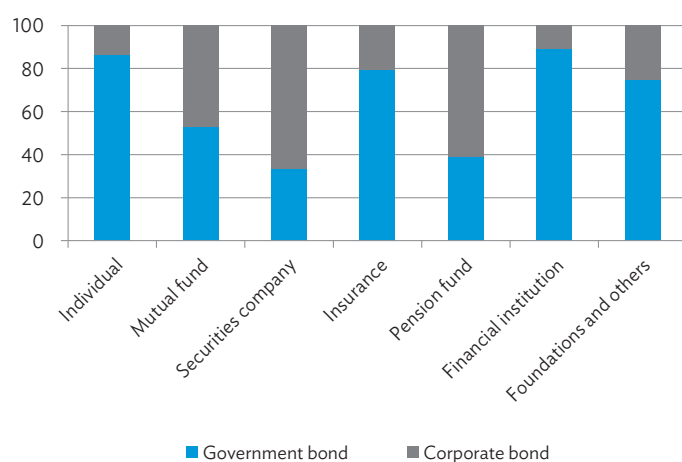
At present, no bond ETFs are offered in Indonesia.

Government bonds remain the dominant asset class. For reasons mentioned earlier, the development of corporate bond markets and corporate bond funds has been subdued. Despite the apparent growth of mutual funds, fund ownership is concentrated in high-net-worth investors and has not yet achieved significant penetration among the middle class. According to Association of Indonesian Mutual Fund Managers (APRDI) data, the average mutual fund investor's holding is worth a hefty Rp1.3–Rp1.4 billion. APRDI is targeting an expansion in the mutual fund base to 5 million investors by 2017, which would benefit a broader spectrum of Indonesian savers.

With the benefits and impetus provided by a predominantly young and productive population, APRDI sees a potential market of 45 million mutual fund investors. APRDI believes that this can be accomplished if the OJK liberalizes the distribution of mutual funds, specifically by expanding the number of channels through which funds are sold.

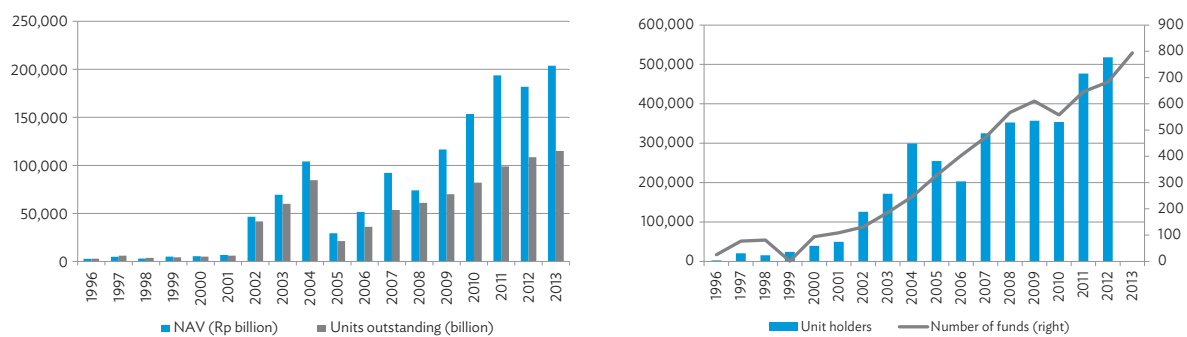
Table A8: Indonesian Institutional Bond Investments,
31 December 2013

Investment Fund Type	Government (Rp billion)	Corporate (Rp billion)	Total (Rp billion)
Individual	32,480.0	5,095.4	37,575.4
Mutual fund	42,500.0	38,140.6	80,640.6
Securities company	880.0	1,751.3	2,631.3
Insurance	129,550.0	33,577.6	163,127.6
Pension fund	39,470.0	62,165.9	101,635.9
Banks and other financial institutions	335,430.0	40,598.1	376,028.1
Foundation and others	47,850.0	2,620.7	64,160.7
Total	628,160.0	197,639.6	825,799.6



Source: OJK, Directorate of Debt Management.

Figure A11: Growth of Mutual Funds Assets under Management, 2000–2013



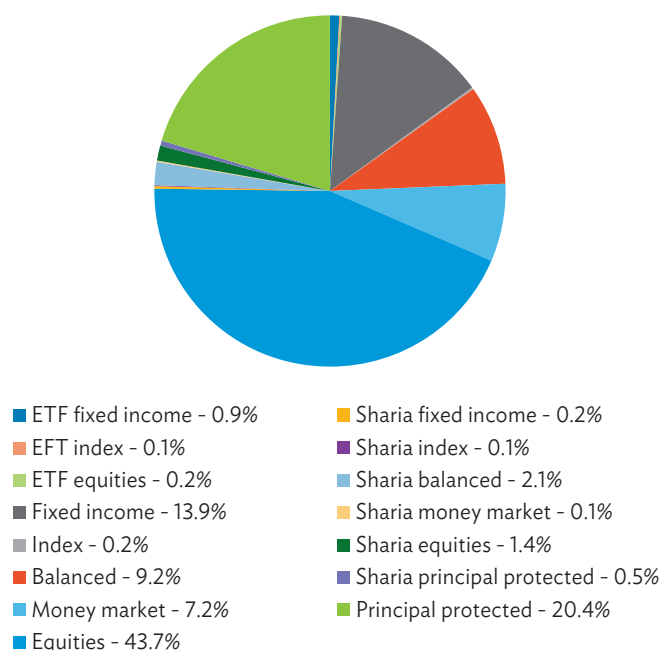
NAV = net asset value.

Source: OJK.

Currently, 95% of mutual funds are sold through banks. Future points of distribution could include insurance companies, financial advisers, independent distributors, and direct-to-consumer electronic networks.

A small but growing sector since 2008 has been the emerging sharia-compliant investment, which have also been introduced to the mutual fund sector (Figure A12). Compared with the advances of its much smaller neighbor Malaysia in this area, Indonesia has lagged in the development of *sukuk* in spite of its large Muslim population. Despite modest initial growth, only 3.5% of the mutual fund industry's assets are sharia compliant. This represents significant growth potential for bond funds and managed assets generally.

Figure A12: **Mutual Funds, by Asset Class**
(% Rp billion)



ETF Fixed Income	1,734.0	Sharia Fixed Income	485.9
EFT Index	165.2	Sharia Index	163.0
ETF Equities	349.8	Sharia Balanced	4,356.2
Fixed Income	28,270.9	Sharia Money Market	230.5
Index	347.8	Sharia Equities	2,832.5
Balanced	18,708.4	Sharia Principal Protected	952.7
Money Market	14,606.4	Principal Protected	41,495.2
Equities	89,059.4		

Note: Data as of the end of April 2014.

Sources: Bank Indonesia, Mutual Fund Information Centre, OJK.

Structural and Regulatory Framework

Bond funds are regulated under Capital Markets Law No.8/1995 and receive day-to-day supervision from the OJK, whose mandate is to ensure an orderly, fair, and efficient market and to protect the interests of the investors and the public. Like its predecessor BAPEPAM-LK, the OJK grants licenses to various securities market intermediaries (e.g., brokers, mutual funds, custodian banks, and underwriters) and professionals (accountants, public notaries, lawyers, and appraisers). The OJK is an agency of the Ministry of Finance.

The OJK's regulatory jurisdiction includes the following responsibilities:

- (i) prescribing capital market rules and regulations;
- (ii) ensuring compliance with capital market rules among market players;
- (iii) formulating disclosure requirements for issuers and public companies;
- (iv) settling and redressing disputes among person(s) on whom sanctions have been imposed by the stock exchange, the Clearing and Guarantee Corporation, or the Central Securities Depository; and
- (v) establishing capital market accounting standards.³¹

Another agency of the Ministry of Finance is the Directorate General of Debt Management (also known as the Debt Management Office). Its task is to formulate and implement policies and technical standards in the field of debt management. The Debt Management Office has put in place a primary distributor network for government securities and bond settlement, and established electronic custody arrangements.

Among the self-regulatory organizations (SROs) that oversee various capital market activities is APRDI. Members of this association are divided into ordinary and extraordinary members. Ordinary members include fund companies, investment managers, and custodians. Extraordinary members are institutions that are not directly related to mutual fund activity.

APRDI organizes and supervises its members to uphold standards of market conduct and professionalism, to broaden the skills of its members, and to act as an advocate for the industry within the broader Indonesian capital markets. While each member organization sets its own rules for its area of oversight, the OJK approves these rules, in much the same way that other SROs approve the rules made by their members.

Infrastructure Financing

Demand for infrastructure investment is high, reflecting a need to catch up from years of underinvestment, which has left Indonesia poorly positioned relative to other regional countries on measures such as the portion of the population with access to the electricity

³¹ ADB. 2011. *ASEAN+3 Bond Market Guide*. Manila.

grid, potable water, and sewerage. Transportation infrastructure, particularly in the large urban areas, is inadequate to support the growing population of 235 million. The government planned infrastructure investment equivalent to \$157 billion for the 5 years through 2014, with about 60% to be financed by the private sector.³² Bottlenecks in the planning and approval process exacerbated by uncertainties in the legal and regulatory regime have led to delays in many planned projects, with the result that infrastructure investment has fallen well short of the government's objective.

Private investment in large infrastructure projects in Indonesia peaked in 1996, driven by the booming energy sector and the privatization of the telecommunications industry. There was also significant investment in highways, both through the first private sector toll operator, PT Citra Marga Nusaphala Persadam (CMNP), and through the state-owned operator, PT Jasa Marga. At that time there was some limited use of project bonds. These were mostly foreign currency-denominated such as those issued by Paiton Energy Funding, CE Indonesia Funding Corporation, and DSPL Finance Company. Each of these was a funding conduit for project bonds to develop, build, and operate generating plants, with repayment to come from power purchase agreements with Perusahaan Listrik Negara (PLN), the state-owned electric utility. There was also very limited use of local currency project bonds, which included issues by CMNP for toll road construction.

From the perspective of project finance, the chilling effect on investor appetite for Indonesian risk arising from the 1997/98 Asian financial crisis was perhaps less significant than the highlighting of the legal, political, and country and transfer risks associated with Indonesian infrastructure projects. Long and difficult restructurings were common throughout corporate Indonesia, and in the power sector were complicated by the non-adherence of PLN to contractual terms of power purchase agreements. One consequence was that it was not until 2013 that the financing of an IPP was completed without a government guarantee of PLN's obligations. A further complication, not unique to project bondholders, was the prospect of lengthy litigation with unpredictable outcomes.

Current Approaches

Investment in infrastructure has been trending upward but continues to lag behind planned levels. Bank financing is the norm for projects in Indonesia; however, domestic banks have limited project finance expertise and have recently faced liquidity constraints. Some market observers have suggested that Malaysian banks are the most active in the Indonesian project finance market.

A major challenge has been bringing viable projects to the financing stage. Government has taken a number of policy initiatives to increase the flow of projects, and to facilitate their financing. The Indonesia Infrastructure Guarantee Facility (IIGF) was established as a state-owned entity in 2009 to provide guarantees against political risks such as delays in the processing of permits and licenses, or changes in rules and regulations. Through May 2014, two guarantees had been provided (Way Sekampung water supply and Central Java power plant), and six others were in various stages of review.

³² Andrew Kinlock. 2012. Indonesia, the Future. In Rod Morisson, ed. *The Principles of Project Finance*. Surrey, United Kingdom: Gower Publishing.

PT Saran Multi Infratraktur (SMI) is a state-owned entity established in 2009 to promote PPPs; to provide funding; and to be the shareholder—together with the ADB, World Bank, and private sector shareholders—in Indonesia Infrastructure Finance (IIF). At the end of 2013, SMI had an infrastructure loan portfolio of Rp5.1 trillion, and had just begun to provide advisory services. IIF is a nonbank financial institution intended to provide long-term guarantees and advisory services for infrastructure projects. At the end of May 2014, it had completed or was in negotiations for seven projects.

While the two state-owned entities—IIGF and SMI—and the SMI-sponsored IIF have contributed to bringing infrastructure projects to market, the limited resources available highlight the need to catalyze large-scale private investment. This will require more fundamental reform to ensure that the government has the capacity to implement and manage a successful PPP program.

IPPs have been one of the most common vehicles for private sector investment in Indonesian infrastructure. These projects are typically financed by international bank consortia. A government guarantee in support of the power purchase agreement with PLN has been required because of concerns about its financial capacity and political and legal risks. The Banten IPP agreement, completed in December 2013, was the first funded by an international consortium that did not require an explicit government guarantee. If the project is successfully developed, it could become a model for future projects, giving international lenders greater comfort regarding the financial, legal, and political risks associated with Indonesian project finance.

There is some limited history of project bonds to finance toll roads, but most transportation infrastructure investment not coming from the government budget is financed through bank loans. The Jakarta monorail project to be completed by a consortium of state-owned companies is expected to be financed 70% by bank loans and 30% from the companies' cash flow.³³ There have been ongoing delays with planning and contract finalization, calling into question the 3-year construction program and expected 2017 completion date. The Jakarta Mass Rapid Transit (MRT) project will be about 88% financed by a loan from the Japan International Cooperation Agency, with the balance from the Jakarta government budget.³⁴ Planning for the long-delayed project began in the 1980s, with the construction of phase one finally starting in April 2014. Tendering for other sections of the MRT is ongoing.

Bond Financing

The Indonesian corporate bond market is dominated by bank and other financial issuers. Among the top 30 issuers, only Indosat and Telekomunikasi Indonesia (both are state-owned telecommunications firms) and state-owned Jasa Marga (toll roads) are in infrastructure-related businesses. CMNP, the first private toll road operator in Indonesia, has used several bond issues to finance the construction and operation of its concessions.

³³ *Bloomberg News*. 2013. Indonesia to Build Jakarta Monorail to Ease Rising Traffic Jams. 7 February. <http://www.bloomberg.com/news/2013-02-07/indonesia-to-build-jakarta-monorail-to-ease-rising-traffic-jams.html>

³⁴ *Jakarta Post*. 2014. MRT Enters Final Bidding Processes. 19 February. <http://www.thejakartapost.com/news/2014/02/19/mrt-enters-final-bidding-processes.html>

With these exceptions, local currency bonds are not a source of infrastructure finance in Indonesia.

Expanding the Use of Bond Financing

The corporate bond market in Indonesia needs to expand considerably if it is to play a meaningful role in infrastructure finance. Placing interest paid on bank debt and interest paid on bonds on an equal footing from a tax perspective—currently bond interest is not deductible from corporate income for tax purposes—would be an important first step.

There is also a need to increase the number and size of domestic institutional investors. One step in this direction, which has been taken in some other countries in the region, is to move toward fuller funding of government pensions. The civil service and armed forces pension plans are mainly pay-as-you-go with a small reserve fund. Fuller funding would build larger pension funds that could be invested in local currency securities.

There is also scope for expanding pension coverage for the employees of private and state-controlled enterprises. Many domestic companies do not offer pension plans. Establishing pension plans for state-owned enterprises could have a useful demonstration effect for other employers. Although there are individual private pension plans available, uptake has been limited. Promotion of these plans, in particular by emphasizing the tax deferral benefit, could help to increase the assets managed by the providers of these financial institution pension plans. This would contribute to capital market development and meet the important social objective of ensuring that individuals provide for their own retirement.

There is a need for greater clarity regarding the regulatory changes coming in 2015 with respect to the regulation of the insurance and pension sectors. Jamsostek, the state health insurance and pension provider, will be divided into separate insurance and pension functions. The role of the current private pension industry relative to the revised state basic insurance provider has yet to be clarified, and potentially could reduce the scope for private pensions to emerge as significant pools of domestic capital.

There will continue to be a need to attract foreign capital for infrastructure investment given the liquidity constraints facing the banking sector and the small size of nonbank institutional investors. One avenue to explore is the possibility of developing pilot PPPs, most likely in the power generation sector, which lends itself to a more standardized approach that might be supported by SMI. Much as the Malaysian IPP projects in the 1990s established replicable templates, IPP projects may pave the way for more Indonesian PPPs.

Japan

Financial and Capital Markets Overview

Japan has all the elements of modern and developed financial and capital markets (Table A9). The system is bank dominated, with bank assets equivalent to more than twice GDP. The large city banks are international in scope with the three largest—Mitsubishi UFJ

Table A9: Financial and Capital Markets Overview, 31 December 2014

Financial Institution	Number	Assets (¥ trillion)	Assets (\$ billion)	Assets (% of GDP)
Banks	120	1,142.9	9,539.6	234.1
City banks	5	554.6	4,629.7	113.6
Regional banks	105	276.6	2,308.7	56.7
Trust banks	4	84.2	703.1	17.3
Foreign and other banks	5	20.0	166.9	4.1
Japan Post Bank	1	207.4	1,731.2	42.5
Cooperative financial institutions	1,549	494.3	4,126.0	101.2
Norinchukin Bank	1	95.3	795.7	19.5
Shinkin banks and Shinkin Central Bank	271	169.9	1,418.2	34.8
Shinkumi banks	154	20.5	171.1	4.2
Shinkumui Federation Bank	1	5.5	45.9	1.1
Labor bank and Rokinren Bank	14	25.8	215.4	5.3
Agricultural cooperatives	738	173.6	1,449.1	35.6
Fishery cooperatives	370	3.7	30.9	0.8
Insurance companies	95	482.1	4,024.2	98.8
Life	42	366.1	3,055.9	75.0
Of which, Japan Post Insurance	1	87.1	727.0	17.8
General and reinsurance	52	28.9	241.2	5.9
Government Pension Investment Fund ^a	1	137.0	1,143.6	28.1
Corporate pension plans		97.0	809.7	19.9
Other pension funds		12.0	100.2	2.5
Japan Finance Corporation	1	24.7	206.2	5.1
Investment trust management companies	145	148.8	1,242.1	30.5
Stock market (listed companies, market capitalization)	3,468	524.9	4,381.5	107.5
Securities companies	250	140.8	1,175.3	28.8
Total debt securities outstanding		1,093.5	9,127.7	224.0
Of which, local currency		1,074.6	8,969.9	220.0
foreign currency		18.9	157.8	3.9
Government debt securities outstanding		998.2	8,332.2	204.5
Of which, local currency		993.2	8,290.5	203.4
foreign currency		5.0	41.8	1.0
Corporate debt securities outstanding		95.3	795.5	19.5
Of which, local currency		81.4	679.5	16.7
foreign currency		13.9	115.7	2.8

Notes:

a. \$1 = ¥119.8 end of 2014, GDP = ¥488.2 trillion.

b. Japan Post Bank, Norinchukin Bank, GPIF, investment trust, stock market, securities, and bond data as of December 2014. City/regional/trust banks, Shinkumi banks/Shinkumi Federation Bank, general and reinsurance data as of September 2014. All other data as of March 2014.

^a Government Pension Investment Fund manages the assets of the mandatory Employee Pension Insurance (private sector employees), the Mutual Aid Society (public sector employees), and the National Pension System (non-earnings-based contributory old-age pension).Sources: Japanese Bankers Association, Norinchukin Bank, The National Association of Shinkin Banks, Shinkin Central Bank, Shinkumi Federation Bank, Japan Ministry of Finance, Japan Exchange Group, Government Pension Investment Fund, Japan Finance Corporation, Community Bank Shinyo Kumiai, Rokinren Bank, Agricultural cooperatives, Fisheries cooperatives, Japan Post Bank, Japan Post Insurance, Life Insurance Association of Japan, General Insurance Association of Japan, Foreign Non-Life Insurance Association of Japan, Nomura Research Institute, Japan Securities Dealers Association, Tokyo Stock Exchange. Investment Trust Association of Japan, *AsianBondsOnline*.

Financial Group, Mizuho Financial Group, and Sumitomo Mitsui Financial Group—having been designated as G-SIFIs by the Basel Committee.

Several unique features of the Japanese financial system indicate that the importance of deposit-based intermediation is even greater than is suggested by the size of the banks. Japan Post Bank, which alone has total assets equal to more than 40% of GDP, is a narrow bank funded by deposits and investing in high-quality securities, about 68% of this in Japanese Government Bonds (JGBs). The cooperative sector, which comprises over 1,400 entities offering financial services, includes several large bank or bank-like institutions subject to a different regulatory regime than that applicable to the banks. Collectively, these cooperatives, largely funded by deposits, have total assets equivalent to over 100% of GDP. Taken together, the deposit-taking sectors have total assets exceeding 335% of GDP.

Another unique feature is the extent of direct government participation, with government-owned financial institutions accounting for about 30% of finance sector intermediation. In addition to Japan Post Bank, which is larger than any of the three Japanese G-SIFIs, Japan Post Insurance is one of the largest insurance companies in the world. Other major government-related financial institutions are Shoko Chukin Bank, Development Bank of Japan, Japan Bank for International Cooperation, and Japan Finance Corporation. The government has announced plans to divest its shareholding in Development Bank of Japan over a 5- to 7-year period from 2012. Government ownership of Japan Post Bank and Japan Post Insurance has been migrated to Japan Post Holdings, with a view to preparing for privatization. While government's role will be reduced over time, for the foreseeable future government-related financial institutions will be major players in the finance sector.

Nonbank institutional investors play a significant role in Japanese financial and capital markets. Life insurance companies are large with broad penetration, resulting in life insurance premiums per capita exceeding \$4,000, the highest in the world and totaling more than 12% of GDP. Investment trusts (similar to unit trusts or mutual funds) are sold primarily to individual investors by 134 management companies. Collectively, these trusts have assets under management equal to about 30% of GDP.

The main government pension funds (National Pension System and Employee Pension Insurance) have accumulated reserves equivalent to more than one-third of GDP, which are managed by the Government Pension Investment Fund (GPIF). Despite the relatively large fund size in nominal terms—equivalent to more than \$1.6 trillion—a significant pension liability still remains because of the rapidly aging population of Japan.

The JGB market amounts to over 200% of GDP, the largest in the world relative to GDP. Now exceeding \$9.3 trillion, it is the second largest in absolute terms after the US government debt market. Aside from the JGB market, Japanese capital markets are relatively modest in size relative to the economy and other G7 countries. The corporate bond market is about one-sixth the size of the JGB market, and stock market capitalization is equal to about 100% of GDP. While growth has resumed since reaching new lows in 2012, the Tokyo Stock Exchange Index remains about 60% below its 1989 peak.

Japan's finance sector supervisory architecture is complex with multiple shared responsibilities. The Financial Services Agency (FSA) is the main prudential supervisory authority with responsibility for banks and insurance companies and oversight of securities firms. The Bank of Japan (BOJ) also conducts on-site examinations and off-site monitoring with regard to its counterparties, which include the banks and other major financial institutions. The Ministry of Health, Labour, and Welfare (MHLW) is responsible for pension fund oversight with the exception of the pension funds for civil servants and private school employees.

The FSA shares responsibility for oversight of some of the cooperative institutions including Norinchukin Bank and *shinkin* banks, while other cooperatives are solely supervised by other government entities. The day-to-day supervision of the regional and *shinkin* banks is delegated to local finance bureaus of the Ministry of Finance (MOF). The Ministry of Agriculture, Forestry and Fisheries also plays an oversight role with respect to Norinchukin Bank, and agricultural and fisheries cooperatives offering financial services. Agriculture and fishery cooperatives are supervised under the Agricultural Cooperatives Act and the Fishery Cooperatives Act, with day-to-day supervision conducted by local state governments. The Ministry of Economy, Trade and Industry, FSA, and MOF oversee Shoko Chukin Bank. The MHLW and FSA oversee labor banks and Rokinren Bank.

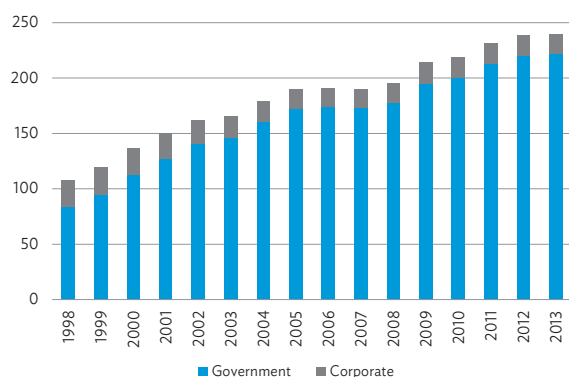
The Insurance Business Act excludes the insurance activities of cooperatives from FSA oversight, so these are overseen by the respective ministries. This results in a structure that somewhat parallels the approach to deposit-taking cooperatives by involving multiple ministries, except that the FSA does not share responsibility with the various ministries.

The FSA delegates significant responsibility for capital market oversight to the local finance bureaus of the MOF and several SROs. The local finance bureaus are responsible in reviewing prospectus and periodic information of issuers, registering securities firms, and monitoring and inspecting small and medium-sized securities firms. The SROs include the stock exchanges with respect to listing and market conduct rules and oversight of member firms, the Japan Securities Dealers Association with respect to rule making and oversight of securities dealers, the Investment Trust Association of Japan with rule-making and oversight responsibility for investment trusts (similar to mutual funds), and the Japan Securities Investment Advisers Association, which has similar powers over advisers.

Local Currency Bond Markets

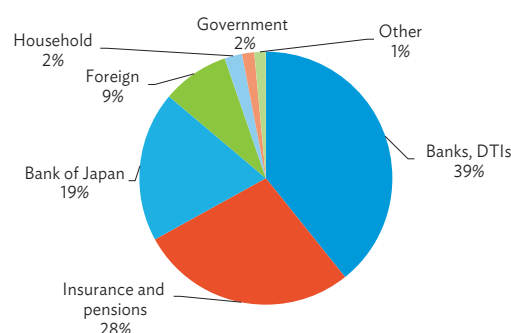
The local currency bond market is dominated by JGBs, which accounted for 91.5% of the total outstanding bonds at the end of 2013 (Figure A13). Most of the JGBs are held domestically, with foreign investors accounting for only 9% of outstanding yen issues (Figure A14). Public sector holdings through the Bank of Japan, Japan Post Bank, Japan Post Insurance, the Fiscal Loan Fund, and the Government Pension Investment Fund account for more than half of outstanding JGBs. Expansion of public sector holdings since 2012 has been driven in part by the Bank of Japan's stimulus policies. The JGB market is among the most liquid in Asia, with average trading volumes relative to outstanding bonds second only to the Republic of Korea's. The smaller corporate market is much less liquid, ranking at the lower end of ASEAN+3 countries in turnover relative to outstanding bonds.

Figure A13: **Local Currency Bonds Outstanding**
(% of GDP)



Source: Japan Ministry of Finance, *AsianBondsOnline*.

Figure A14: **Investors in Japanese Government Bond, 31 December 2013** (% of total)



DTI = deposit-taking institution.

Source: Bank of Japan.

Japanese corporate bond markets were significantly reformed through the 1990s by the transition from a merit-based regime to a disclosure-based regime, culminating in 1996 with the abolition of prescribed eligibility criteria for an issue. The supporting clearing, settlement, and depository infrastructure was enhanced in the latter part of the 1990s in line with evolving international standards. Despite the innovations, corporate bonds outstanding have declined relative to GDP from over 20% in 2000 to about 17% at the end of 2013. This reflects curtailed capital investment by Japanese corporates through the period of economic stagnation.

Corporate bonds may be issued by public offering or private placements, with the same requirements applying to foreign and Japanese issuers. Private placements are not subject to the same initial and continuous disclosure requirements applicable to public offerings. Private placements may be made to less than 50 investors, or qualified institutional investors, or to specified investors—essentially a broader definition of qualified investor.

The Japan Exchange Group (JPX) Pro-Bond market, which lists bonds and medium-term notes of foreign and Japanese issuers, was established after the 2008 reform introducing the specified-investor concept to cater to these investors. English-language documentation is permitted, making the Pro-Bond market more attractive to foreign issuers as well as domestic issuers targeting foreign institutional investors.

As is the case for countries with well-developed debt markets, the Japanese nonbank finance sector is large and diverse. Despite the diversity of domestic institutional investors, investment policies and portfolios tend to focus on high proportions of JGBs, with this generally conservative approach to investment being even more in evidence in public entities such as the GPIF and Japan Post Insurance. Increasing the sophistication of investment management among public entities and improving their governance are among the key recommendations of the Panel for Vitalizing Financial and Capital

Markets.³⁵ This could help to create demand for a wider range of debt instruments as well as alternative investment classes including infrastructure.

Bond Funds

Overview

Japan is Asia's largest local currency bond market, followed by the PRC and the Republic of Korea. As of March 2014, government and corporate bonds worth \$10.2 trillion were outstanding, including \$9.4 trillion (92%) in government bonds. Thanks to loyal local banks and institutional giants—including pension funds and insurance companies—the Japanese government has long been able to borrow at low cost. However, Prime Minister Abe's expansionary fiscal policy and monetary easing to fight decades-long stagnation and to reignite economic growth ("Abenomics") is likely to lead to rising financing costs for borrowers as a result of yield increases under higher inflation expectations. If successful, the plan will transform Japan's public pension funds, the country's largest institutional investors and key clients of the asset management industry, from limited-mandate administrators to broad-mandate asset managers.

Pension industry. Japan has a very complex pension system. Combined, the National Pension System, compulsory for all residents aged between 20 and 60, the Employees' Pension Insurance for private sector workers, and the Mutual Aid Association, which covers central and local government employees as well as private school workers, form the public pension pillar. Various forms of voluntary occupational pension plans are available to provide additional benefits. Defined-benefit and defined-contribution corporate pension schemes were introduced in Japan in 2001. In addition, the self-employed and those not offered a corporate pension plan can set up defined contribution (DC) accounts with the National Pension Fund Association.

The reserves of the National Pension System and the Employees' Pension Insurance are managed and invested by the GPIF, established in 2001 to replace its predecessor, Pension Welfare Service Public Corporation. GPIF is the world's largest pension fund with \$1.3 trillion assets under management.

In 2014, GPIF entered into a co-investment agreement with the Ontario Municipal Employees Retirement System (OMERS) and the Development Bank of Japan (DBJ) to jointly invest in infrastructure assets in developed countries—sourced and proposed by OMERS—through a unit trust structure with Nissay Asset Management as investment manager. Infrastructure assets are classified under international fixed-income investments on the basis of GPIF's policy asset mix, although the joint venture will also entail equity investments.

Assets totaling \$888 billion are controlled by private pension funds. Both GPIF and corporate pensions have for years been heavy on domestic debt, a trend that has been reversed in the recent past. Given the extremely low interest environment and dismal yields offered by domestic bonds, both the public and private pension sectors are increasing

³⁵ Panel for Vitalizing Financial and Capital Markets. Recommendations for Vitalizing Financial and Capital Markets. December 2103; and Follow-up and Further Recommendations for Vitalizing Financial and Capital Markets. June 2014.

allocations to a wider range of asset classes including foreign securities, real estate investment trusts (REITs) and infrastructure projects, as well as active asset management in the quest for higher returns.

The sufficiency and sustainability of Japan's pension funds are greatly challenged by the aging population, highlighted by a projected old-age dependency ratio of 75 by 2050, driven by one of the world's highest life expectancies and a relatively low fertility rate. As estimated by the Ministry of Health, Labor, and Welfare, the country's predominant public pension program, Employees' Pension Insurance, will continue to draw down its reserves to pay benefit outlays in the short term, while its reserves will increase in the long term.

Insurance Industry. Japan is the only advanced Asian market³⁶ that has experienced a positive growth rate in life premiums since the financial crisis. Similarly, while nonlife premium growth has been depressed in North America, Western Europe, and Oceania postcrisis, Japan reported an average annual growth rate of 3.5% from 2009 to 2013, compared with 0.5% before the global financial crisis, partly because of the earthquake and tsunami in 2011. In 2013, Japanese insurers received a total of \$53.2 billion in premiums—\$42.0 billion in life premiums, and \$10.9 billion in nonlife. Overall, Japan had an insurance density of \$4,207 per capita in 2013, ranking 10th in the world, and an insurance penetration of 11.1% of GDP, ranking seventh.³⁷

Japan has one of the most comprehensive solvency and capital management regimes in Asia. The FSA is working toward ensuring financial soundness and achieving Solvency II equivalence.

Investment Trusts and Asset Management Companies. Asset management companies (AMCs) in Japan serve three types of clients: retail investors, pension funds, and corporations, including financial institutions. Nomura Research estimated that as of 31 March 2013, Japan's financial assets totaled ¥1,723 trillion, 20% of which were managed by AMCs.³⁸ The retail investment landscape could undergo a significant shift following the advent of tax-exempt individual investment accounts called "Nippon Investment Savings Accounts (NISA)" introduced in January 2014. NISA is aimed at coaxing individual savers to invest in equities and other risky assets, and to promote long-term investment among the younger generation. Japanese individuals are conservative investors: only 8% of Japan's \$16 trillion household wealth is exposed to stocks, compared with 30% in the United States.³⁹ NISA allows each individual over the age of 20 to set up one account and invest up to ¥1 million annually to be eligible for an exemption from the 20% tax levy on capital gains, dividends, and coupons.

Financial institutions—including banks, *shinkin* (cooperative) banks, credit unions, and insurers—represent a minor revenue source for AMCs as these institutions invest the majority of their assets in JGBs and largely manage their assets internally. In the current environment of reflationary policies, banks are likely to diversify their portfolios away from

³⁶ Advanced Asia, according to IMF's economy classifications, comprises Japan; Republic of Korea; Hong Kong, China; Singapore; and Taipei, China.

³⁷ Swiss Re Sigma. 2014. World insurance in 2013. media.swissre.com/documents/sigma3_2014_en.pdf

³⁸ Nomura Research Institute. 2013. Japan's Asset Management Business 2013/2014.

³⁹ *Wall Street Journal*. 2014. Japan launches tax free investment accounts. 8 January 2014. wsj.com/japanrealtime/2014/01/08/japan-launches-tax-free-investment-accounts

a JGB-centric model. This may present opportunities for AMC's in terms of asset allocation and asset trading.

It is common for Japanese AMC's to outsource portfolio asset management to third-party subadvisers and focus on conducting marketing functions and structuring investment vehicles for investors. In particular, a high percentage of AMC's outsource the management of high-yield bonds and emerging-market securities. After long periods of resistance, Japanese AMC's have become increasingly open to the idea of outsourcing back- and mid-office functions for improved operating efficiency.⁴⁰

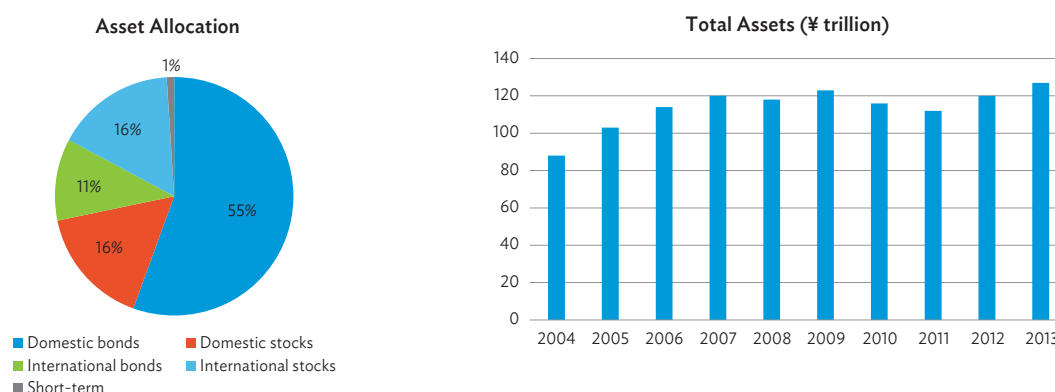
Size and Scope

Public Pensions. GPIF currently manages and invests ¥130.9 trillion (\$1.2 trillion) on behalf of 40 million pensioners. The asset base of GPIF from FY2004 to FY2013 is summarized in Figure A15.

As of fiscal year-end 2013 (31 March 2014), two-thirds of GPIF's ¥126.6 trillion in assets were invested in bonds, the majority of which (¥70 trillion) were domestic, including Fiscal Investments and Loan Program (FILP) holdings. In addition to in-house asset management teams, GPIF outsources the management of domestic fixed-income securities to 15 external asset managers (Table A10). Over 90% of the domestic bond assets are passively managed, with Sumitomo Mitsui Trust Bank, Mitsubishi UFJ Trust and Banking, and Resona Bank as the top three subcontractors.

The GPIF has been cutting its holdings in domestic bonds, which offer the lowest yields in the world, and seeking riskier asset classes in pursuit of higher returns (Figure A16). The domestic bond weighting of 55% at fiscal year-end 2013 (March 2014) of 55% was already

Figure A15: Asset Growth of Government Pension Investment Fund from FY2004 to FY2013; Asset Allocation, 31 March 2014



Source: GPIF Review of Operations in Fiscal 2013.

⁴⁰ State Street 2013, newsroom.statestreet.com/press-release/asset-managers/outourcing-trend-growing-japan-asset-management-industry; and Nomura Research Institute.

Table A10: Management of Government Pension Investment Fund's Domestic Bonds, by Asset Management Firm, FY2013

Subcontractor	Active/ Passive	Benchmark	MV (¥ billion)	% MV
In-house III	Passive	BPI - C	16,223.1	23.1
In-house II	Passive	BPI - J	4,983.1	7.1
Sumitomo Mitsui Trust Bank II	Passive	BPI - J	4,982.7	7.1
Mitsubishi UFJ Trust and Banking	Passive	BPI - J	4,981.5	7.1
Resona Bank	Passive	BPI - J	4,981.0	7.1
In-house I	Passive	BPI	4,944.5	7.0
Sumitomo Mitsui Trust Bank I	Passive	BPI	4,941.7	7.0
State Street Global Advisors Japan	Passive	BPI	4,940.4	7.0
Mizuho Trust & Banking	Passive	BPI	4,938.2	7.0
DIAM	Active	BPI	987.0	1.4
Sumitomo Mitsui Trust Bank	Active	BPI	848.4	1.2
Tokio Marine	Active	BPI	846.4	1.2
Mitsubishi UFJ Trust and Banking	Active	BPI	843.6	1.2
Mizuho Trust & Banking	Active	BPI	842.8	1.2
MJ Investments	Active	BPI	490.5	0.7
Prudential Investment Management Japan	Active	BPI	423.3	0.7
PIMCO Japan	Active	BPI	420.0	0.7
Manulife Asset Management Japan	Active	BPI	418.3	0.7
Total			62,036.5	100.0

Source: GPIF, Review of Operations in Fiscal 2013. gpif.go.jp

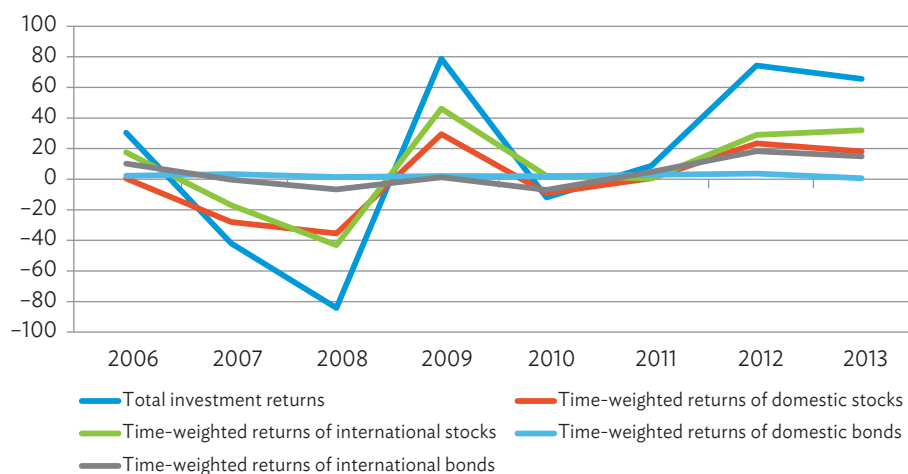
substantially and progressively lower than 70%+ in 2007–2008. In 2013, GPIF reviewed and revised its policy asset mix by again reducing the portfolio target in domestic bonds from 67% to 60%, and correspondingly increasing the targets in international bonds (from 8% to 11%) and stocks (from 9% to 12%) by 3% each and domestic stocks (from 11% to 12%) by 1%.⁴¹

As a result of GPIF's effort to reduce its holdings of low-yielding domestic bonds, Nomura Holdings estimates that approximately \$200 billion will flow into the overseas stock and bond markets.⁴² In the first 4 months of 2014, nearly \$4 billion was injected into the bond markets of other Asian economies, with 75% to Singapore; Hong Kong, China; and Malaysia. The main challenge for Japan's bond investments in other Asian countries is the lack of investment-grade bonds in the region. Japan, Singapore, and Malaysia are the only three Asian countries included in Citigroup's global investment-grade bond index, which is the benchmark GPIF uses for its international bond portfolio.

⁴¹ GPIF. 2013. The Revision of Medium-Term Plan. gpif.go.jp/en/fund/pdf/2013_medium_term.pdf

⁴² Bloomberg. 2014. World's Oldest Population Drives Asian Bonds in Quest for Yield. 30 June. bloomberg.com/news

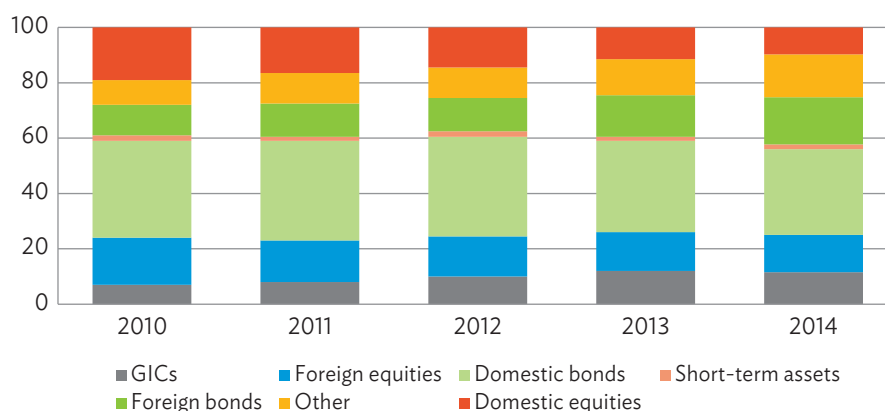
Figure A16: Government Pension Investment Fund Time-Weighted Investment Returns, by Asset Class, 2006–2013



Source: GPIF, Review of Operations in Fiscal 2013, gpif.go.jp

Private Pensions. Japan's private pension funds, which manage assets of approximately ¥90 trillion, are similarly turning away from government debt and diversifying their holdings to include greater allocations to higher-yielding assets. In late June, JP Morgan Asset Management published a survey of 127 corporate pension funds. The funds had reduced their holdings of domestic debt from 34.9% to 34.1% over the previous 12 months, the lowest level since 2009. Figure A17 shows the multiyear transition into asset classes other than domestic bond and domestic equities, particularly a growing allocation to foreign bonds.⁴³

Figure A17: Japan's Private Pension Funds: Asset Allocation, 2010–2014



GIC = Government Investment Corporation.

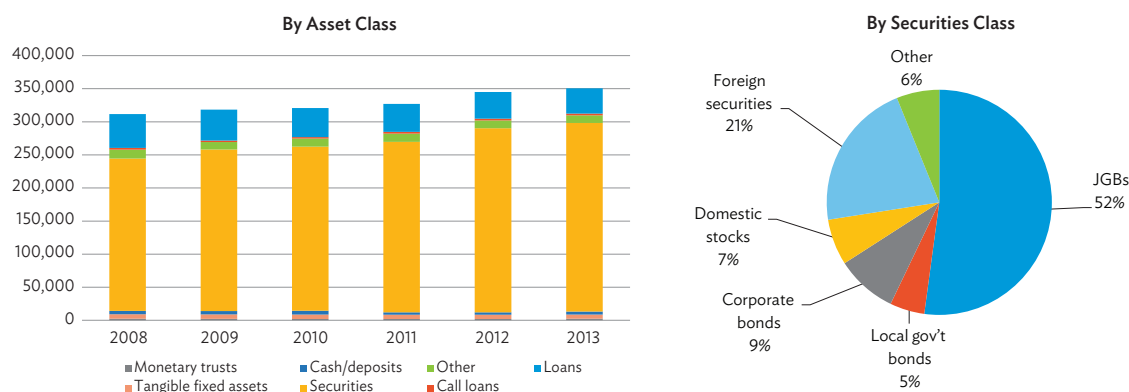
Source: WSJ.com

⁴³ Wall Street Journal. 2014. Japan's Private Pension Funds Eye Riskier Assets. 15 July.

Life Insurance. As of fiscal year-end 2013, 43 life insurers had ¥351 trillion in assets under management, 81% of which (¥278 trillion) were invested in securities (Figure A18). Furthermore, over half of the securities assets consisted of holdings in JGBs, 20% in foreign bonds and equities, 9% in domestic corporate bonds, and 6% in domestic equities. Japan Post Insurance alone had ¥90.5 trillion in assets, with ¥56.5 trillion (62%) invested in JGBs.

Nonlife Insurance. Thirty-one domestic and 23 branch offices of foreign general insurance companies currently operate in Japan. As of fiscal year-end 2013, member companies of the General Insurance Association of Japan had ¥26.3 trillion in investible assets outstanding, 83% of which were invested in domestic and international securities (Figure A19). In contrast to the portfolio of life insurance companies, domestic equities account for the biggest share of the general insurance pie. Holdings of foreign securities

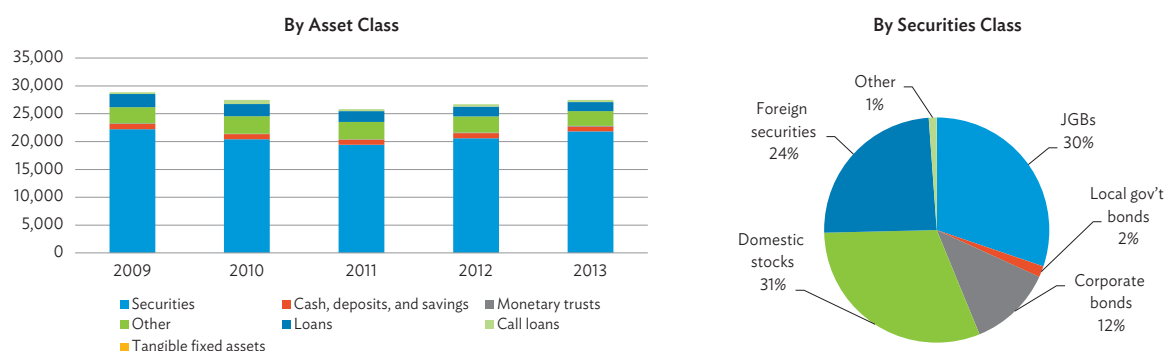
Figure A18: **Life Insurance Assets under Management, FY2008–FY2013**
(¥ trillion)



JGBs = Japanese Government Bonds.

Source: The Life Insurance Association of Japan. *Life Insurance Fact Book 2013*. seiho.or.jp/english/statistics/trend

Figure A19: **Nonlife Insurance Assets under Management, FY2009–2013**
(¥ trillion)



JGBs = Japanese Government Bonds.

Source: The General Insurance Association of Japan. *Business Results: Balance Sheet*. sonpo.or.jp/en/statistics/business/

and Japanese corporate bonds are moderately higher as well, while holdings of JGBs represent only 30% of the entire securities portfolio.

Investment Trusts. In Japan, mutual funds are known as investment trusts. As of December 2014, the Investment Trusts Association listed 144 asset management companies as full members and 19 securities firms as supporting members. A total of 8,827 publicly offered (61%) and privately placed (38%) investment trusts held ¥147 trillion in managed assets at the end of December 2014. The top 10 firms combined account for 76% of the publicly offered investment trust market, with Nomura leading the league table with a 23% market share, followed by Daiwa at 14% and Nikko at 10%.

The Japanese asset management industry is dominated by equity investment. Seventy-six asset management firms with 5,242 funds were managing ¥77.0 trillion under publicly offered stock investment trusts, representing over half of the investment trust industry. Publicly offered and privately offered bond investment trusts total ¥16.4 trillion and ¥1.6 trillion, respectively, but accounted for just 12% of the entire investment trust industry. Table A11 lists the largest managers of publicly offered bond investment trusts.⁴⁴

Contractual-type investment trusts are distributed through securities companies, other registered financial institutions such as banks and insurance companies, and direct marketing. Figure A20 illustrates the distribution channel breakdown for bonds.

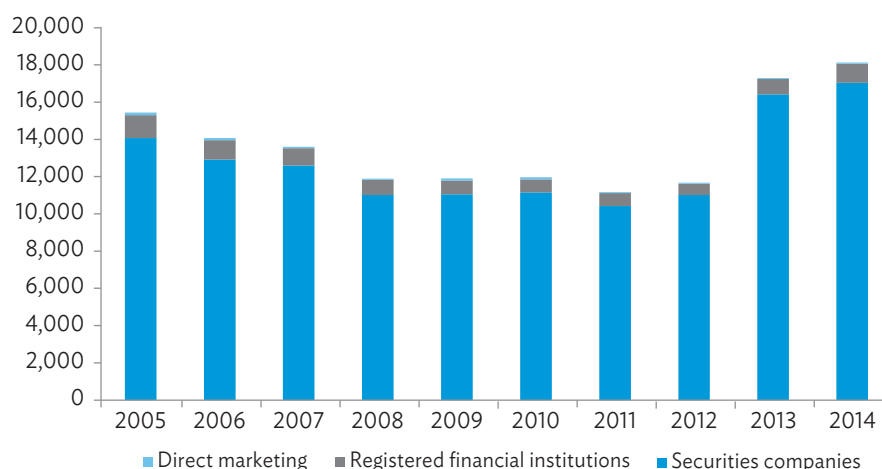
Table A11: Top 14 Publicly Offered Bond Investment Trusts, 30 June 2014
(¥ billion)

Management Company	Assets under Management	% of Top 14
Nomura Asset Management	7,093	43.2
Daiwa Asset Management	3,265	19.9
Nikko Asset Management	2,535	15.5
Mitsubishi UFJ Asset Management	899	5.5
Shinko Asset Management	759	4.6
KOKUSAI Asset Management	718	4.4
Mizuho Asset Management	410	2.5
JPMorgan Asset Management (Japan)	277	1.7
Okasan Asset Management	218	1.3
Norinchukin Zenkyoren Asset Management	119	0.7
Sumitomo Mitsui Asset Management	79	0.5
T&D Asset Management	17	0.1
Amundi Japan	16	0.1
INVESCO Asset Management (Japan)	2	0.0
Total	16,409,118	100.0

Source: The Investment Trusts Association, Japan. toushin.or.jp/english/statistics

⁴⁴ The Investment Trusts Association, Japan. toushin.or.jp/statistics/statistics/data

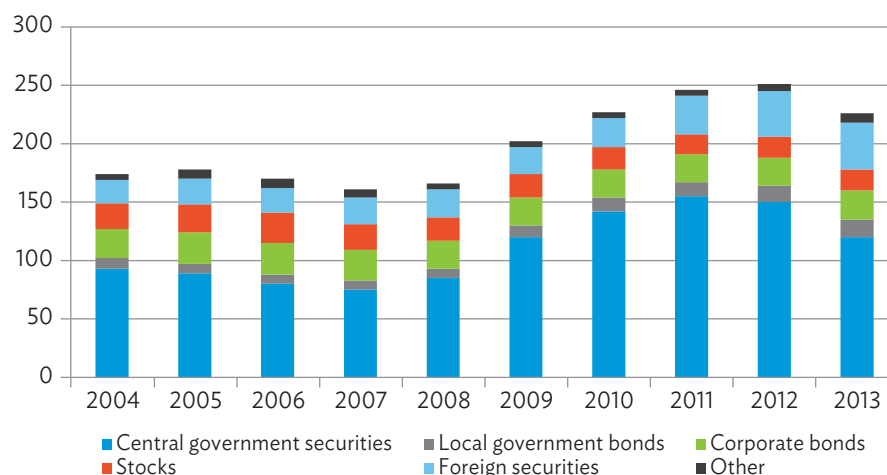
Figure A20: Total Net Assets of Contractual-Type Bond Investment Trusts, by Distribution Channel, 2004–2013 (¥ billion)



Source: The Investment Trusts Association, Japan. toushin.or.jp/english/statistics

Banks. The investment assets of all Japanese city banks, regional banks, and second-tier regional banks totaled ¥220 trillion as of fiscal year-end 2013. Over half of the securities are invested in JGBs (Figure A21). However, allocations to JGBs have been decreasing since 2011 across the entire banking industry in response to the central bank's monetary easing and the government's reform policies. City banks and major regional banks offset the reduced allocations to JGBs by holding more foreign securities and domestic equities. In contrast, second-tier regional banks increased their investment in domestic corporate bonds while holding foreign securities and equities relatively constant, possibly because of a lack of asset management expertise in-house.

Figure A21: Asset Allocation of Banks' Investment Securities, FY2004–FY2013 (¥ trillion)



Source: BOJ Time Series Data Search.

Infrastructure Financing

Current Approaches

Infrastructure investment in Japan is typically financed by the public sector, often through local government bonds, government agency bonds, local public corporation bonds, or local government agency bonds. The use of local government bonds and subsidies and tax allocation grants from the central government has traditionally facilitated low-cost financing, reducing the attractiveness of private investment. This will change, given the increasing fiscal pressure on the central government.

PPPs have been used in Japan since the Promotion of Private Finance Initiative Act in 1999. Over 400 projects, mostly build–transfer–operate agreements for social infrastructure such as government buildings and local public facilities, have been undertaken. These projects depend on government payments for construction and operation. Revisions in the law in 2011 introduced concession agreements to facilitate user-pay infrastructure projects. As part of a 10-year action plan announced in 2013, the government is targeting ¥10–¥12 trillion in projects.

The private sector plays a significant role in transportation infrastructure, with most rail services in the large urban centers (including subways) provided by private companies operating trains on their own rail infrastructure. These are typically companies engaged in a range of business including estate development and leasing. Development of company-owned land adjacent to stations provides an economic rationale beyond passenger revenues for the construction of new lines and stations.

Bond Financing

While project financing has not been a large part of the domestic market, Japanese companies and financial institutions are major players in infrastructure projects around the world, many using project bonds. The government-owned Japan Bank for International Cooperation supports infrastructure projects with significant Japanese participation by providing financing to complement private sector sources and advisory services. The Nippon Export and Investment Insurance plays a traditional ECA role, providing political risk and other cover in support of projects where Japanese companies are involved as project sponsors or providers of construction services or major capital equipment. The large Japanese banks have been actively involved in infrastructure projects, both in an advisory and underwriting role with respect to the issuance of project bonds, and as part of lending consortia.

Expanding the Use of Bond Financing

Recent government initiatives are likely to lead to an increase in project bond financing by catalyzing the domestic market. To move away from the financing approaches traditionally used in Japan—central and local government financing—it will be important to carry out plans to expand the investment portfolios of pension plans and life insurance companies to encompass a wider range of instruments, including foreign and domestic project bonds. It will also be important to continue to promote PPPs.

Measures intended to promote the financial and capital markets could increase domestic investor interest in project bonds. Recent legal changes to encourage PPPs are expected to facilitate private sector financing through concession agreements for a range of projects including the maintenance and operation of airports, water and sewerage facilities, and expressways. The Private Finance Initiative Promotion Corporation of Japan was established in late 2013 with investment from government and private financial institutions. Its mandate is to promote equity investments in infrastructure projects by providing mezzanine debt or preferred share investment in project companies. The promotion of user-pay projects is expected to reduce fiscal pressures and provide additional private sector opportunities.

These measures will be complemented with efforts to harness existing savings for more productive investment. These include the promotion of new investment vehicles including infrastructure funds, and a review of the governance and investment policies of institutional investors, particularly public entities, to facilitate investment in a wider range of assets. A greater focus on regional investment as a means of increasing returns could result in investment by the GPIF in infrastructure domestically and abroad, possibly in conjunction with other large pension funds.

Republic of Korea

Financial and Capital Markets Overview

The Republic of Korea has a large well-developed finance sector.⁴⁵ Deposit-taking institutions, which include credit cooperatives, mutual banks, and the Postal Savings Bureau in addition to commercial and specialized banks, have total assets approaching 200% of GDP (Table A12). Life insurance is well established and the government National Pension Service, which manages government-run pension schemes, is a very large institutional investor. Other pension plans collectively are quite small, in part because of the broad membership and relatively high replacement rate of government pension schemes. Stock-market capitalization is roughly equivalent to GDP, and the bond markets are well developed. Notably, the corporate bond market is larger than the government debt market, reflecting both the importance of bonds for Korean corporate finance, and government's sound fiscal position.

The Financial Services Commission is a unified regulatory authority responsible for prudential oversight of banks, insurance companies, and a number of nonbank institutions. The Financial Supervisory Service (FSS) is responsible for off-site monitoring and on-site examinations as required by the Financial Services Commission and the Securities and Futures Commission. The Bank of Korea also has a supervisory role and conducts joint examinations with the FSS. The Korea Deposit Insurance Corporation has a supervisory role with respect to deposit-taking institutions.

The Securities and Futures Commission, established within the Financial Services Commission, is responsible for capital markets oversight. The Korea Financial Investment

⁴⁵ Portions of this section draw on work completed by Robert Hannah for ADB, 2013. *Broadening the Investor Base for Local Currency Bonds in ASEAN+2 Countries*. Manila.

Table A12: Republic of Korea Financial and Capital Markets Overview

Item	Number	Assets (W billion)	Assets (\$ billion)	Assets (% of GDP)
Commercial banks (end of 2012)	52	1,425,768	1,350.2	109.5
Nationwide banks	7	1,086,084	1,028.5	83.4
Regional banks	6	135,593	128.4	10.4
Foreign bank branches	39	204,134	193.3	15.7
Specialized banks (end of 2012)	5	528,515	500.5	40.6
Credit cooperatives (end of 2012)	2,339	457,174	432.9	35.1
Merchant banks (end of 2012)	1	14,488	13.7	1.1
Mutual savings banks (end of 2012)	93	49,392	46.8	3.8
Postal Savings Bureau (end of 2013)	1	66,961	63.5	5.8
Insurance companies	55	862,383	784.7	58.1
Life insurance	24	662,075	602.4	44.6
General insurance	31	200,308	182.3	13.5
Korea Post Insurance (end of 2013)	1	41,128	39.0	3.4
National Pension Service (end of 2013)	1	525,700	498.3	46.3
Public ^a and corporate pension funds		70,315	66.6	5.4
Securities companies (Sep 2014)		324,930	295.6	21.9
Asset management companies (Sep 2014)		5,139	4.7	0.4
Investment funds (Sep 2014)		270,204	245.8	18.2
Listed companies (market capitalization)	773	1,192,253	1,084.9	80.3
Government debt securities outstanding		797,758	731.0	53.7
Of which, local currency		765,008	701.2	51.5
foreign currency		32,750	29.8	2.2
Corporate debt securities outstanding		1,235,052	1,131.1	83.2
Of which, local currency		1,092,731	1,001.6	73.6
foreign currency		142,321	129.5	9.6

^a The Government Employees Pension System, the Military Personnel Pension System, and the Private School Teachers Pension System

Notes: All data as of the end of 2014 except as noted. Exchange rate at the end of 2012 (\$1 = W1,056), at the end of 2013 (\$1 = W1,055), at the end of 2014 (\$1 = KRW1,099); GDP at the end of 2012 (W1,302 trillion), at the end of 2013 (W1,135 trillion), and at the end of 2014 (W 1,485 trillion).

Sources: *AsianBondsOnline*; Republic of Korea: Financial System Stability Assessment, *IMF Staff Country Report No. 14/126*; Korea Post Annual Report 2013; National Pension Service, *OECD Pension Markets in Focus 2013*; Korea Exchange; and Korean Financial Investment Association.

Association (KOFIA) is a self-regulatory organization of dealers and fund managers with a number of licensing, technical, and educational responsibilities in the fixed-income market. The Financial Investment Services and Capital Market Act is the main law governing the capital markets, establishing a disclosure-based system. Bond issues are by prospectus, with continuous disclosure requirements. Bond issues require a rating by two agencies.

Local Currency Bond Markets

The Korean bond market is the third largest in Asia, after Japan's and the PRC's. Government debt has been relatively constant in the range of 40%–45% of GDP since the mid-2000s despite increasing in nominal terms (Figures A21, A22). The corporate bond market has almost doubled relative to GDP over the same time frame; however, this is in some ways deceptive because of the inclusion of bonds issued by government-related entities. Seventeen of the 30 largest corporate bond issuers are government related. Most are state-owned financial or commercial businesses, but two play key roles in the safety net for financial stability.

The Korea Finance Corporation, established as a government-owned policy bank as part of the response to the global financial crisis, manages the Financial Market Stabilization Fund, the Bank Recapitalization Fund, and the Bond Market Stabilization Fund among other mandates. It is the third-largest issuer of local currency bonds. Like the fourth-largest issuer, the Korea Deposit Insurance Corporation, which has used bonds to finance payments to resolve failed banks and other financial institutions, the Korea Finance Corporation raises funds on the basis of its own rating, without an explicit government guarantee. These two government-related entities had a total of W92 trillion (\$88 billion) in bonds outstanding at the end of 2013, or about 8.6% of the total corporate bond market.

Until the mid-1990s, the Korean government bond market was small and fragmented. Bonds were issued for different accounts and various objectives, and rates were set below prevailing market rates. To avoid booking mark-to-market losses on instruments with below market rates, institutions held bonds to maturity. The market's benchmark rate through this period was the 3-year corporate yield. Bonds issued by affiliates of the large corporate groupings were usually bank guaranteed, providing a high-quality enhancement, were much more liquid than government bonds, and offered a better yield.

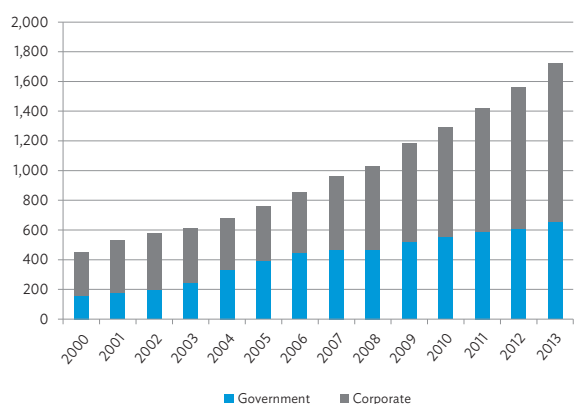
In the mid-1990s, a concerted effort was undertaken to develop the bond markets. Government debt issues were consolidated. Stock-exchange trading of Korean Treasury Bonds (KTBs) and a primary dealer system were instituted in 1999. Through the next decade, 10- and 20-year issues were introduced, in addition to 3- and 5-year benchmark issues, and inflation-indexed bonds were introduced, as were bond futures markets to contribute to liquidity and market-making activities. The repurchase market is active.

Corporate bonds, having lost their benchmark status a decade ago to KTBs, are now less liquid. The 2009 Plan for Improving the Secondary Bond Market led to the 2010 introduction by KOFIA of the FreeBond OTC trading system, and the 2011 FreeSIS statistical system providing data on capital markets and the investment industry. These and other initiatives contributed to an increase in corporate bond turnover from the lows of 2009–2010; however, there has been a long-term decline in corporate bond trading as a share of the total market even though it has expanded in nominal terms. In 2002, corporate bonds accounted for 20.5% of bond market turnover, while they accounted for only 8.0% of turnover in the first 7 months of 2014.⁴⁶ Some market participants note that corporate bonds are used on a buy-and-hold basis to back principal-guaranteed savings products.

⁴⁶ <http://mosf.go.kr> and <http://freesis.kofia.or.kr/stat/engMain.do> (accessed 20 August 2014).

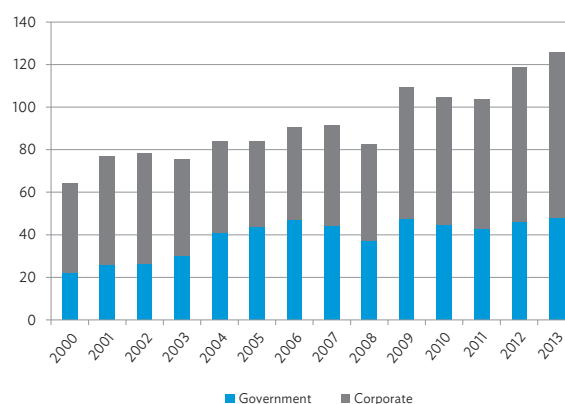
The contractual savings market is well developed in the Republic of Korea, with insurance companies and pensions composing the largest categories of investors in both government and corporate debt (Figures A23, A24). Banks and other financial institutions are the two next largest investors. Therefore, while banks are significant purchasers of corporate bonds, the presence of other large institutional investors means that the Korean bond market is better placed to play the “spare tire” role than bond markets in financial systems with greater bank dominance, and there is greater potential for domestic nonbank financing of infrastructure projects.

Figure A22: Local Currency Bonds Outstanding (W trillion)



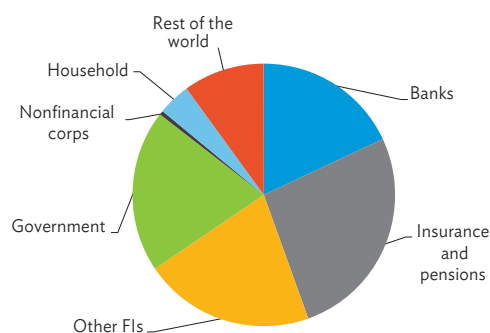
Source: AsianBondsOnline.

Figure A23: Local Currency Bonds Outstanding (% of GDP)



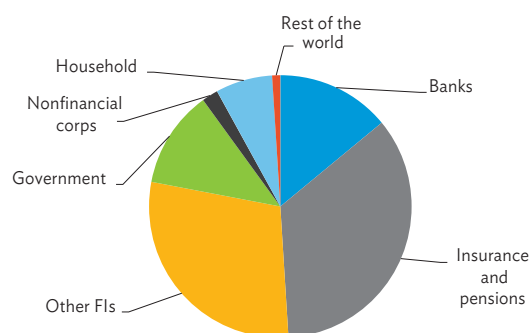
Source: AsianBondsOnline.

Figure A24: Investor Profile: Government Bonds, 30 September 2013



FIs = financial institutions.
Source: AsianBondsOnline.

Figure A25: Investor Profile—Corporate Bonds, 30 September 2013



FIs = financial institutions.
Source: AsianBondsOnline.

Bond Funds

Overview

The Republic of Korea's investment landscape has been transformed since the 1997/98 Asian financial crisis, with the Korean capital market evolving to become one of Asia's powerhouses as successive governments have pursued reform policies. The capital market is open to international investment inflows and backed by foreign exchange reserves of over \$365 billion.⁴⁷ Bond markets are flourishing and the assets of both institutional and retail investors are growing steadily. Major investors include domestic and foreign banks, investment banks and brokerages, investment trust companies, and other financial institutions. Retail investors show a preference for deposit accounts with financial institutions, although they hold small amounts of government and corporate bonds.

Korean investment funds have strong relationships with domestic asset management firms. Consequently, the market is dominated by local managers like Daehan, Hanwah, Mirae, and Samsung. The top 10 Korean firms account for about 80% of total assets under management, with the balance shared among about 80 smaller local and foreign firms.⁴⁸

Size and Scope

Commercial banks. As a group, commercial banks hold about 18% of outstanding government bonds and 14% of corporate bonds. As Korean banks move to adopt the conservative liquidity requirements mandated by Basel III—currently in the monitoring phase, with the FSS pending formal introduction in 2015—they are likely to continue to be significant holders of local currency bonds.⁴⁹

Pension funds. The National Pension Service operates the National Pension Fund (NPF), the Republic of Korea's single largest bond investor (Figures A25a, A25b). Enrollment in the NPF is compulsory for working Koreans between 18 and 60 years old, with the exception of military personnel, government employees, and private school teachers, who have their own occupational pension schemes.⁵⁰ The NPF's investment policy states its intent of pursuing a long-term investment horizon. Over the medium term, the NPF maps its asset allocation onto its strategic plan and, on a more tactical basis, onto its annual plan, which reflects current capital market conditions and outlook.

According to its actuarial projections, NPF reserves are forecast to grow from their current size of W453 trillion to a peak of W2,561 trillion by 2046, for a compound annual growth rate of 5.75%.⁵¹ This volume of growth is projected to outstrip the supply of investable

⁴⁷ IMF. 2014. Republic of Korea: Financial Stability Assessment. *IMF Staff Country Report No. 14/126*. Washington, DC: IMF.

⁴⁸ Investment and Pensions Asia. asia.ipe.com

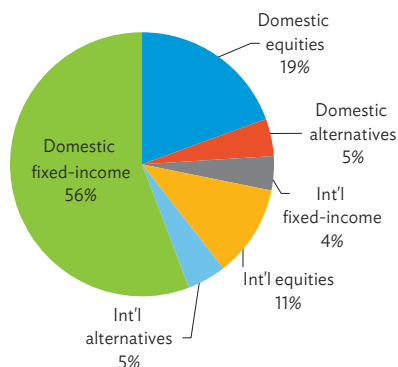
⁴⁹ Korean banks have also recently begun to issue bonds that qualify as eligible regulatory capital under Basel III. *International Financial Law Review*. iflr.com/Article/3342618/Woori-T2s-clarify-Korea-Basel-III.html

⁵⁰ Military Personnel Pension Scheme, Government Employee Pension Scheme, and Private School Teachers Pension Scheme.

⁵¹ National Pension Service. nps.or.kr/jsppage/english/main.jsp

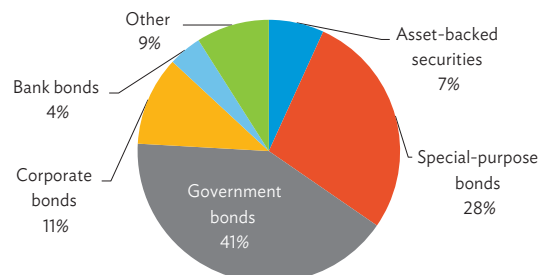
Interestingly, the NPF is scheduled to deplete rapidly after the Republic of Korea migrates to a pay-as-you-go national pension system.

Figure A26a: National Pension Service's Overall Portfolio Asset Allocation



Source: National Pension Service.

Figure A26b: Domestic Fixed-Income Allocation



Source: National Pension Service.

assets in the Republic of Korea; hence the need to expand the NPF's external asset base.⁵² To help reach this goal, and comparing the NPF to a more aggressive fund like Singapore's Temasek, the head of the NPF has pledged to ramp up its investment policy by strengthening its in-house asset management expertise and board governance to comfortably transition the fund into a less risk-averse organization.⁵³ It is not clear, however, how much latitude is available to the NPF, given the somewhat prescriptive regulatory rules about permitted investments.⁵⁴

Insurance companies. Ranked by AUM, the Republic of Korea boasts the largest insurance industry in Asia outside Japan and the sixth largest among member Organisation for Economic Co-operation and Development (OECD) countries.⁵⁵ As of 31 December 2013, the assets of the Republic of Korea's life insurance companies totaled nearly W600 trillion. As of the end of October 2014, there were 25 life insurance companies authorized by the FSS.⁵⁶ All of the large insurers are substantially domestic, with both assets and premiums attributable to their domestic business well above 90%. The Republic of Korea also boasts a healthy general insurance sector.

Korean insurance companies are among the largest investors in the local currency bond market. Of the total investment portfolio of W467 trillion, 58%, or W271 trillion, was held in the form of government and corporate bonds as of the end of December 2013 (Figure A27).⁵⁷ Recognizing that the rapid growth of the bond portfolios of insurance companies and other domestic investors is beginning to outstrip supply, the Financial Services Commission recently began to allow domestic institutional investors to purchase a limited amount of foreign currency-denominated bonds issued abroad by Korean

⁵² W. Kim and F. Stewart. 2011. Reform on Pension Fund Governance and Management: The 1998 Reform of Korea National Pension Fund. *OECD Working Papers on Finance, Insurance, and Private Pensions* No. 7. Paris: OECD.

⁵³ *The Korea Herald*. 2013. Pension Fund Gets More Assertive. 6 November.

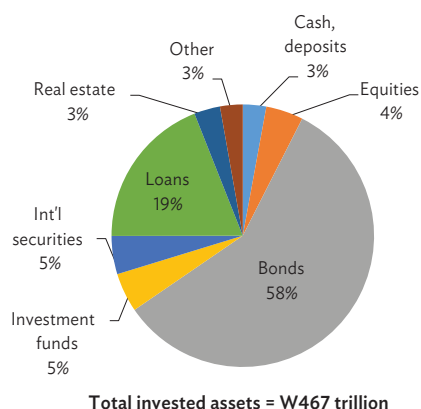
⁵⁴ FSS. 2013. *FSS Handbook*. III 5-3: Management of Plan Assets. Seoul.

⁵⁵ OECD. stats.oecd.org

⁵⁶ FSS. english.fss.or.kr

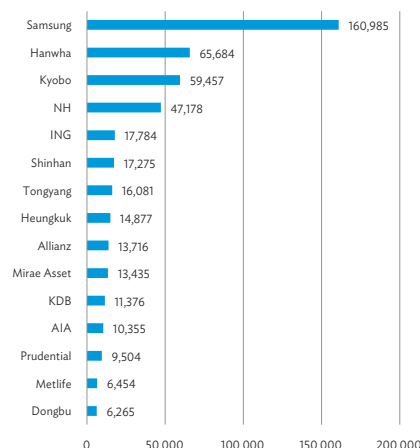
⁵⁷ Korea Life Insurance Association. klia.or.kr

Figure A27: Korean Insurance Company Portfolios: Asset Allocation, 31 December 2013



Source: Korea Life Insurance Association.

Figure A28: The Republic of Korea's 10 Largest Insurers, by Assets Under Management (W billion)



AIA = American International Assurance Korea, ING = ING Life Insurance Korea, KDB = Korea Development Bank Life Insurance, NH = NongHyup Life Insurance.

Source: Korea Life Insurance Association.

companies, subject to a minimum holding period of 1 year. Convertible bonds, bonds with warrants, and exchangeable bonds are not eligible.

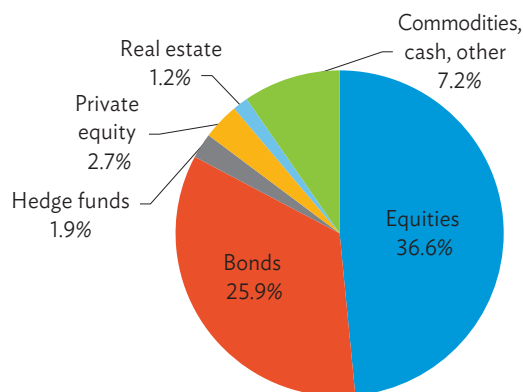
Sovereign wealth and other government entities. The Korea Investment Corporation (KIC) was established in July 2005 under the KIC Act to enhance sovereign wealth and contribute to the development of the domestic financial industry. KIC manages assets entrusted to it by the central government, the Bank of Korea, and other public funds defined under the National Finance Act. KIC directly invests the entrusted assets or re-entrusts them to external managers (Figure A29).⁵⁸

As of the end of December 2013, KIC fixed-income investments, totaling W25.9 trillion, included government, agency, securitized, and corporate bonds across 22 currencies and 58 economies. For its fixed-income portfolio, KIC uses both internal and external managers, the latter more specifically for its international component. The breakdown of investments into domestic and international bonds is not publicly disclosed.

Korea Post not only operates the postal service but offers deposit and insurance products to the public through its 2,800 post offices, including wide coverage in rural areas of the country. In partnership with other financial service organizations, Korea Post also offers credit card, bill payment, and stock account products. The Korea Post Savings Fund manages about W68 trillion in assets. The portfolio is invested primarily in government bonds but is responding to the generally low interest rate environment by seeking

⁵⁸ KIC. kic.kr/en/in/in010000.jsp

Figure A29: Korea Investment Corporation: Asset Allocation, 31 December 2013



Source: Korea Investment Corporation.

higher-yielding investments in other asset classes, including equities and alternative assets such as real estate and hedge funds.

Unit trusts and mutual funds. Household financial wealth has grown along with the Korean economy. At the end of 2013, of the W2,641 trillion in financial assets held by individuals, deposits with financial institutions dominated at 42%, followed by insurance and pension assets at 29%. Equities represented 17%, followed by bonds at 8%. While Koreans are ardent savers, they seem indifferent to bonds as an asset class.⁵⁹

Korean funds can be divided into contractual-type (unit trusts) and corporation-type (mutual funds) depending on the form of the legal entity. Unit trusts are pools of investor contributions managed by a trustee for the benefit of the unit holders. Mutual funds are companies that sell shares to investors, invest the proceeds, and pay a return to shareholders. At the end of July 2014, the net asset value (NAV) of unit trusts stood at W356 trillion and accounted for over 96% of the total AUM in the household wealth asset management market. Bond funds accounted for 18% of total fund AUM, or W64 trillion, at the end of July 2014 (Figure A30).

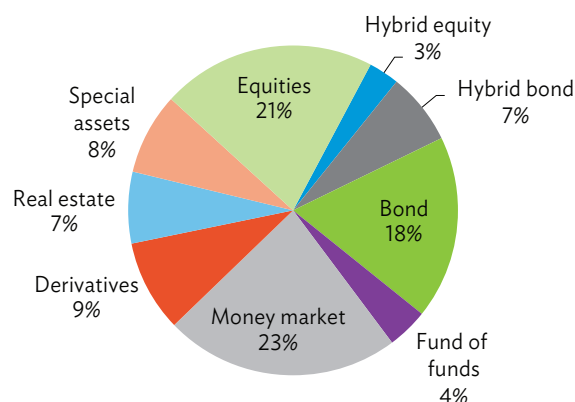
As of 1 October 2014, there were 86 asset management companies authorized by the FSS.⁶⁰ This classification includes investment trusts, unit trusts, mutual funds, and trust accounts of commercial banks and securities companies. At the same time, there were 461 bond funds available, offered by 59 fund management companies. A variety of bond funds, including government-only, real-return, investment-grade, and high-yield bonus funds, are available to investors.⁶¹

⁵⁹ KOFIA. 2014. *Capital Market in Korea 2014*. Seoul.

⁶⁰ FSS. english.fss.or.kr/fss/en/eabu/reg/registered/list.jsp?pg=1&business=25&txtFind=.

⁶¹ Bloomberg.

Figure A30: Fund Assets, by Asset Class,
31 July 2014



Source: Korea Financial Investment Association.

Table A13: Top 10 Korean Bond Funds, by Assets under Management
1 October 2014

Rank	Fund	AUM (₩ million)
1	Kyobo Axa Tomorrow Long-Term Hi Grade K1	2,341,539
2	Samsung ABF Korea Index	727,167
3	Kyobo Axa Tomorrow Hybrid Bond	583,517
4	Eastspring Korea Value Bond	575,140
5	Hanwha Smart Mid & Long Bond	568,442
6	KB Retirement PNS Local BD-M	559,763
7	Eastspring Standard Plus	424,970
8	Hanwha ST GOV&AGN-1	383,689
9	Korea Invst New Personal 3	371,811
10	IBK GRAND PRIX GOVT BD-1	366,839

AUM = assets under management.

Source: Bloomberg.

Eleven bond ETFs are domiciled in the Republic of Korea. The funds are constructed to track various Korean short- and long-term bond and credit indices. As of 1 October 2014, the collective NAVs of these funds were slightly in excess of ₩1 trillion.⁶² Three money market ETFs are also listed.

⁶² Bloomberg.

Infrastructure Financing

Korean public investment in infrastructure has averaged 5% of GDP for several decades.⁶³ This public investment has been leveraged through a range of measures introduced since the mid-1990s to attract private capital for projects. Private investment in infrastructure increased from 4% of total government investment in 1998 to over 17% in 2008.⁶⁴

PPPs were introduced following the passage of the 1994 Promotion of Private Capital into Social Overhead Capital Investment Act. The first project, the Seoul–Incheon Expressway, began as a government–financed initiative but was transformed into a build–transfer–operate project to ease the fiscal burden. The Korea Infrastructure Credit Guarantee Fund (KICGF) was established in 1994 to guarantee bank loans and infrastructure bonds.

The Public and Private Infrastructure Investment Management Center (PIMAC) serves as a gatekeeper for public procurement and private infrastructure investment projects in the Republic of Korea. It is responsible for infrastructure investment procured from the public or the private sector. PIMAC’s role includes conducting feasibility studies and assisting the government in implementing PPP projects by formulating requests for proposals, evaluating tenders, and negotiating with bidders.

The 1997/98 Asian financial crisis led to a number of initiatives to further support private investment in infrastructure projects. The Minimum Revenue Guarantee, introduced in 1998 and significantly reduced in 2006, ensured minimum cash flow to concessionaires despite actual traffic volumes well below forecasts. The government assumed additional risk by offering a buyout option on the termination of construction or during operation. Land was provided free of charge, financial support was made available for land acquisition, and construction subsidies were provided.

Various tax incentives were part of the original legal framework, and additional measures were provided in the 1998 revision in response to the 1997/98 Asian financial crisis. These fiscal programs included 0% value-added tax for the construction of facilities to be transferred ultimately to the government, exemption from specific taxes for build–transfer–operate projects, a favorable income tax rate for investors in infrastructure bonds with tenors of 15 years or longer, and favorable tax rates for investors in infrastructure funds.

The global financial crisis engendered to further changes in the PPP regime. These included the potential provision of bridge loan financing by the Korea Development Bank, to be redeemed on project finance closing, an increase in the guarantee limit of the KICGF from W200 billion to W300 billion, and a reduction in the mandatory equity contribution of project sponsors to 5% from 20%. The eligibility of infrastructure bond issuers for KICGF guarantees was also expanded.

⁶³ A. M. Warner. 2014. Public Investment as an Engine of Growth. *IMF Working Paper No. 14/148*. Washington, DC: IMF.

⁶⁴ M. Do and H. Park. 2012. Current Status and Perspectives of Public–Private Partnership of Infrastructure Projects in South Korea. In G. Winch, M. Onishi, and S. Schmidt, eds. *Taking Stock of PPP and PFI Around the World*. London: Certified Accountants Educational Trust.

Current Approaches

While government financing continues to compose the bulk of Korean infrastructure investment, private investment has increased significantly since the introduction of PPPs in the 1990s. Private sector involvement in infrastructure is concentrated in the design, engineering, and construction phases, with state-owned entities frequently owning and operating infrastructure assets. Construction companies have, on average, provided almost 60% of the investment in PPPs (footnote 64).

Another important dimension of infrastructure investment has been official support for Korean companies' involvement in projects around the world. Through the Korea Export–Import Bank (KEXIM) Guaranteed Bond, KEXIM provides guarantees to bond holders who invest in project-related bonds. This product supports infrastructure projects around the world where Korean manufacturers or construction companies have a significant stake.

The Ministry of Land, Transport and Maritime Affairs established in 2010 the Global Infrastructure Private Special Asset Investment Trust, known as the Global Infrastructure Fund (GIF), with W400 billion in capital—50% invested by Korean state-owned infrastructure-related companies and 50% by private investors. The GIF is targeted at debt and equity investment in greenfield projects around the world, supporting the involvement of Korean partners. Despite plans to increase the fund to W2 trillion (\$2 billion) by 2015, through mid-2013 it had made only two investments and remained at its original size, reflecting the long gestation period for infrastructure projects and the challenges in bringing projects to market in many countries.

Infrastructure funds have grown rapidly, partly because of favorable tax treatment. The Macquarie Korea Infrastructure Fund has grown since its inception in 2002 to R2.1 trillion, with 1.7 trillion invested, at the end of 2012. Macquarie fund investments have benefited from minimum revenue guarantees: 12 of the 13 concession companies in which the fund invests have such government support. Approximately, one-third of the fund's investments are in project equity, and two-thirds in debt. The fund is financed largely through equity unit investments, but it does issue bonds, having W249 billion in bonds outstanding at the end of 2014.

In addition to the Macquarie Korea Infrastructure Fund, KB Asset Management and KDB Asset Management are major players in the Korean infrastructure fund market. The three collectively had W10 trillion under management at the end of June 2014.⁶⁵ Unlike the Macquarie Korea Infrastructure Fund, which invests in various projects across sectors, a number of other infrastructure funds have been established to invest in single projects or a single class of projects such as power generation.

Bond Financing

Specific project bonds have been a relatively small part of the Korean bond market; however, seven of the 30 largest issuers are state-owned infrastructure-related companies

⁶⁵ Korea Joong Ang Daily. 2014. Investors are Attracted to Infrastructure Funds. 22 July.

Table A14: Infrastructure-Related Issuers among Top 30 Corporate Issuers, 31 December 2013

Issuer	State-Owned	Amount (₩ billion)	Amount (\$ billion)
Korea Land and Housing	Yes	58,663	55.9
Korea Electric Power	Yes	30,750	29.3
Korea Expressway	Yes	20,760	19.8
Korea Rail Network Authority	Yes	17,250	16.4
Korea Gas	Yes	14,855	14.2
Korea Water Resources	Yes	9,951	9.5
Korea Railroad	Yes	9,200	8.8
Total		161,429	153.9
Infrastructure-related as % of top 30 local currency corporate bond issuers		15.2%	15.2%

Source: *AsianBondsOnline*.

(Table A14) and two of the largest corporate bond issuers, the Korea Finance Corporation and the Industrial Bank of Korea, are state-owned financial institutions that are mandated to support infrastructure development or Korean companies active in infrastructure projects. The Korea Finance Corporation provided ₩606 billion in infrastructure financing in 2013.⁶⁶

Korean social overhead capital bonds (KSOCBs) were used for six infrastructure investments in the aftermath of the 1997/98 Asian financial crisis. The bonds benefited from a reduced tax rate for investors in infrastructure bonds, and were attractive to project sponsors because of the difficulties in arranging syndicated bank loans in the postcrisis period. However, relatively low returns and high transaction costs led investors to seek alternative infrastructure investments, such as the Macquarie Korea Infrastructure Fund and similar vehicles, and the renewed availability of other financing sources as the 2000s progressed reduced the need for project sponsors to pursue the KSOCB option.

Expanding the Use of Bond Financing

The environment for Korean infrastructure finance will face a number of issues over the coming years. The low birth rate and the aging population will create fiscal challenges, and much existing infrastructure finance has relied on a range of fiscal incentives. These incentives have included free land for projects, subsidized financing, debt guarantees, minimum revenue guarantees, and tax expenditures benefiting project sponsors and investors. These may become more difficult to sustain as government faces the fiscal impact of an aging population and has to provide additional incentives for project finance structures involving greater risk assumption by private investors.

⁶⁶ Korea Finance Corporation. 2014. *Annual Report 2013*. Seoul.

Given the Republic of Korea's well-developed bond market and the ready availability of infrastructure project finance expertise gained both domestically and in international projects, the main obstacles to increasing the use of bonds for project financing relate mostly to the existence of other robust financing approaches. A number of factors could, over time, lead to an increase in project bonds.

Korean pension funds and insurance companies continue to have a need for long-term assets, making them natural purchasers of infrastructure assets. This is happening directly through equity investment and lending, and indirectly through investment in infrastructure funds. The creation of more single-project infrastructure funds could lead to the issuance of a form of project bonds provided that the funds are financed with bond issues in addition to equity unit sales. Similarly, broad-based funds like the Macquarie Korea Infrastructure Fund, and sector specific funds, can offer bonds backed by the cash flows from several infrastructure projects.

The construction companies that have traditionally financed the bulk of the private contribution to infrastructure finance may be encouraged by regulatory developments to pursue project finance structures. If Basel III constrains the provision of longer-tenor bank credit to the parent company sponsors and project vehicles, project bonds may become more attractive. In view of its well-developed contractual savings industry, the Republic of Korea has scope to increase nonbank financing.

The slowdown in domestic infrastructure construction amid plateauing population growth, coupled with the large size of Korean construction and engineering firms, has led to an increased focus on international projects. With the support of initiatives such as the GIF, the sharing of expertise in PPP management by PIMAC, and a range of financial support through KEXIM and the Korea Finance Corporation, this focus is likely to continue.

Lao People's Democratic Republic

Financial and Capital Markets Overview

The bank-dominated finance sector of the Lao People's Democratic Republic's (Lao PDR) has been evolving rapidly with the entry of new privately owned and joint-venture financial institutions into the market. There are 32 banks, of which four are state owned. There are 7 privately owned local banks, 2 joint-venture banks with foreign participation, and 19 subsidiaries and foreign branches. Since private ownership was first permitted in the wake of the 1997/98 Asian financial crisis, privately owned domestic and foreign banks have grown to account for about 45% of the banking market. The economy remains highly dollarized despite recent increases in the use of the Lao kip. Foreign currency deposits composed about 45% of total bank deposits at the end of 2012, down from 76% in 2000.

Nonbank financial institutions are developing gradually. There are eight insurance companies largely focused on general insurance. Life insurance products were introduced in 2007, and remain a small part of market. The two largest insurers are joint ventures with foreign companies. The Lao Securities Exchange (LSX), a joint venture of the central bank—the Bank of Lao PDR (BOL)—and the Korea Exchange, was established in 2010, and

the first trading took place in 2011, in two listed companies. A third listing was added later.

The Social Security Organization was established in 2000 to provide employees of participating companies with health insurance, short- and long-term disability insurance, and retirement savings. Participation is mandatory for enterprises with more than 10 employees, although enrolling members has been slow. The fund has the potential to grow into a significant institutional investor as participation expands. The bulk of the fund is invested in short-term bank deposits, and a smaller portion in bank deposits with terms longer than 1 year.

The legal framework for capital market regulation is provided by the Decree on Securities and Securities Market, 2010, which established the Securities and Exchange Commission (SEC) as the supervisory authority. The policy development and supervisory activities of the SEC are carried out by the Office of the Securities and Exchange Commission, under of the BOL. The BOL is the prudential authority responsible for overseeing the banking system. The Ministry of Finance is the insurance regulator.

Table A15: Lao PDR Financial and Capital Markets Overview

Financial Institution	Number	Assets (KN billion)	Assets (\$ billion)	Assets (% of GDP)
Banks	32	75,433	9.4	80.2
State-owned commercial banks	4	39,305	4.9	41.8
Private and joint-venture banks	9	20,770	2.6	22.1
Subsidiaries and foreign branches	19	15,358	1.9	16.3
Insurance companies (nonlife)	6			
Microfinance institutions	24	240	0.0	0.3
Social Security Organization	1			
Listed companies (stock market capitalization)	4	10,969	1.4	11.7

Notes: Bank data as of the end of Sep 2014; Microfinance data as of the end of June 2014; stock market capitalization as of 26 Dec 2014; Bank of Lao PDR average exchange rate for 2014 (\$1 = KN8042); GDP in 2014 KN94,096 billion.

Sources: Bank of Lao PDR and Lao Securities Exchange.

Local Currency Bond Markets

The Laotian debt securities market comprises Treasury bills and arrears clearance bills (short-term debt to cover committed but unpaid government expenditures) issued by the Ministry of Finance, and BOL instruments. There is very limited secondary trading and most of the securities are held by banks, which may manage their liquidity needs through Treasury bill repos with the BOL. The BOL issues short-term bills for monetary policy purposes, and longer-term bonds (BOL bonds). BOL bonds were introduced in 2009 to mobilize funds for infrastructure development. Current data on market size are not available. In the past, the Ministry of Finance has also issued recapitalization bonds directly to state-owned banks in payment for additional equity as part of reform programs. These bonds were nontransferable and had a term of 5 years.

The Decree on Securities and Securities Market provides for the public issuance of both equity and debt securities. All public issuances must be approved by the Office of the Securities and Exchange Commission, which is required to make a decision within 45 days of receipt of the prospectus and other specified documents. Aside from the completeness of the application, no other assessment criteria are set forth in the decree. The office is required to provide reasons for any refusal. There is a need for a more transparent rules-based approach to the review process to increase predictability for potential issuers.

The Law on Investment Promotion (2009) is targeted at foreign direct investment through joint ventures or wholly foreign-owned enterprises. There is no specific regime for attracting foreign portfolio investment. A foreign investor (individual or other legal entity) may own up to 20% of the securities listed on the exchange, but no more than 1% of the total shares of a listed company. Dividend income is subject to 10% withholding tax. Interest income from bank deposits and bonds is exempt from income tax. All foreign equity capital and foreign borrowing must be registered with the BOL. The kip is freely convertible and foreign investors can repatriate dividends and capital through the banking system at spot exchange rates.

Infrastructure Financing

The government's fiscal position makes it challenging to meet its infrastructure investment objectives through traditional approaches to financing. Under the 7th National Socio-Economic Development Plan, 2011–2015, 35% of government expenditure has been earmarked for infrastructure investment. The Ministry of Communication, Transport, Post and Construction plays a central role, having developed sector strategies through 2020, which are reflected in each 5-year plan, to provide the landlocked country with extensive road, rail, and water transportation links throughout the region.

Infrastructure projects in the Lao PDR have generally been financed from the government budget or with the support of international development partners. The BOL has also provided off-budget credit to support infrastructure projects. This quasi-fiscal activity is generally considered outside the purview of a central bank.

There is currently no legal framework or government capacity for PPP projects. Some large private investments have been made in the power sector, where build–operate–transfer schemes have been used for major hydropower projects. The Nam Theun 2 project, for example, incorporated an off-take agreement with the Electricity Generating Authority of Thailand.

Expanding the Use of Bond Financing

The small size of the domestic finance sector means that, over the medium term, the Lao PDR will have to attract foreign capital to increase private investment in infrastructure projects. Over the long term, the development of a corporate bond market could help channel domestic savings into infrastructure investment.

Developing a local currency bond market is a long-term exercise. A key first step is the development of the government bond market. Initial measures would include the

introduction of a primary dealer system to facilitate the auction of BOL bills and, over the medium term, Treasury bonds. A primary dealer system would also contribute to the development of a secondary market. There should be a preannounced auction schedule, initially for BOL bills, and later for Treasury bonds. Eliminating the quasi-fiscal activities of the BOL and consolidating government financing activities through the issuance of Treasury bonds could contribute to bond market development.

The infrastructure for bond issuance and trading, including the planned real-time gross settlement system, needs to be completed. Requiring bonds to be deposited at the securities exchange, and implementing an exempt listing regime so that price and trade data could be consolidated and made readily available to market participants, would contribute to market transparency and the development of trading. The SEC must also evolve into an effective capital market supervisory authority.

The potential investor base for local currency bonds is currently very limited, highlighting the need to develop institutional investors in addition to the banks. Life insurance companies remain very small, and the Social Security Organization has yet to put together a significant investment portfolio. A framework for private retirement savings that would cover those not participating in the Social Security Organization and supplement the mandatory government program would foster the growth of additional pools of capital. The tax regime, which excludes interest on bonds from income tax, would be attractive to foreign portfolio investors.

The policy of promoting the use of local currency may contribute to bond market development. As the share of foreign currency-denominated savings falls, banks will seek additional domestic currency investments. Similarly, as the life insurance sector grows, there will be increased demand for long-term local currency investments.

Malaysia

Financial and Capital Markets Overview

Malaysia has well-developed financial and capital markets, with all of the key institutional and structural elements in place (Table A16). Banking sector assets and stock market capitalization both exceed 150% of GDP. Contractual savings institutions—life insurance companies and government social security funds—are large and growing, and have significantly increased their holdings of corporate debt over the last 10 years. The fund management industry, about two-thirds of which comprises unit trust funds (UTFs), has assets under management equivalent to about 22% of total bank assets.

Bank Negara Malaysia (BNM) is the main prudential authority, with supervisory responsibility for the oversight of banks, insurance companies, and the payments system, as well as an overarching mandate for financial stability. BNM was an early adopter of Basel III. It started phasing in new standards for capital and liquidity in 2013, and it expects full implementation by 2019 in line with the international timetable.

The Securities Commission (SC) is the principal capital market regulator, with responsibility for licensing and overseeing individuals and institutions in capital market activities,

Table A16: Malaysia Financial and Capital Markets Overview

Item	Number	Assets (RM billion)	Assets (\$ billion)	Assets (% of GDP)
Commercial banks	27	1,710.5	521.5	160.0
Islamic banks	16	487.1	148.5	45.5
Investment banks	11	54.4	16.6	5.1
Life insurance (includes family <i>takaful</i>)	28	209.9	63.9	19.6
General insurance (includes general <i>takaful</i>)	37	36.2	11.0	3.4
Fund management companies	77	629.9	192.1	58.9
Private retirement schemes	8	0.3	0.1	0.0
Employees Provident Fund	1	596.7	181.9	55.8
Retirement Fund (KWAP) (Sep 2014)	1	107.7	32.8	10.1
Listed companies (stock market capitalization)	906	1,651.2	503.4	154.3
Government debt securities outstanding		667.6	191.3	62.4
Of which, local currency		646.9	185.0	60.5
foreign currency		20.7	6.3	1.9
Corporate debt securities outstanding		547.7	158.3	51.2
Of which, local currency		456.5	130.5	42.6
foreign currency		91.2	27.8	8.5

Notes: All data as of the end of 2014 unless stated otherwise—exchange rate \$1 = RM3.28; GDP RM1,070.1 billion.

Sources: *AsianBondsOnline*, Bank Negara Malaysia, Bursa Malaysia, Ministry of Finance, Employees Provident Fund, Retirement Fund (KWAP), Securities Commission Malaysia, Private Pension Administrator.

overseeing the exchanges and central depositories, and approving the issue of securities. Bursa Malaysia, the stock exchange, has delegated authority from the SC for market surveillance and disclosure requirements of listed companies. In January 2011, the Federation of Investment Managers Malaysia was recognized as an SRO for the licensing of unit trust managers and consultants, in accordance with powers delegated by the SC.

The Shariah Advisory Council (SAC) established by the SC has had an important role in the development of the Islamic capital market. The SAC takes precedence over the advisory councils of individual issuers and has contributed to establishing precedents and standardization. There has been growing international acceptance of Malaysian sharia interpretation elsewhere, particularly in important markets in the Middle East. Obtaining Saudi Arabian approval of the structure of *sukuk* has greatly facilitated offshore *sukuk* issuance in Malaysia, and international investment and trading of Malaysian issues.

The Capital Markets Services Act passed in 2007 sets out the legal foundations for capital market activities. Two instruments bring together all the issuance requirements and clarify them for market participants. The Private Debt Securities Guidelines, first issued by the SC in 2004 and revised in 2011, provide a concise summary of the requirements for the issuance of any corporate bond, medium-term note, commercial paper, or debt program.

The Islamic Securities Guidelines, issued in 2004 and revised in 2011, offer parallel guidance for *sukuk*.

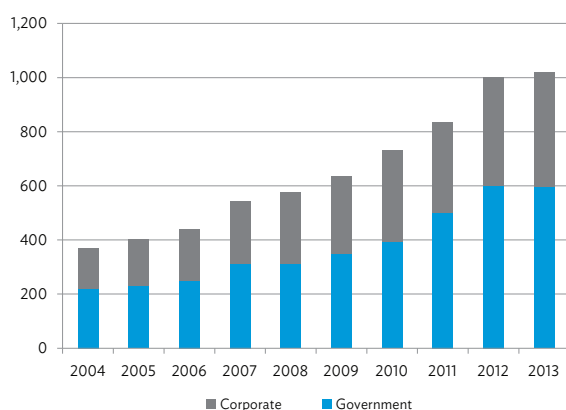
The SC has moved from merit-based regulation to a disclosure-based regime, where approval of bond issuance is based on an assessment of the adequacy of the information disclosed and the completeness of the application process. Issues rated AAA by a local rating agency, or BBB– or above by an international rating agency, are deemed approved once all required documents are submitted and the provisions of the guidelines are complied with.

Local Currency Bond Markets

The Malaysian ringgit bond market comprises about 2,000 issues with about RM1,022 billion outstanding at the end of 2013. Government securities account for about 58% of outstanding bonds (Figure A31). There is very limited investor appetite for riskier securities: 98% of corporate issues rated in 2013 had AA or higher rating, and none were rated lower than A (Figure A32). Islamic securities have contributed significantly to the growth of the Malaysian bond market. Foreign currency Islamic issues, particularly those from offshore issuers, have been especially noteworthy. Even in the local currency markets, Government Investment Issues (GIIs–Islamic securities) have increased steadily as a portion of total Malaysian government debt, accounting for about 40% of government debt issuance in 2013 (Figure A33). The corporate bond market has grown rapidly, although issues of Islamic corporate securities remain small relative to conventional ringgit bonds (Figure A34).

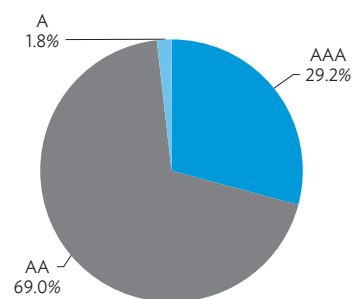
Concerted efforts to develop the bond market were part of the original Capital Market Masterplan. Work on the master plan began in 1999 and by the time of its publication in 2001, a number of initiatives, including the establishment of the SC as the primary capital market regulator, had already been completed. Following on from the success of the

Figure A31: Local Currency Bonds Outstanding (RM billion)



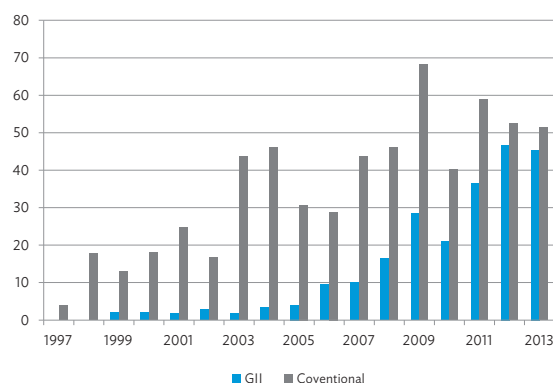
Source: AsianBondsOnline.

Figure A32: New Corporate Issues, by Rating, 2013



Source: Malaysian Rating Corporation, 2014 Bond Market Outlook.

Figure A33: New Issues of Government Debt (RM billion)

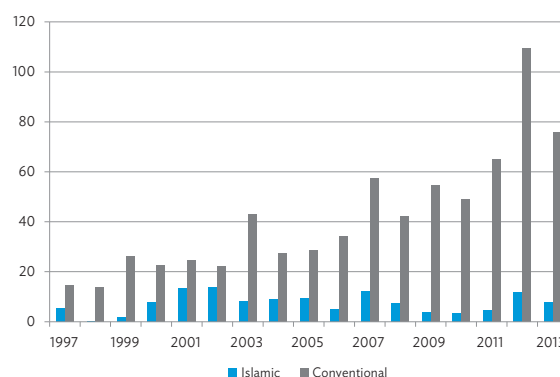


GI = Government Investment Issue.

Note: Gross figures.

Source: Bank Negara Malaysia.

Figure A34: New Issues of Corporate Debt (RM billion)



GI = Government Investment Issue.

Note: Gross figures.

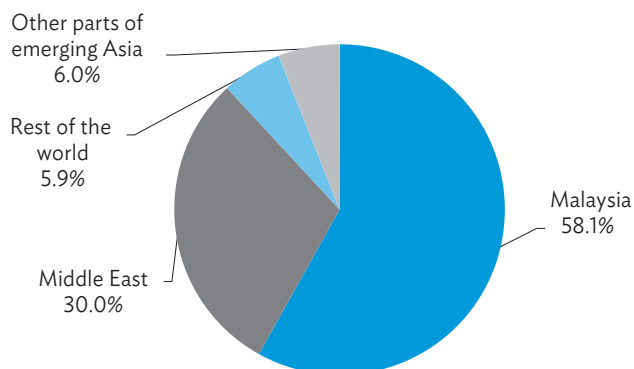
Source: Bank Negara Malaysia.

Capital Market Masterplan, the Capital Market Masterplan 2 was adopted in 2011. Key accomplishments included building liquidity in government securities by focusing on benchmark issues of Islamic and conventional securities; putting in place the supporting infrastructure, including securities clearing and settlement; removing the withholding tax on ringgit-denominated Malaysian government conventional and Islamic securities; and developing Malaysia as a global center for Islamic securities.

The growth of the Islamic capital market has been a notable success. *Sukuk* amounted to 52% of total Malaysian local currency bonds outstanding at the end of 2013, up from about 17% in 2000. Malaysian issues compose almost 60% of the global *sukuk* market (Figure A35). A key contributor to the growth of the Islamic bond market was the 2006 establishment of the Malaysia International Islamic Financial Centre (MIFC) by BNM, in collaboration with the SC; the Labuan Offshore Financial Services Authority; Bursa Malaysia; and the banking, *takaful*, and capital market sectors in Malaysia. Important policy initiatives have included

- (i) building an Islamic yield curve through the issuance of GIIs;
- (ii) coordinating among the regulatory authorities and SAC to achieve clarity and consistency in scholarly interpretation; and
- (iii) adopting an accommodative tax policy, including exemption from the real property gains tax—thus putting instruments not based on interest payments on the same footing as conventional debt—as well as tax deductions for the issuance costs of approved Islamic securities, tax treatment of the special-purpose vehicles established to issue Islamic securities based on economic substance, and time-limited exemptions from stamp duty for international *sukuk* issuances.

Figure A35: Global Sukuk Market (%)



Note: Percentage shares of total global sukuk outstanding (\$281.3 billion) as of the end of December 2013.
Source: AsianBondsOnline.

The MIFC initiative has attracted Islamic fund management companies from around the world, including the Gulf Cooperation Council. Foreign Islamic fund managers are able to invest 100% of assets offshore, and receive a tax exemption on fees earned through 2016.

After the central government, the largest categories of bond issuers are quasi-government entities such as Kazanah Nasional, the investment holding arm of the Government of Malaysia, and government-owned or government-guaranteed issuers such as water management company Pengurusan Air. Other significant issuers are government related, for example, Aman Sukuk, which is a financing vehicle for a build-lease-transfer project for facilities for the Royal Malaysian Police. Cagamas, 20% owned by BNM and 80% by Malaysian financial institutions, is the largest nongovernment issuer. Financial institutions and financial services, primarily banks and Cagamas, account for about one-fifth of the corporate bond market.

Bond Funds

Overview

Malaysia enjoys a happy combination of strong growth and one of the highest savings rates in the world. As a consequence, sound regulatory and capital market infrastructure, ample liquidity in the banking sector, and modest rates of interest on savings accounts have produced strong demand for investment products. The Malaysian asset management business is well developed and growing.

The objective of most bond funds is to provide regular income and reduce risk, with less emphasis on producing capital growth for investors. There is, therefore, an important asset class for diversification and the reduction of overall portfolio risk. Depending on the fund's investment objectives, it may either focus either on a particular type of bond or debt securities, or on a combination of bond types. For the average retail investor,

these investment objectives are best achieved collectively through the relative efficiency and diversified portfolio found in a bond fund, rather than through individual bond selection.

UTFs are classified under “collective investment schemes” as defined in securities legislation, a set of vehicles that also comprises ETFs, REITs, restricted investment schemes, and closed-end funds. Capital appreciation in UTFs is not taxable; however, distributions are subject to tax. Bond funds are available in both conventional and *sukuk* variations. Both forms present virtually identical risk and return profiles for comparable securities; aside from the important religious considerations, investors should be economically indifferent between these forms. As with other forms of sharia-compliant securities, Malaysia is seen as a global leader in the creation and distribution of *sukuk* bond funds.

Investments in bond funds can be made through three types of vehicles:

- (i) UTFs operated as open-end funds, which pool investors’ capital and invest in government and corporate bonds. Units in the open-end fund are sold to investors from the fund itself through a licensed sales force directly under the auspices of the fund sponsor or a third-party broker. Units are redeemable and sold at NAV after fund fees are deducted. There is no secondary market for UTFs. Mutual funds, UTF-like instruments commonly found in other countries, are not offered in Malaysia.
- (ii) Only one bond ETF (the ABF Malaysia Bond Index Fund) listed and traded on Bursa Malaysia. ETFs may be bought and sold on Bursa Malaysia by both residents and nonresidents through a licensed dealer in denominations starting at 100 units. Investors have the benefit of real-time access liquidity at an observable market price. ETF investors must hold an account with a broker and a custody account with Bursa Malaysia.
- (iii) Closed-end fund companies, which sell a fixed number of units in the fund to investors via an initial public offering. These units are then traded on the secondary market, where prices will fluctuate with supply and demand. Unlike UTFs, closed-end fund shares are not redeemable with the fund sponsor; liquidity is available only through the secondary market.

Size and Scope of Sector

The first Malaysian UTF was issued in 1959. After years of sluggish growth, government focus on the regulation of the industry in the 1980s sparked renewed interest in this vehicle. As a result, the UTF has become a popular investment for individuals. As of the end of December 2013, there were 595 unit trust funds issued and offered to retail investors, and 191 funds available for wholesale investors such as corporations, banks, insurers, pension funds, and qualified high-net-worth individuals. In total, unit trust funds held RM396 billion in assets at the end of 2013.

UTFs have grown substantially in recent years (Figure A36). The asset class of choice for Malaysian investors is equities, in part because of the long history of Malaysian equity

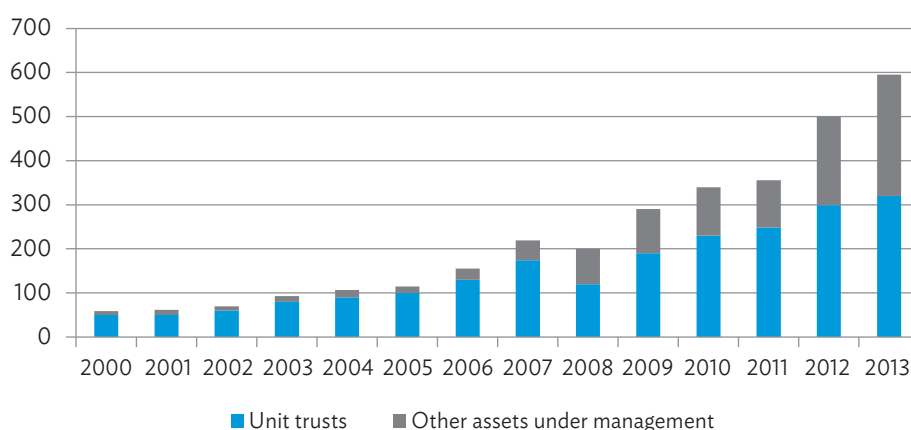
Table A17: Malaysian Unit Trust Funds, 31 December 2013

Item	Unit Trust Funds	Wholesale Funds
No. of management companies (end of Dec 2014)	36	39
No. of launched funds	595	191
conventional	417	140
Islamic-based	178	51
Units in circulation (billion)	388.519	59.38
conventional	308.207	45.538
Islamic-based	80.312	13.842
No. of accounts	16,776,401	8,728
conventional	14,527,200	8,258
Islamic-based	2,249,201	470
Total NAV (RM billion)	335.51	60.442
conventional	292.688	44.984
Islamic-based	42.822	15.458
% of NAV to Bursa Malaysia Market Cap	19.71%	3.62%

NAV = net asset value.

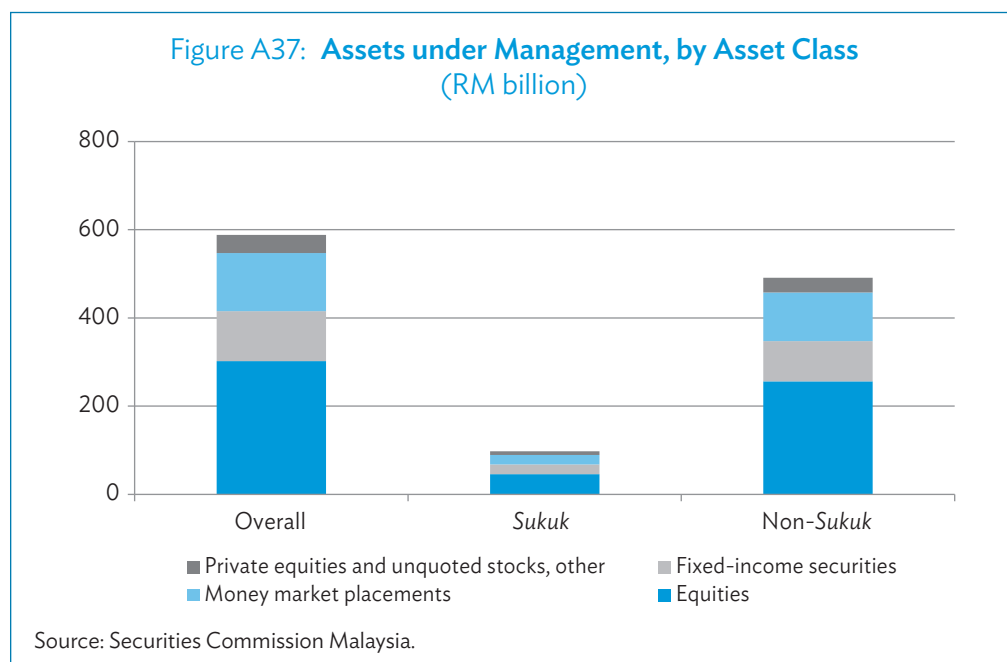
Source: Securities Commission Malaysia, Federation of Investment Managers of Malaysia.

Figure A36: Growth of Assets under Management and Unit Trust Funds, 2000–2013
(RM billion)



Source: Securities Commission Malaysia.

capital markets. Other asset classes include Malaysian government debt securities, corporate bonds, and money market instruments such as bankers' acceptances and fixed deposits. Smaller allocations consist of private equities and unlisted stocks, REITs, closed-end funds, UTFs held by institutional investors, and derivatives (Figure A37).



Bond funds have multiplied but there are constraints on growth due to Malaysians' investment bias toward equities. There are an estimated 180 bond funds offered by retail and wholesale fund manufacturers in Malaysia, with AUM of RM113 billion, about 29% of total UTF assets.⁶⁷

Structural and Regulatory Framework

Guidelines governing the operation of the UTF industry are issued by the Securities Commission Malaysia according to section 377 of the Capital Markets and Services Act, 2007. These guidelines set out the requirements for all UTF manufacturing, issue, and investor subscription. The objective of the guidelines is to foster a market environment that protects the interests of the investing public and provides for the orderly development of the UTF market. The guidelines cover the following elements:

- (i) marketing and distribution of unit trust funds;
- (ii) unit trust advertisements and promotional materials; and
- (iii) online transactions and activities in relation to unit trusts.

All UTFs are sold under prospectus in accordance with the Securities Commission Malaysia's Prospectus Guidelines for Collective Investment Schemes.

The fund distribution model is typical of a mature capital market, being almost entirely financial adviser driven. There are three types of advisers: (i) in-house (the direct

⁶⁷ Bloomberg; Securities Commission Malaysia.

sales force of the unit trust management company [UTMC]), (ii) tied, and (iii) third-party consultants. Most adviser networks are owned by banks, and some by insurance companies, interspersed with a few independents. Banks therefore dominate the UTF distribution marketplace.

Depending on which market segment of investor it is targeting, a UTMC may use its in-house sales force to market and distribute the funds directly by appointing

- (i) individual agents, known as unit trust consultants (UTCs);
- (ii) firms known as institutional unit trust advisers (IUTAs); or
- (iii) firms known as corporate unit trust advisers (CUTAs).

Like UTMCs, IUTAs and CUTAs are accountable to the Securities Commission Malaysia.

UTCs must be licensed by the Federation of Investment Managers of Malaysia, the industry's self-regulatory organization. They are expected to conduct their activities in a responsible, fair, and equitable manner. UTCs are also accountable for their market conduct to their IUTA, UTMC, or CUTA.

The Securities Industry Development Corporation (SIDC) is the training and development arm of the Securities Commission Malaysia. SIDC provides educational resources to educational resources to Malaysian investors to protect them from fraudulent transactions to the maximum extent possible and enable them to make informed investment choices.

Although Malaysia's fund management industry is among the fastest-growing segments of the capital markets, equity funds are growing faster than bond funds. This growth may be due to distortions created by Permodalan Nasional (PNB), a large government-owned institutional investor whose mandate is to promote share ownership in the corporate sector among Bumiputera (ethnic Malay) by evaluating and acquiring shares in domestic growth companies.

PNB creates UTFs, which it sells to the investing public. Since, as a matter of public policy, PNB's mission requires a successful outcome for investors, PNBs equity UTFs offer stable and relatively high returns. At the same time, limited public disclosure on portfolio holdings and valuations is available, implying that government guarantees may be playing a role in investment outcomes. Investors may thus be shielded from the unseen hand of true market discipline and acquire a false notion of the risk-reward trade-off normally associated with equity market investment. In other words, PNB UTF investors enjoy the benefits of an artificially efficient investment horizon.

The perceived low volatility and consistent income from these investments reduces the incentive for investors to allocate portions of their investments to fixed-income or bond UTFs as most rational investors would do.⁶⁸ The government should therefore slowly remove misperceptions created by PNB funds, so that investors have the right

⁶⁸ IMF and World Bank. 2013. *Malaysia: Bond Market Development Technical Note*. Washington, DC: IMF and World Bank.

understanding of the risk and return profile of the funds. Investors would then naturally turn to funds with similarly low volatility profiles as a substitute (e.g., bond ETFs). With the same intent, PNB has further opportunities to invest in and promote bond UTFs.

Infrastructure Financing

The 10th Malaysia Plan (2011–2015) continues the emphasis of prior plans on infrastructure investment. New initiatives include a facilitation fund intended to catalyze private investment in strategic areas, and a shifting of more of the risks from PPPs to the private sector through competitive bidding on toll highway and IPP projects. Building physical infrastructure is specifically targeted in Chapter 3, which includes a focus on transportation, rail development, maritime infrastructure, and airport development; and in Chapter 6 which targets broadband communication, water, sewerage, electricity, and solid waste management. Commitments in the 2013–2014 budget include RM41.4 billion (\$12.6 billion) to upgrade basic infrastructure such as roads, water supply, and sewerage and electricity supply. Large infrastructure investments are also being financed off-budget through various government-related entities, and through private participation.

Current Approaches

A range of government-related entities is involved in Malaysian infrastructure financing in addition to direct government budget expenditures. This financing occurs directly through the participation of state-owned entities in project financing and the major role played by state-owned companies as owners and operators of infrastructure, and indirectly through access to the capital markets by state-owned entities to fund their general investment activities. The government also catalyzes private investment through its well-established approaches to PPPs, which involve long-term revenue commitments to private operators.

Syarikat Prasarana Negara (Prasarana), an infrastructure company wholly owned by the Ministry of Finance through the Minister of Finance Incorporated, owns and operates several public transport providers through a group of related companies. Pengurusan Air is a government-owned water utility, and KL International Airport, the airport concessionaire, is government owned. Sarawak Energy is a state-owned electric utility. These companies, all of which raise funds through conventional and Islamic securities to finance operations and investment, rank among the 30 largest Malaysian issuers. Bank Pembangunan Malaysia, the government-owned development bank, is mandated to focus on infrastructure finance. With total assets of RM29 billion, it is a relatively small player compared with the debt markets (conventional and Islamic) and commercial and Islamic banks; however, it can play an important role in providing financing for smaller infrastructure projects.

Danainfra Nasional is a government-owned and government-guaranteed special-purpose entity established in 2011 to finance infrastructure projects. Its initial focus has been the mass rapid transit (MRT) project involving the construction of three light rail lines in the greater Kuala Lumpur–Klang Valley area. While Danainfra is treated as an off-budget entity, given the noncommercial nature of the MRT project, some portion of the debt repayments associated with the project is likely to be eventually funded through the budget.⁶⁹ The

⁶⁹ IMF. 2013. Staff Report for the 2013 Article IV Consultation. *IMF Country Report No. 14/80*. Washington, DC: IMF.

newly established government investment fund—Malaysia Development—has some infrastructure projects in its portfolio.

Danajamin Nasional, a credit guarantor jointly owned by the Malaysian government (50%) and Credit Guarantee Corporation Malaysia (50%), was established in 2009 to expand issuer access to debt markets. Bond or *sukuk* issuers pay an annual premium in return for Danajamin's guarantee to meet coupon and principal payments should the issuer default. From inception through the end of 2013, Danajamin had undertaken 23 transactions, which generally allowed the issuers to obtain longer tenors and AAA pricing. Five of the 23 transactions were infrastructure-related:

- (i) Ranhill Power (holding company with interests in electricity, water, other infrastructure);
- (ii) Ranhill Powertron II (IPP);
- (iii) Senari Synergy (depot for oil, gas, petrochemicals);
- (iv) Segi Astana (develop and manage airport complex); and
- (v) NUR Power (IPP).

Private financing based on government concessions is a well-developed model in Malaysia. IPPs have been major providers of generation capacity since the early 1990s after the partial privatization of Tenaga Nasional, the national electric utility, and strong government impetus to involve the private sector in meeting the fast-growing need for electricity.

An initial round of five IPP projects set the general template. An independent entity controlled by an established Malaysian conglomerate or state-owned enterprise was created to build and operate a generating plant. A long-term power purchase agreement with Tenaga provided a certain revenue stream, and the project was financed primarily with domestic debt. The Employees Provident Fund (EPF), the national pension plan and largest institutional investor, was a major investor, and debt securities—mostly *sukuk*—were sold to a range of domestic investors including the banks, insurance companies, fund managers, and pension plans.

The Malaysian template for toll road PPPs was also established in the 1990s. As with IPPs, the approach usually involved an independent entity with strong ties to large conglomerates or state-owned companies building and operating a specific toll road under a long-term concession agreement. Financing was generally through domestic debt issues sold to a range of domestic institutional investors.

Bond Financing

Local currency bonds, including project bonds and *sukuk*, are widely used in Malaysia for infrastructure finance, most commonly for power generation and toll roads. In addition, a number of conglomerates with well-established infrastructure businesses issue bonds and *sukuk* for general corporate purposes. Similarly, several government-controlled companies

that are directly involved as owners and operators of infrastructure assets, or indirectly as significant investors in infrastructure projects, also tap the bond and *sukuk* markets for general financing needs. More than one-third of the largest corporate issuers are infrastructure related, with half of these being state-owned entities (Table A18).

The largest issuer after the government is PLUS Malaysia (PLUS), jointly owned by the UEM Group, an investment holding company wholly owned by Khazanah Nasional, the government-owned investment holding company, and the EPF. PLUS acquired highway concessions through privatization to become the largest tollway operator in Malaysia. The acquisitions were financed through *sukuk* issuance in 2012, comprising RM11.0 billion in government-guaranteed and RM19.6 billion in AAA-rated *sukuk*.

Although the highway concessions have been partially privatized, the government retains a controlling interest through Khazanah Nasional's ownership of the UEM Group, which owns 51% of PLUS. In addition, the government has provided significant financing support through a guarantee facilitating AAA rating for the nonguaranteed portion of the financing. The Malaysian Rating Corporation's AAA rating of the PLUS *sukuk* is premised on the rating agency's assumption of full and timely government support. Factors contributing to the two-notch upgrade from the PLUS stand-alone AA rating include the government's support and golden share in the concession company, the interdependence between

Table A18: Infrastructure-Related Issuers among Top 30 Corporate Issuers, 31 December 2013

Issuer	State-Owned	Amount (RM billion)	Amount (\$ billion)
PLUS Malaysia	Yes ^a	30.6	9.3
Pengurusan Air	Yes	11.6	3.6
Danainfra Nasional	Yes	6.5	2.0
Malakoff Power	No	5.6	1.7
Senai Desaru Expressway	No	5.6	1.7
Sarawak Energy	Yes	5.5	1.7
Celcom Transmission	No	5.0	1.5
1Malaysia Development	Yes	5.0	1.5
KL International Airport	Yes	4.9	1.5
Manjung Island Energy	No	4.9	1.5
Tanjung Bin Power	No	4.0	1.2
Jimah Energy Ventures	No	4.0	1.2
YTL Power International	No	3.8	1.1
Total		97.0	29.5
Infrastructure-related as % of top 30 local currency corporate bond issuers		41.5%	41.5%

^a *AsianBondsOnline* does not include PLUS among the state-owned issuers; however, the state-owned investment company Khazanah has a controlling interest through its control of the UEM Group.

Source: *AsianBondsOnline*.

default events for the rated *sukuk* and government-guaranteed *sukuk*, and the tollway's function as a critical national transportation link.

Of 18 outstanding issues classified as project finance by Rating Agency Malaysia (RAM), 11 might be considered project finance in the sense of providing financing at the construction phase to a stand-alone legal entity with repayment dependent on the revenues once the project is completed (Table A19). Three other issues were to take out earlier-stage financing, and four might be considered as indirect project financing as the funds were raised for general corporate purposes by project-related entities.

Table A19: RAM Holding Berhad–Rated Project Finance Issues Outstanding, April 2014

Issuer	Issue Date and Maturity	Details
Edaran SWM, exclusive provider of solid waste collection and public cleaning services under a 22-year concession agreement in the states of Johor, Negeri Sembilan, and Melaka	RM750 million <i>sukuk</i> under an Islamic medium-term note program of up to RM1 billion (2012/2032)	General operating purposes
GB3, an independent power producer owned by Malakoff Corporation, established to build and operate a gas turbine plant	RM850 million senior secured Al-Bai Bithaman Ajil bond facility (2001/2022)	Project finance to take out initial equity investment and complete construction; repayment provided by a 21-year power purchase agreement with Tenaga Nasional (the national electric utility); 7-year <i>sukuk</i> tranche previously retired
Jati Cakerawala, an investment holding company that owns 80% of Teknologi Tenaga Perlis Consortium, an independent power producer and owner of and operates a gas turbine power plant	RM540 million <i>sukuk murabaha</i> (2013/2023)	Repayment is dependent on dividends from Teknologi Tenaga Perlis Consortium, which derives its income from a power purchase agreement with Tenaga Nasional.
Jimah Energy Ventures, an independent power producer that built and operates a coal-fired power plant	RM4.85 billion senior Islamic medium-term notes facility (2005/2024)	Part of the total project financing, with repayment from a 25-year power purchase agreement with Tenaga Nasional. Two series of junior notes, subscribed by the project owners took the role of traditional equity in the financing.
Kesas, the concessionaire for construction, maintenance, and toll collection for the 35-km Shah Alam Expressway	RM800 million Al-Bai' Bithaman Ajil Islamic debt securities (2002/2014)	Refinancing of outstanding debt related to the original 1993 concession agreement
Lebuhraya Kajang Seremban, the concessionaire for construction, maintenance, and toll collection for the 44-km Kajang–Seremban Highway	Senior <i>sukuk istisna'a</i> of up to RM785 million, junior <i>sukuk istisna'a</i> of up to RM633 million, up to RM50 million in redeemable unsecured loan stocks, RM240 million in redeemable convertible unsecured loan stocks	Less-than-expected traffic volumes prompted a proposed refinancing in 2010, which has not proceeded. Unsecured loan stocks and redeemable convertible loan stocks in default as of 2011.

continued on next page

Table A19 continued

Issuer	Issue Date and Maturity	Details
Lingkaran Trans Kota, the concessionaire for construction (completed in 1998), operation, and toll collection for the 40-km intra-urban Lebuhraya Damansara–Puchong Expressway	<i>Sukuk musharakah</i> Islamic Medium-Term Notes Program I (IMTN I) of up to RM1.15 billion (2008/2023) and <i>sukuk musharakah</i> Islamic Medium-Term Notes Program II (IMTN II) of up to RM300 million (2008/2023)	Refinancing and general corporate requirements
Manjung Island Energy, a special-purpose vehicle controlled by TNB Janamanjung (TNBJ), set up to raise the financing required to meet the development cost of a new coal-fired power plant	Series 1 and Series 2 <i>sukuk</i> of up to RM5 billion, with recourse to TNBJ under the <i>ijarah</i> structure	Rating based on strong cash flow from existing TNBJ generation operations sufficient to service the series 1 issue. Repayment from power purchase agreements with Tenaga Nasional.
MRCB Southern Link, a wholly owned funding conduit for MRCB Lingkaran Selatan, is a concessionaire for the Eastern Dispersal Link Expressway.	RM845 million in secured senior <i>Sukuk</i> (2008/2025) and RM199 million in junior <i>Sukuk</i> (2008/2027)	Highway opened as scheduled in 2012, but government announced in contravention of the concession agreement that tolling would not begin. Interim payments are being made by government pending a final resolution of its decision not to collect tolls on this expressway.
Mukah Power Generation, a wholly owned subsidiary of Sarawak Energy, is an independent power producer incorporated to build and operate a coal-fired power plant.	Senior <i>sukuk mudharabah</i> program of up to RM665 million (2006/2021) and junior <i>sukuk mudharabah</i> program of up to RM285 million (2006/2031)	The junior <i>sukuk</i> and standby facility from the parent provided a quasi-equity tranche for the project. Repayment is provided under a power purchase agreement with Syarikat SESCO.
New Pantai Expressway, a subsidiary of IJM Corporation, a special-purpose entity created to build, operate, and maintain the 19.6-km New Pantai Highway	RM490 million in senior Bai' Bithaman Ajil notes (2003/2013), RM250 million in junior Bai' Bithaman Ajil notes (2003/2016)	Junior notes are unconditionally guaranteed by the parent, providing a quasi-equity financing tranche. Repayment comes from toll collections under to a 33-year concession agreement. Financing was restructured in 2010 reflecting a compensation payment following a government decision to eliminate collections at one toll plaza.
Panglima Power, a subsidiary of Powertek, is an independent power producer established to build and operate a gas turbine generation plant.	RM830 million in redeemable secured serial bonds (2003/2016)	Repayment under 23-year power purchase agreement
Prai Power, a subsidiary of Malikof, is an independent power producer established to build and operate a gas turbine power plant.	RM780 million in Al-Istisna'a fixed-rate serial bonds (2001/2016)	Repayment under power purchase agreement

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Table A19 continued

Issuer	Issue Date and Maturity	Details
Projek Lintasan Shah Alam , concessionaire for the construction, operation, and maintenance of 14.7-km Lebuhraya Kemuning–Shah Alam Highway	RM330 million in senior <i>sukuk ljarah</i> (2008/2027) and RM415 million in junior <i>sukuk mudharabah</i> (2008/2037)	Rating considered the implicit support of Permodalan Nasional, one of the largest Malaysian fund managers, which subscribed to all of the junior <i>sukuk</i> . Repayment under a 5-year concession agreement. Senior <i>sukuk</i> redeemed in 2014; junior <i>sukuk</i> still outstanding.
Ranhill Powertron, a subsidiary of Ranhill, is an independent power producer originally established in 1997 (under different ownership) to build and operate a gas turbine power plant.	RM540 million in Islamic medium-term notes (2005/2019)	Repayment under a 21-year power purchase agreement with Sabah Electricity
Sarawak Power Generation, a wholly owned subsidiary of Sarawak Energy, which is controlled by the Sarawak state government, is an independent power producer that owns and operates a gas turbine power plant.	RM215 million Serial in <i>sukuk musyarakah</i> (2006/2021)	Rating underpinned by a letter of support from Syarikat SESCO, another subsidiary of Sarawak Energy
Tanjung Bin Energy Issuer, a wholly owned subsidiary of Tanjung Bin Energy, is the turnkey contractor for the construction and operation of a new coal-fired power plant.	RM3.29 billion in <i>sukuk murabahah</i> (2012/2032)	Sponsor is Malakoff Corporation Repayment under a power purchase agreement with Tenaga Nasional. Total project cost RM7.6 billion.
YTL Corporation, an investment holding and management company with interests in power generation and transmission, water and sewerage services, cement manufacture and trading, property investment and development, construction, hotels, telecommunications, and information technology	RM500 million in medium-term notes (2004/2019)	Indirect infrastructure investment

Source: RAM http://www.ram.com.my/4_1_1.aspx?catID=21f623ad-d599-4fd9-ba18-01c7705c73a9&ddlID=d35598aa-8e1a-45eb-878a-fee636e3a290&G4issue=&g4id=&f=Syarikat+Prasarana+Negara+Berhad&s=TRANSPORTATION&type=&id=829&filter (accessed 23 April 2014).

Expanding the Use of Bond Financing

Local currency bonds and *sukuk* already play a major role in infrastructure financing in Malaysia. The use of project bonds, or more commonly *sukuk*, is well established, and many infrastructure-related companies issue bonds and *sukuk* for general corporate purposes. Islamic securities, based on the concepts of risk sharing and profit participation, are particularly well suited to project finance. Two public sector initiatives—the use of specific retail issues and the provision of credit enhancement—could facilitate additional local currency bond financing for infrastructure.

Danainfra's 2013 initiative to launch retail *sukuk* met two policy objectives—broadening the investor base for local currency issues by targeting retail investors, and mobilizing local savings for infrastructure projects. The initial retail offering of RM300 million was sold in January 2013, and a second offering of RM100 million followed in November. The *sukuk* were sold directly to retail investors in the initial offering, and are listed on the Bursa Malaysia to facilitate secondary market trading. The retail *sukuk* compose about 6% of Danainfra's outstanding bonds and *sukuk*.

Specific retail bonds and *sukuk* are an option that could be used by other issuers; however, given the costs relative to traditional book building, retail issues may not be attractive for any other purpose besides meeting the specific objective of broadening the investor base. A potentially more attractive option is the policy pursued by Cagamas of requiring underwriters to reserve a tranche of each issue for direct retail investment. As in many other countries, direct retail holding of bonds and *sukuk* is estimated as less than 5% of outstanding issues, although individuals hold considerably more securities indirectly through unit trusts and ETFs, as well as through their pension funds.

Danajamin's provision of credit enhancement can contribute to the viability of project finance. With investors prepared to commit to longer tenors for higher-rated issues, the term of the financing can better match project payback periods, reducing the refinancing risk. The challenge for Danajamin is to support issues with acceptable risks that would not be completed without a credit enhancement, while at the same time being sufficiently conservative in the risk assessment of potential issuers to ensure that its AAA rating is maintained. Successfully addressing this challenge can help with two of the major impediments to Malaysian bond market development: (i) insufficient supply, as institutional investors universally indicate they would hold more local currency debt if available; and (ii) virtual exclusion from the market of issuers rated below AA.

Developing a market for lower-rated debt could contribute significantly to infrastructure finance by providing alternatives sponsoring investment to cover higher-risk tranches. Government-related entities such as the EPF and KWAP could stimulate this process by increasing their use of external managers and developing specific high-yield debt mandates for small portions of their investment portfolio. This would spur demand for lower-rated securities while also addressing the policy objective of attracting new issuers to the market. Other institutional investors might follow this lead, and an increased supply of lower-rated securities would also facilitate the development of higher-yield bond ETFs or UTFs.

Myanmar

Financial and Capital Markets Overview

The finance sector in Myanmar is small and bank dominated, and operates in a regime of administratively set interest rates and exchange restrictions.⁷⁰ There are only a handful of nonbank financial institutions, all small and playing a limited intermediation role. There is

⁷⁰ The decision to unify the exchange rates and adopt a managed float was announced in April 2012.

reportedly a large unregulated shadow financial system.⁷¹ Plans for financial liberalization are unfolding quickly, with a new Banking and Financial Institutions Law expected to be introduced in 2015. In addition to legal and regulatory reform, there is a need to build supervisory capacity.

The Central Bank of Myanmar has announced that it will grant preliminary approval to nine foreign banks to prepare for the start of banking operations in Myanmar through branches. The preliminary approval is valid for 12 months, during which applicants will have to meet requirements set by the Central Bank of Myanmar in order to receive their final license to operate. Reform of the state-owned banks is being considered. Licenses have recently been granted to two new policy banks, the Housing and Construction Bank and the Microfinance Bank, both of which are joint ventures between the government and the private sector.

The Myanmar Securities Exchange Centre (MSEC) was established in 1996 as a joint venture between the Daiwa Institute of Research and Myanma Economic Bank, the largest of the four state-owned banks. The original plan was for the MSEC to develop into an active capital market for the listing and trading of bonds and equities, but it has been largely inactive over the last decade. It has, since 2010, acted as the agent for Treasury bonds. There are also two listed companies, both majority-owned by the government. Recent announcements indicate the government's intention to have an active exchange by 2015, with technical support from the Tokyo Stock Exchange.

The current regulatory framework is based on the Financial Institutions of Myanmar Law, 1990; the Insurance Law, 1993; and the Central Bank of Myanmar Law, 1990. Modern finance sector legislation is planned as part of the program of financial liberalization. The

Table A20: Myanmar Financial and Capital Markets Overview

Item	Number	Assets (MK million)	Assets (\$ million)	Assets (% of GDP)
State-owned banks	4	17,850,722	18,085.8	31.9
Private banks	23	5,126,388	5,193.9	9.2
Licensed microfinance institutions	166	n.a.	n.a.	n.a.
Life insurance companies	3	n.a.	n.a.	n.a.
General insurance companies	9	n.a.	n.a.	n.a.
Government Provident Fund	1	n.a.	n.a.	n.a.
Listed companies (market capitalization)	2	2,600,000	2,534.1	4.3
Treasury bonds		2,950,596	2,875.8	4.9

GDP = gross domestic product, n.a. = not available.

Notes: All data as of the end of 2013, except for Treasury bonds outstanding, as of the end of 2014. Exchange rate at the end of 2013 (\$1 = MK987), at the end of 2014 (\$1 = MK1,026); GDP in 2013 (MK55,854,330 million), in 2014 (MK59,963,774 million).

Sources: Central Bank of Myanmar, KPMG.

⁷¹ IMF. 2011. Myanmar 2011 Article IV Consultation. IMF Country Report No. 12/104.

Securities and Exchange Law was passed in July 2013. The Central Bank of Myanmar is the prudential supervisor for banks, and the Ministry of Finance, for insurance and capital market activities.

Local Currency Bond Markets

Treasury bonds have been issued since 1993. There is no established secondary market. Detailed data on investors are not available, but the majority of Treasury bonds are held by banks, and smaller amounts are held by other companies and individuals. The Central Bank of Myanmar also holds significant amounts of government debt. Aside from the banks, there are no major institutional investors in Myanmar. There is no corporate debt market.

Clearing and payment arrangements are currently manual, paper based, with net settlement at the end of the day. Retail systems in the form of debit cards and ATMs have recently been introduced, but neither a large-value transfer system nor the widespread use of electronic transfers has developed. The central bank has begun work on an electronic payment system. The legal basis for payment system development and oversight, including securities clearing and settlement, is yet to be developed.

Infrastructure Financing

Since the start of reforms in 2010, development plans to address the large infrastructure gap have been quickly unfolding. Land transportation links with regional economies are a priority, with a number of major road and rail projects already initiated with assistance from international development partners. Port development and new airports are also under way. The power sector is a priority because of the lack of a reliable electricity supply to support industry and low access to electricity—the lowest in the region.

The 2013 National Comprehensive Development Plan covers four 5-year plans through 2033. Ambitious plans for infrastructure investment can be met in the near term only by attracting foreign capital. Myanmar drew over \$40 billion in foreign investment in fiscal 2012–2013, the bulk of this for infrastructure projects.⁷² Given the strong investor interest in the growth potential of the country, this trend is likely to continue despite the current incomplete framework for PPPs. Over the longer term, the development of Myanmar's financial and capital markets will offer opportunities to mobilize domestic savings for infrastructure investment.

Expanding the Use of Bond Financing

Finance sector modernization measures to foster capital market development will need to be appropriately sequenced as part of a broader program of reform. Experience elsewhere highlights the importance of first establishing an appropriate regulatory framework, building supervisory capacity, and establishing the supporting infrastructure. Specific measures will include

⁷² KPMG. 2013. *Infrastructure in Myanmar*. Amsterdam: KPMG.

- (i) effective implementation of the the 2013 capital markets law;
- (ii) an effective capital market supervisory authority;
- (iii) a securities depository and a large-value transfer system with appropriate coordination to ensure delivery versus payment; and
- (iv) an appropriate trading platform to support exchange trading or capture and disseminate trade data for OTC transactions.

The development of a government bond market is an important precursor to the development of a corporate bond market. It is also linked to the policy need to put a monetary framework in place. A government debt management program, including a preannounced schedule of auctions and benchmark issues, should be established. A primary dealer system would facilitate the auction of government securities and provide a foundation for a secondary market.

In addition to the specific bond market measures, many of the steps required for finance sector development more broadly are necessary concurrent actions. Appropriate regulation and oversight, which will require new or extensively revised legislation, needs to be put in place for all financial institutions. It is important to institute appropriate prudential restrictions, such as a prudent portfolio approach so that institutions are not arbitrarily constrained in their investments and, at the same time, investors and financial stability are adequately protected. This will facilitate the development of insurance companies that can grow over time into institutional investors. The framework for private pensions and the development of the fund management industry—including, in the longer term, collective investment schemes—will all facilitate the creation of a domestic investor base.

Foreign investors are likely to be attracted by Myanmar's high growth potential. With an appropriate regulatory framework and infrastructure in place, foreign investors may take an interest if local currency bonds are issued, provided the foreign exchange and tax regimes are sufficiently accommodating.

Philippines

Financial and Capital Markets Overview

Most of the elements of modern financial and capital markets already exist in the Philippines.⁷³ The finance sector is bank dominated (Table A21). This bank dominance, combined with the important role played by large Philippine conglomerates, has resulted in high concentration levels in both the financial and non financial sectors. About 60% of bank assets, and 7 of the 10 largest banks, are conglomerate related. About three-quarters of the market capitalization of the Philippine Stock Exchange (PSE) is

⁷³ Sections of this note draw on work completed by Brent Sutton for ADB, 2013. *Expanding the Investor Base for Local Currency Bonds in ASEAN+2 Countries*. Manila.

Table A21: **Philippine Financial and Capital Markets Overview**

Item	Number	Assets (P billion)	Assets (\$ billion)	Assets (% of GDP)
Banks	648	11,158	251.3	88.3
Nonbank financial institutions ^a	5,989	190	4.3	1.5
Life insurance companies	32	855	19.3	6.8
General insurance and reinsurance companies	72	161	3.6	1.3
Public sector pension funds				
Government Service Insurance System	1	910	20.5	7.2
Social Security System	1	437	9.8	3.5
Mutual fund sector ^b		822.9	18.5	6.5
Listed companies (market capitalization)	265	14,251	321.0	112.8
Total debt securities outstanding		6,671	150.2	52.8
Of which, local currency		4,655	104.8	36.8
foreign currency		2,016	45.4	15.9
Government debt securities outstanding		5,445	122.6	43.1
Of which, local currency ^c		3,895	87.1	30.8
foreign currency		1,550	34.9	12.3
Corporate debt securities outstanding		1,226	27.6	9.7
Of which, local currency		760	17.0	6.0
foreign currency		466	10.5	3.7

^a Includes insurance companies and investment companies, plus a variety of other financial institutions such as 6,188 pawnshops.

^b Mutual fund and unit investment trust fund figures are estimates.

^c Includes government-guaranteed corporate bonds.

Note: All data as of the end of 2014 unless otherwise noted. Exchange rate as of the end of 2014 (\$1 = ₱44.4) and GDP as of the end of 2014 (₱12,634 billion).

Sources: Bangko Sentral ng Pilipinas, Insurance Commission, Philippine Stock Exchange, Government Service Insurance System, Social Security System, *AsianBondsOnline*.

attributable to large conglomerate-related entities, including the San Miguel Corporation, SM Investment Corporation, Aboitiz Equity Ventures, the Ayala Group, DMCI Holdings, and Metro Pacific Investment Corporation.⁷⁴

The Bangko Sentral ng Pilipinas (BSP) is the prudential supervisor for banks and nonbank deposit-taking institutions, and the Insurance Commission responsible for the oversight of insurance companies. The Ministry of Finance is responsible for most capital market oversight, although, as described below, many day-to-day responsibilities are delegated to the Securities and Exchange Commission (SEC) and a number of SROs.

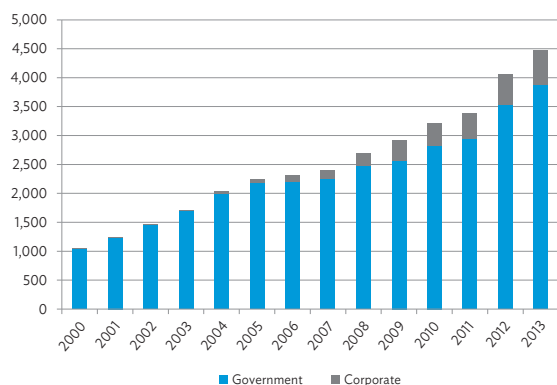
⁷⁴ IMF. 2010. Philippines: Financial System Stability Assessment Update. *IMF Country Report No. 10/90*. Washington, DC: IMF.

Local Currency Bond Markets

The Philippine local currency corporate bond market has been growing since 2000 both in nominal terms and relative to GDP (Figures A38, A39); however, outstanding corporate issues relative to GDP remain well below the levels seen in Malaysia and Thailand.

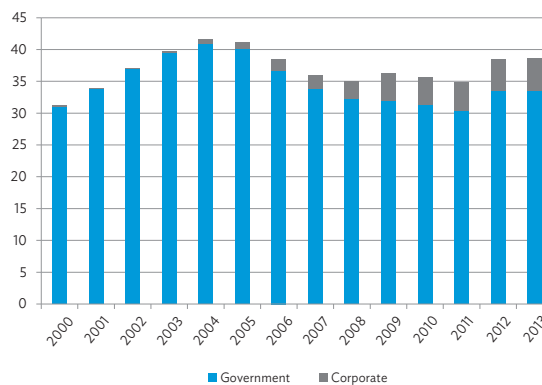
Reflecting the symbiotic relationship between the growth of local institutional investors and the growth of local currency bond markets, pension funds, insurance companies, and fund managers in the Philippines remain relatively small in relation to the banks and GDP. Development of the local bond market has been inhibited by several factors, one of which—the use of special deposit accounts (SDAs)—was partially addressed in 2013.

Figure A38: Local Currency Bonds Outstanding
(₱ billion)



Source: AsianBondsOnline.

Figure A39: Local Currency Bonds Outstanding
(% of GDP)



Source: AsianBondsOnline.

The tax regime is unfavorable to bond investors and discourages secondary trading. A 20% withholding tax applies to most investors in Philippine bonds, but some of the largest institutional investors (the government insurance and social security funds) are exempt. Secondary market trading conventions factor in the withholding tax so the market is bifurcated with exempt and nonexempt investors not trading with each other. The limited bond market liquidity is worsened by the application of the documentary stamp tax to certain secondary market activities, including repos, which discourages trading.

An ongoing challenge is the lengthy legislative process in the Philippines, where legal changes often take years to achieve. The Securities Regulation Code and the Implementing Rules and Regulations are the primary regulations governing the Philippine capital markets. The Philippine Dealing and Exchange Corporation (PDEx) in its capacity as an SRO has also issued a variety of rules that govern market instruments and participants using its facilities.

A further challenge is presented by the complex regulatory structure. The Ministry of Finance is responsible for most aspects of the regulation and oversight of Philippine capital markets but delegates day-to-day responsibilities to a variety of primarily government bodies. The SEC oversees corporate bond issuance and secondary trading, and also has

responsibility for mutual funds (but not unit investment trust funds). The PDEX is an SRO recognized by the SEC to operate an electronic fixed-income trading platform and market liquidity programs (securities lending and repo activities), and to develop and enforce fixed-income trading rules.

The Philippine Stock Exchange, through its subsidiary the Capital Markets Integrity Corporation, has SRO functions that include rule making and enforcement of the Securities Regulation Code and its implementing rules and regulations, the Anti-Money Laundering Law and its implementing rules and regulations, and the Code of Conduct and Professional Ethics for Traders and Salesmen. The Capital Market Development Council is a public-private sector partnership chaired by the Secretary of Finance with a mandate to recommend policy and legislative reforms to promote the development of the Philippine capital markets. The Bureau of the Treasury is responsible for public debt management including the issuance of government debt securities, and for policy related to capital market development.

The BSP's oversight of deposit-taking institutions includes the issuance of debt securities by licensed banks; the operation of trust accounts, which include individual investment accounts; and the manufacture and distribution of unit investment trust funds, a type of mutual fund. The BSP also registers foreign investments (including portfolio investments) and monitors capital flows into and out of the Philippines. The BSP registration process for foreign currency transactions is cited by market participants as an impediment to foreign investment and the development of currency swaps. Views vary, with some participants seeing the registration process as a relatively minor administrative inconvenience, while others view it as so cumbersome as to be a major deterrent.

The use of nontradable SDAs for monetary operations has limited the growth of Philippine debt markets. The total value of SDAs outstanding at the end of 2012 was equivalent to about 50% of the total value of local currency government debt securities. The use of Treasury bills or central bank bills for monetary operations, as is common practice elsewhere, would introduce significant volumes of tradable assets at the short end of the debt market, contributing to the growth of secondary trading. Although intended as an instrument for monetary operations to mop up excess liquidity in the banking system, SDAs have become sought-after investments for individual investment accounts managed by banks' trust departments.

The recent decision by the BSP to limit access to SDAs has stimulated additional demand from individual investment accounts for corporate bond issues. Reducing the availability of SDAs does not directly address the overall dearth of tradable debt instruments as they are still used for monetary operations. Effective May 2013, the BSP limited access to SDAs to banks for their own accounts and through their trust departments for unit investment trusts, and required the divestment of SDAs from individual investment accounts by November 2013. The result has been a reduction in SDAs held by trust departments to about ₱1.2 trillion in 2013, although a significant portion of this was placed in interbank deposits, which in turn were used to purchase SDAs. Thus, total SDA balances declined by about ₱550 billion from the May policy change through the end of 2013.⁷⁵

⁷⁵ JP Morgan. 2014. *Economic Research Note Philippines: Tracking SDA Flows and Money Growth*. 7 March.

Restrictions on access to SDAs have been cited by market participants as a contributor to the increase in corporate bond issues in the latter part of 2013 and early 2014, as higher-yielding alternatives to bank deposits were sought by individual investment account clients. Banks are the largest purchasers of corporate bond issues, but a significant portion is then resold to their retail clients holding investment management accounts or unit investment trusts rather than being held for banks' own accounts.

Bond Funds

Overview

The retail managed fund industry in the Philippines is small but growth is gaining momentum in tandem with the growth in the country's pool of savings. According to the latest available data, as of the end of September 2013, unit investment trust funds AUM stood at ₱501.2 billion,⁷⁶ while mutual fund AUM cracked the ₱200 billion mark, reaching ₱207.0 billion as of the end of December 2013.⁷⁷ Growth in 2013 followed a 40% expansion in AUM in 2012,⁷⁸ signaling the strengthening of the underlying demand for retail managed asset funds.

Managed funds have existed in the Philippines for many years and are currently available to retail investors in three forms:

- (i) unit investment trust funds (UITFs), which are offered predominantly by banks and regulated by the BSP in the course of its general supervisory oversight of banks;
- (ii) mutual funds, which are offered predominantly by insurance companies and are directly regulated by the Philippines SEC as stand-alone entities; and
- (iii) ETFs, which have been recently introduced and are also regulated by the SEC.

Size and Scope of Sector

Bond funds make up about 50% of the total mutual funds AUM and 80% of the UITFs currently outstanding.⁷⁹ Filipinos are characterized as conservative investors who value safety of principal. Retail investors typically manage their investments with a buy-and-hold philosophy. At the same time, they are reluctant to buy instruments that do not offer some degree of liquidity. They gravitate toward investment products that are tied to the well-known corporate conglomerates that dominate the Philippine economy. The recent phasing out of SDAs for individual investment accounts has resulted in a very liquid financial system and is most likely responsible, at least in part, for the recent rapid growth in managed fund AUM. In the context of infrastructure financing needs, however, the AUM of the entire managed funds industry in the Philippines is less than the projected

⁷⁶ BSP.

⁷⁷ Philippine Investment Funds Association.

⁷⁸ Footnote 77.

⁷⁹ Footnote 77; industry sources.

expenditures for PPP projects for 2014 alone. It is therefore unlikely that retail bond funds will represent anything more than a modest opportunity to finance infrastructure spending in the foreseeable future.

The pool of corporate bonds from which bond funds can be manufactured is thin in the Philippines. Corporate bond issues outstanding amount to about 15% of the total fixed-income market (the remainder being government bonds), and the market is dominated by the country's major conglomerates. Fund sponsors are thus less able to roll out new products since regulations restrict the exposure of a fund's total AUM to a single issuer to 10%. On-balance-sheet bank loans are the primary financing mechanism in the country and banks have ample retail deposits with which to fund their growth. Nevertheless, growth in corporate bond issuance is expanding. Industry participants report a strong 2013 for corporate issues and expect 2014 to accelerate from that pace, with ₱200 billion in new issues anticipated in the first half of the year.⁸⁰

Structural and Regulatory Framework

Mutual funds, ETFs, and UITFs share a similar regulatory framework, with some differences. Mutual funds and ETFs are registered and regulated by the SEC under the Investment Companies Act (Rule 35-1). Each mutual fund and ETF is incorporated as a separate investment company and must have subscribed and paid-in capital of ₱50 million. Mutual funds and ETFs are issued to investors under a prospectus, which must receive prior approval from the SEC. UITFs are overseen and regulated by the BSP. UITF assets are included on the balance sheets of the issuing banks and are, therefore, subject to a single-borrower limit and other prudential requirements.

An estimated 85% of the bond funds offered in the Philippines are denominated in pesos, and the rest in US dollars or euros. A number of types of bond mutual funds and bond UITFs are available in the Philippines.

The Philippines' first ETF was launched in December 2013 by the First Metro Investment Corporation, an investment company and securities dealer. The First Metro Philippine Equity Exchange Traded Fund reflects the performance of the Philippine Stock Exchange Index (PSEi). The launch follows work begun by the PSE and the SEC in 2008 to develop appropriate regulations and rules for such a vehicle. ETFs are classified as a new investment product under the Investment Companies Act, which eliminates problems associated with structuring ETFs under existing legislation. ETFs must be registered with the SEC and provide regular public disclosure of investment policies and objectives, portfolio positions, and fees. The rules also permit in-kind issuance and redemption of shares. First Metro is contemplating a bond ETF that will track the Philippine government bond index.

Although the slow emergence of a fund-friendly regulatory framework has restricted the development of a robust managed fund industry, the recent approval and launch of the Philippines' first ETF is a sign that regulators are encouraging its growth. In 2012, the BSP approved the issuance of UITF segment feeder funds and funds-of-funds. Meanwhile, the financial services industry has long hoped for the passage of a Collective Investment

⁸⁰ First Metro.

Table A22: Comparison of Mutual Funds, Unit Investment Trust Funds, and Exchange-Traded Funds

Feature	Mutual Funds	UITFs	ETFs
Legal form	Investment company (each fund is separately incorporated)	Trust fund	Investment company (each fund is separately incorporated)
Offered by	Investment and insurance companies	Trust departments and corporations	Investment companies
Distributed by	Predominantly life insurance companies	Predominantly banks	Investment companies
Feeder funds	Allowed	Allowed	n.a.
Ownership instrument	Shares	Units of participation	Shares
Valuation	Net asset value per share	Net asset value per unit	Net asset value per unit
Regulator	Directly regulated by SEC	Indirectly regulated by BSP	Directly regulated by SEC and PSEi
Applicable law	ICA and SRC	BSP Circular No. 447 (as amended by BSP Circular No. 593)	ICA and SRC
Expenses	Sales charge: 1%–5% Redemption fee: 0.5%–3% Investment mgmt, advisory, distributor and administrative fees: 1%–2.5%	Sales charge: 0%–2% Redemption fee: 1%–2% Trust fees: 1%–1.5%	Sales commission: up to 0.25% of gross trade +VAT on commission +PSEi fees (0.005%) +SEC fees (0.01%) +0.5% stock transaction tax on sale
Selling agents	SEC-licensed mutual fund agents	Authorized bank employees with TOAP certification	SEC-licensed mutual fund agents
Interest income tax	Tax on underlying holdings	Tax on underlying holdings	Tax on underlying holdings
Capital gains tax	None	20% withholding tax	gains < ₱100,000 = 5% gains > ₱100,000 = 10%

n.a. = not applicable, not available; UITF = unit investment trust fund.

Sources: pinoymoneytalk.com. 2010. *Differences between Mutual Funds and UITFs*. 7 January; PSE Academy. 2011. *Mutual Funds and UITFs*. 19 September; moneysense.ca. 2010. *Mutual Funds vs. UITFs*. 22 March; pinoymoneytalk.com. 2013. *ETFs in the Philippines*. 23 January; wikinvest; and comments from market participants.

Schemes Law that would put the regulation of all managed funds under the umbrella of the SEC. It is hoped that this law would modernize the regulatory framework and level the playing field for the manufacture and distribution of funds. However, after 12 years in the making, the law still awaits passage.

Infrastructure Financing

A large demand gap has resulted from infrastructure investment averaging about 2% of GDP per year over the last 30 years, versus the estimated 5% investment required to meet the country's needs.⁸¹ Accelerating infrastructure development is a central initiative under

⁸¹ PPP Centre Philippines. Cited in A. N. Siackhachanh et al. 2013. *Private Investment for Infrastructure Development in Selected ASEAN+3 Member Countries*. Manila: ADB.

the Philippine Development Plan, 2011–2016, with key strategies focused on improving investor confidence to generate additional financing and attract service providers. The government intends to have the private sector finance a significant portion of the estimated \$110 billion infrastructure investment required through 2020 be financed by the private sector and to this end has devoted significant resources to PPPs.⁸²

Current Approaches

Infrastructure financing in the Philippines has historically been provided by the local banking system. The combination of generally high levels of liquidity in the banking sector, accommodative prudential standards, and the involvement of the leading conglomerate groups in most current and planned infrastructure projects makes it likely that local banks will continue to dominate Philippine infrastructure financing over the near term. In the medium to longer term, there may be incentives for project sponsors to seek true project financing.

Philippine banks have historically been prepared to lend for relatively longer tenors—5 or 7 years—and project sponsors are generally comfortable with the refinancing risk. In part this arises from the concentrated nature of the Philippine corporate and finance sectors, with all of the large conglomerates having related banks, and the nonrelated banks generally eager to extend financing to the conglomerates. In the prevailing low-interest-rate environment, banks have generally been eager to provide infrastructure financing, and given high liquidity would often prefer to roll over loans after the construction phase is complete rather than take out financing that might come from a bond issue.

Bank financing has been further encouraged by extremely accommodative prudential limits. In 2013, the BSP amended the single-borrower limit to allow banks to extend an additional 25% of capital (beyond the existing 25% of capital limit) for infrastructure projects.⁸³ Combined with preexisting additional provisions for trade finance, this raises the possibility that a single bank could have exposure of up to 60% of its capital to a single borrower.

The single-borrower limit in practice is even more generous, as market participants interpret it to exclude joint ventures where the borrower does not have de jure control. Lending to a consortium that includes a large conglomerate therefore not be considered lending to a group of related entities composing a single borrower as long as the conglomerate did not own more than 50% of the joint venture. This interpretation means the full extent of individual bank exposure to conglomerate groups would be understated. Even disregarding joint ventures, a bank's exposure to two conglomerate groups could exceed its capital, raising concentration risk and financial stability concerns.

Despite the accommodative prudential limits, some market participants⁸⁴ have indicated that the single-borrower limits have already prompted corporate bond issues that might indirectly be used for infrastructure financing. It has been suggested that some

⁸² Goldman Sachs. 2013. ASEAN's Half a Trillion Dollar Infrastructure Opportunity. *Asia Economic Analyst*. May.

⁸³ BSP. 2013. *Circular No. 779*. 9 January.

⁸⁴ Market participants' discussions with the authors in February 2014.

conglomerates use the proceeds of bond issues to reduce their outstanding bank credit, clearing capacity in their bank credit lines to be able to fund initial-stage work on PPP projects in case their consortia are selected for the pipeline projects nearing contract award stage. Other market participants have expressed a contrary view, suggesting that the exclusion of joint ventures from the single-borrower limits provides the necessary flexibility for the banking system to finance all projects in the pipeline.

The total capital of the banking system at the end of 2013 was ₱1.125 trillion, equivalent to about \$26.5 billion, or about one-quarter of the anticipated infrastructure investment required in the Philippines through 2020. While the banking sector has enough liquidity to fund the expected infrastructure investment over the next several years, the resulting increased concentration in conglomerate exposure is a significant financial stability concern.

Adhering to more prudent regulatory standards—for example, a maximum of 25% of capital with a definition of connected counterparties that captures all of the conglomerate group connections—would not only contribute to financial stability but also promote the development of the bond market. One challenge is the relatively small size of the Philippine nonbank finance sector. While there is some scope for increased investment by local institutional investors—all they have expressed interest in holding more high-quality securities if available,⁸⁵ and individuals also clearly have an appetite for local bonds, funding from domestic nonbank sources could provide only a portion of the required infrastructure financing. Additional foreign investment would therefore be required to significantly diversify infrastructure financing.

Other regulatory developments have not yet had an impact on Philippine project financing. The BSP has yet to introduce the liquidity requirements of Basel III, so the need to avoid long-term funding mismatches that has led banks in some other jurisdictions to pull back from longer-tenor financing has not had an impact in the Philippines. Some bankers expressed little concern, indicating that there was a ready market for their own bonds, which could be used to fund longer-term commitments if required.

For the conglomerates, which in various combinations of local and international players are part of all of the consortia bidding on current PPP projects, and which have significant investments in power, roads, airports, ports, water, and sewerage through their numerous operating entities, there is little incentive to seek project finance. The banks are liquid and prepared to lend at attractive rates. Much of the lending is on a “name” basis—credit decisions tend to be based more on the involvement of one or more well-known conglomerates in the consortium rather than on detailed underwriting analysis of the project—simplifying for the project sponsors the process of obtaining financing.

Bond Financing

While project bonds are virtually unknown in the Philippines, infrastructure financing needs are already being met to some extent through the local currency bond market. About one-fifth of outstanding corporate local currency bonds were issued by

⁸⁵ Interviews with the authors in February 2014, and with the authors of *Broadening the Investor Base for Local currency Bonds in ASEAN+2 Countries* in June 2012.

Table A23: **Infrastructure-Related Local Currency Bonds Outstanding**

Issuer	Amount (₱ billion)	Amount (\$ billion)
Philippine Long Distance Telephone Co.	17.3	0.4
Globe Telecom	17.0	0.4
Maynilad Water Services	16.6	0.4
Energy Development Corporation	16.0	0.4
Manila Electric Company	14.4	0.3
MTD Manila Expressway Corporation	11.5	0.3
South Luzon Tollway Corporation	11.0	0.3
Manila North Tollways Corporation	6.1	0.1
Total outstanding infrastructure-related issues	109.9	2.6
Infrastructure-related as % of total local currency corporate bonds	19.8%	19.8%

All data as of the end of September 2013.

Source: *AsianBondsOnline*.

infrastructure-related companies (Table A23). An alternative measure gives a similar picture of the corporate debt securities listed with the PDEX—12 of 59, or about 20%, are infrastructure related.⁸⁶

Foreign currency-denominated bonds have also been used by Philippine issuers for infrastructure finance. These include the \$300 million issue by SMC Global Power Holdings, a subsidiary of San Miguel Corporation, in January 2011. Some government bond issues have been specifically linked to infrastructure financing, for example, the 2010 dollar-denominated issues to finance infrastructure and reconstruction projects to address damage from 2009 typhoons. Another indirect use of local currency bonds for infrastructure finance is through the government-owned Development Bank of the Philippines, which has \$300 million in dollar-denominated bonds outstanding—classified as government debt since the Development Bank is a government-owned or -controlled corporation. The bank's sectors of focus include transport, logistics, and power. Its outstanding peso-denominated subordinated debt and hybrid instruments were issued primarily to meet capital adequacy requirements, but the proceeds do form part of the bank's general funding base used for debt and equity investments in infrastructure projects.

Recent experience in the Philippines illustrates both the possibilities and challenges in tapping the local currency markets for infrastructure finance. While the data suggest that over \$2.5 billion has been raised for infrastructure financing through local currency bond issues over the last 10 years, this should be considered only as an indicative guide, as a number of features of the Philippine market could mean that this figure either overstates or understates the amounts actually used for infrastructure investment.

⁸⁶ The PDEX data (12 December 2013) are not directly comparable to the *AsianBondsOnline* data. Not all corporate bonds are listed with the PDEX. *AsianBondsOnline* classifies bonds issues by government-owned or government-controlled corporations (GOCCs) as government bonds, while the PDEX includes bonds issued by the Power Sector Assets and Liabilities Management Corporation, an infrastructure-related GOCC, as corporate securities.

For one thing, as disclosed in their prospectuses, bond issues by the established telecommunications and electric utilities have tended to raise funds for general corporate purposes rather than project financing. Bond proceeds may be used to contribute to a range of capital investments or refinance capital projects, but cannot be directly linked to specific infrastructure investment. On the other hand, bond issuance by corporates not directly involved in infrastructure construction and operation may indirectly contribute to infrastructure financing through the complex group structures of Philippine conglomerates.

San Miguel Brewery and Ayala Corporation, the first- and third-largest issuers of local currency corporate bonds, respectively, are active in infrastructure development through various arms of their respective conglomerates. These and other large Philippine conglomerates, including Metro Pacific and DMCI Holdings, have been active bidders on current projects such as the Light Rail Transit project, and are expected to bid on many of the projects now in the pipeline. Bond issues by the large conglomerates may therefore play a role in the early-stage financing of these projects, possibly to be supplemented at a later date with project-specific bond issues.

There are a number of recent Philippine examples of options for the use of local currency bonds for infrastructure finance. The Energy Development Corporation (EDC) issued 5- and 7-year peso-denominated bonds in 2009 and again in 2013 for specific project finance purposes. The 2009 issue was to refinance and redenominate a portion of the outstanding yen-denominated Miyazawa II loan. This facility was provided by Japan's Export-Import Bank to the government-owned Philippine National Oil Company-Energy Development Corporation (PNOC-EDC), predecessor of today's privatized EDC. It was used to fund the capital investment and working capital requirements of PNOC-EDC's geothermal power projects.

The decision to use concessional financing for the original investment in geothermal generation facilities reflects the general challenges of construction-stage financing of infrastructure projects, as well as specific market-access issues that faced the Philippines (and other developing markets in Asia) in the years following the 1997/98 Asian financial crisis. The subsequent 2009 bond issue for refinancing was driven in part by the advantages of eliminating the need to hedge currency risk by matching the denomination of the debt with the local currency-denominated revenues of EDC. While there were some unique factors in play, broadly speaking, EDC's 2009 bond issue reflected the widely used model of bank financing during the construction phase followed by a bond issue to take out the bank financing.

EDC's 2013 ₱7 billion bond issue was intended to partially fund the \$300 million greenfield Burgos wind farm project. Reflecting one of the challenges of bond issuance for project financing—single-tranche financing versus the phased drawdown of bank facilities—EDC planned to invest the proceeds in marketable securities until the anticipated 2014 start of construction.

The IFC provided a \$75 million loan facility to EDC in 2011, at the same time the company obtained a \$175 million syndicated bank loan on commercial terms. EDC also raised \$300 million through a dollar-denominated issue of 10-year bonds in 2011. EDC has

therefore tapped a range of financing sources for the Burgos wind farm and its other renewable energy projects, illustrating the feasibility of including a domestic bond financing tranche in major infrastructure financing. The involvement of the IFC, which included a technical review of the Burgos project, provided additional comfort to the private bank and bond investors, facilitating private financing.

Three of the infrastructure-related Philippine bond issuers are transport-related unlisted companies. Unlike most other Philippine local currency bond issuers, the MTD Manila Expressway Corporation (a unit of the Malaysian toll-road operator MTD Capital): the South Luzon Tollway Corporation (SLTC, a joint venture of MTD Manila Expressway Corporation and the Philippine National Construction Corporation), and the Manila North Tollways Corporation do not have equities listed on the Philippine Stock Exchange, and their bonds are not listed on the PDEX.

The experience of these toll-road operators typifies the complexities of infrastructure financing in the country. The SLTC agreement in 2006 provided for a series of toll increases over the lifetime of the company, the first of which was to be implemented in June 2010. Amid public opposition, a temporary restraining order prohibiting the increase was issued by the Supreme Court in 2010. Although the court later upheld the contract provisions and removed the restraining order in October 2010, the case shows that even contractual agreements are not immune from legal action.

The Manila North Tollways Corporation (MNTC) is controlled by Metro Pacific Tollways Corporation and Metro Pacific Investments Corporation (MPIC). MPIC is part of the large First Pacific conglomerate group and a holding company with a range of infrastructure-related investments, including Maynilad Water and Manila Electric Company. The original concession agreement between the Bases Conversion and Development Authority, a government agency, and MNTC for the operation of the Subic–Clark–Tarlac Expressway (SCTEX) was suspended in 2010 over concerns about the revenue sharing between the two parties. Terms were renegotiated in 2011 to significantly increase the government's share of revenue; however, by 2014 final agreement had still not been reached, leaving considerable uncertainty over the revenue streams that would accrue to MNTC over the life of the contract and highlighting the risk that existing agreements would be reopened. While MNTC has legal recourse under the original agreement, observers suggest that this is unlikely to be pursued because of the potential adverse impact on First Pacific's many other government relationships.⁸⁷

Expanding the Use of Bond Financing

Revisiting the banks' single-borrower limit could help increase the use of bond financing and contribute to financial stability. As long as the large Philippine conglomerates have access to ample inexpensive bank funding, they have little incentive to seek true project finance.

The overly generous single-borrower limit has the effect of increasing reliance on bank financing, in direct contrast to the "spare tire" objective underlying bond market

⁸⁷ J.P. Morgan. 2012. *Metro Pacific Investments. Asia Pacific Equity Research*. Manila.

development throughout Asia. A major concern regarding the current approach is that the entire Philippine banking sector can easily be exposed to the large conglomerate groups to the extent of several multiples of its capital. True project finance structures that stand alone would have significant benefits from a financial stability perspective. A stand-alone structure funded by a wider range of local and international investors would help reduce the concentration risk to the Philippine banking sector.

Two recent for infrastructure finance initiatives in the Philippines offer some insights into other potential avenues for increasing the use of local currency bonds for infrastructure project financing. The typical oversubscription of Philippine bond issues indicates that significant domestic funds are available for investment in infrastructure. The real challenge lies in the supply of highly rated issues.

First steps toward developing a project finance market would focus on brownfield financing. There are Philippine examples such as EDC where bond issues have taken out earlier-stage financing. A more prudent single-borrower limit could encourage more of this, as conglomerates might look to a bond issue to take out bank financing of infrastructure projects to free borrowing capacity for other purposes. Another avenue would be to encourage bidders on PPP projects to include local currency bond financing as part of the overall financing package.

The Philippine Investment Alliance for Infrastructure (PINAI) is a 10-year closed-end fund launched in 2012 with assets of ₱26 billion (about \$625 at inception). PINAI is managed by Macquarie Infrastructure and Real Assets (Singapore), and jointly financed by the Government Service Insurance System (GSIS, the largest Philippine pension fund, providing pension and other benefits to all employees of the Philippine government); Dutch pension fund asset manager Algemene Pensioen Groep; the Macquarie Group; and ADB. GSIS is the largest contributor, accounting for about 65% of the initial funding. The fund is targeted at 10–12 equity investments in infrastructure projects. PINAI will help address one of the most significant challenges in project finance—the required initial equity investment. In structuring projects for PINAI investment sponsors could be encouraged to include a domestic bond financing component as part of the overall financing package.

The Philippine Water Revolving Fund was set up in 2008 with a concessional loan from the Japan International Cooperation Agency (JICA), funding by private banks, and capacity-building support from the United States Agency for International Development. By 2012, it had funded 22 projects. The projects were relatively small in size, typically ranging from \$4 million to \$7 million. In some cases, private banks assumed the entire risk, while other projects involved JICA participation or guarantees from the Local Government Unit Guarantee Corporation, a private credit guarantor. While the banks generally had a strong appetite for water projects, they were unwilling to provide the longer tenors (10-plus years) preferred by the borrower.

The need for long-term funds for projects too small to make bond issuance attractive, and the success of the bank-funded Water Revolving Fund, suggest the possibility of a centralized debt issuance facility for local governments and related water and sewerage projects. Funds could be raised through bond issues and on-lent to local governments and utilities, providing the advantages of longer tenor and more favorable pricing relative

to bank loans. Pooling the debt of small projects could attract institutional investors that would otherwise consider only much larger projects. Risk would be diversified through a number of smaller projects supporting each bond issue, and, if required, credit enhancement might be provided through the Local Government Unit Guarantee Corporation.

Singapore

Financial and Capital Markets Overview

Singapore's financial and capital markets are well developed (Table A24), with a large number of domestic and foreign financial institutions, open financial markets, a sizable educated workforce, a well-developed legal system, excellent infrastructure, and a highly professional and supportive regulator.⁸⁸ A stable political system and low tax rates have also been positive factors. Singapore is an important financial hub. Funds managed in Singapore play a significant role in providing corporate finance throughout the region. In addition to having a well-developed domestic market, therefore, Singapore is a source of capital and expertise for project finance in other ASEAN countries.

The asset management sector is very large (over 400% of GDP), banking assets exceed 250% of GDP, and there is a sizable foreign currency bond market as well as extensive issuance of Singapore dollar-denominated securities by foreign corporates and supranationals, all of which reflect Singapore's role as an international financial center. The three largest domestic banks all have between 35% and 40% of group business domiciled outside Singapore, much of this in ASEAN countries.⁸⁹

Singapore's capital markets have three unique features. First, the government has been running a fiscal surplus in most years, with government debt securities initially issued to provide instruments to enable financial institutions to meet statutory liquidity requirements and, more recently, to encourage the development of Singapore's capital markets. Second, Singapore's capital markets are among the most open in the world. Foreign institutions face few barriers to investing in Singapore dollar-denominated securities or to establishing operations in Singapore. In fact, the government has actively sought their presence with a variety of tax incentives, and grants financial institutions considerable flexibility in staffing their operations from local and expatriate communities. Third, two of the world's largest sovereign wealth funds—the Government Investment Corporation (GIC) and Temasek Holdings—reside in Singapore.

The Monetary Authority of Singapore (MAS) is the sole regulator and supervisor of Singapore's financial system and capital markets. In addition to supervision and financial stability surveillance, it is charged with developing Singapore as an international financial center, including developing its bond market and promoting the asset management sector. The MAS was an early adopter of the Basel III capital and liquidity requirements, which began to be phased in from January 2013 in line with the internationally agreed timetable.

⁸⁸ Parts of this section draw on work completed by Brent Sutton for *Broadening the Investor Base for Local Currency Bonds in ASEAN+2 Countries*.

⁸⁹ Segmented reporting in the annual reports of DBS Bank, OCBC Bank, and United Overseas Bank.

Table A24: Singapore Financial and Capital Markets Overview

Item	Number	Assets (\$ billion)	Assets (\$ billion)	Assets (% of GDP)
Commercial banks ^a	123	1,060.4	803.3	271.8
Merchant banks	42	115.8	87.7	29.7
Finance companies	3	16.0	12.1	4.1
Securities companies	93	n.a.	n.a.	n.a.
Life insurance companies	13	152.2	115.3	39.0
General insurance companies	50	10.4	7.9	2.7
Asset management companies	131	1,820.0	1,433.0	488.2
Government Investment Corporation (GIC) ^b	1	422.4	320.0	108.3
Temasek	1	319.0	241.7	81.8
Central Provident Fund (CPF)	1	255.7	201.3	68.6
Licensed finance advisers	32	n.a.	n.a.	n.a.
Listed companies (stock market capitalization)	775	997.6	755.8	255.7
Total debt securities outstanding		389.8	295.3	99.9
Of which, local currency		319.5	242.0	81.9
foreign currency		70.3	53.3	18.0
Government debt securities outstanding		194.2	146.5	49.8
Of which, local currency		194.2	146.5	49.8
foreign currency		0.0	0.0	0.0
Corporate debt securities outstanding		195.6	147.8	50.1
Of which, local currency		125.3	94.5	32.1
foreign currency		70.3	53.3	18.0

^a Assets for domestic banking units.

^b Estimates from the Sovereign Wealth Fund Institute.

Notes: All data as of the end of 2014, except for asset management companies and CPF (end of 2013).

Commercial banks' Singapore dollar transactions are separately booked in domestic banking units.

Exchange rate at the end of 2014 (\$1 = S\$1.32) and at the end of 2013 (\$1 = S\$1.27), and GDP at the end of 2014 (S\$390.1 billion) and at the end of 2013 (S\$372.8 billion).

Sources: Monetary Authority of Singapore, Central Provident Fund, Singapore Exchange, Temasek, and *AsianBondsOnline*.

The Securities and Futures Act (2001) is the primary legislation governing Singapore's capital markets. Corporate debt securities are issued on the basis of a public offering or a private placement. Private placements, unregistered securities that do not require a prospectus, are offers to no more than 50 investors within a 12-month period. Market participants have indicated that the majority of corporate bond offerings are done through private placement.⁹⁰ Public offerings are registered securities that require a prospectus and pricing statement to be lodged with the MAS. Once the prospectus has been filed, the

⁹⁰ In 2002, 99% of Singapore dollar bonds were issued as private placements. This was the last year for which the MAS released these data. In interviews with the authors in June 2014, and with the authors of *Broadening the Investor Base for Local currency Bonds in ASEAN+2 Countries* in June 2012, market participants indicated that private placements were still prevalent.

MAS has a maximum of 21 days to review and register the prospectus, though it can extend this by 7 days if necessary. Market participants have commented that MAS approvals are provided on time. Credit ratings are not required for private placements or public offerings and, in fact, most corporate bonds are issued without one, according to market participants.

Local Currency Bond Markets

Singapore's efforts to develop its bond market began in 1998. In contrast to some other ASEAN countries, Singapore developed its capital markets in incremental steps and through continuous improvement, rather than following a master plan. As part of its mandate to develop Singapore into an international financial center, the MAS has taken the lead in a broad range of initiatives to develop and promote Singapore's bond market.

The MAS has consulted closely with industry to understand the needs of the market. Market participants have commented on the responsiveness of the MAS in bringing about the needed policy, legislative, and regulatory changes; investing in market infrastructure; and backstopping new initiatives.⁹¹ Government and industry leaders share a common view and work closely together to ensure that the measures needed to support a well-functioning bond market are in place.

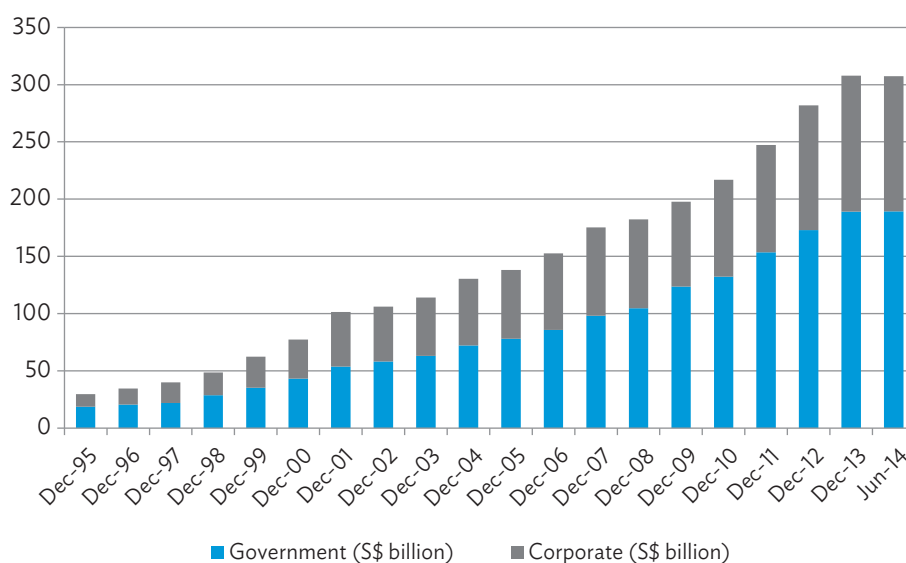
The Singapore dollar bond market is composed of approximately Singapore Government Securities (40%) and corporate issues (60%) (Figure A40). At the end of 2013, there were 1,552 corporate debt securities listed on the Singapore Exchange (SGX), over one-third more than in 2011.⁹² Many of the large corporate issuers are government-related entities, which, because their debt is not explicitly government guaranteed, are generally classified as corporate securities. The largest corporate issuer is the Housing and Development Board, a government entity responsible for planning and developing public housing, which accounts for about 15% of outstanding corporate securities.

Companies linked to the government through minority or majority ownership by Temasek—such as DBS Bank, Singapore International Airlines, and SingTel—also rank among the largest issuers, as does Temasek itself, through several special-purpose vehicles (SPVs). SPVs established as funding entities by Singapore-based and international companies compose about one-quarter of the 30 largest corporate issuers. Singapore encourages foreign corporations, governments, and supranational organizations to issue Singapore-dollar debt securities, and they have accounted for about 25% of total corporate issuance over the past 5 years. Issuing requirements are the same for foreign and domestic issuers. The only significant constraint is that Singapore-dollar proceeds raised by nonresident financial institutions must be swapped into foreign currencies before the funds are repatriated, a measure adopted to curb speculation in Singapore dollars.

⁹¹ Interviews with the authors in June 2014, and with the authors of *Broadening the Investor Base for Local currency Bonds in ASEAN+2 Countries* in June 2012.

⁹² Most corporate bonds are listed on the SGX, even if this is not a legal requirement and very little trading takes place on the exchange. Issuers have noted that some institutional investors are limited to holding listed securities and that obtaining an SGX listing makes their bonds easier to place.

Figure A40: Local Currency Government and Corporate Bonds, 30 June 2014



Source: AsianBondsOnline.

A few *sukuk* denominated in local or foreign currency have been issued in Singapore. This process was jump-started in January 2009, when the MAS established a S\$200 million (\$147 million) Sukuk Al-Ijarah Trust Certificate Issuance Program. The MAS has since amended policies and regulations to create a level, tax legal, and regulatory framework for both traditional and sharia-compliant financial services.

Bond Funds

Overview

With its open financial system, AAA country rating, political stability, regulatory transparency, huge national savings, and ample foreign reserves, Singapore is a magnet for institutional investors. Singapore is home to over 700 financial institutions offering myriad products and services across various asset classes. Principal investors in the debt market include the major domestic and international banks, sovereign wealth funds such as the GIC and the Central Provident Fund (CPF), private asset management companies, and insurers. Retail investors also participate directly or through various collective investment schemes.

The Singapore bond market is equally open to domestic and foreign investors. Bonds with credit ratings are available to the general public, while unrated issues from foreign entities may be purchased only by investors that qualify as sophisticated under local rules.⁹³

⁹³ Other filing exemptions are offered to issuers that exclusively target the institutional and sophisticated investor segment.

Recognizing the importance of a robust asset management industry, Singapore has encouraged firms to establish operations in the country. Leading by example, the government encourages state-owned or state-affiliated firms to use local asset managers. Restrictions on efficient operations have been relaxed; for example, investments offered through the CPF no longer need to be denominated in Singapore dollars. Other barriers to entry, such as the capitalization threshold for an investment management firm, have been reduced.

Singapore's success as a regional center can be measured both by the size of the industry and by the extent of two-way investment flows. At the end of 2013, Singapore-based managed assets stood at S\$1.8 trillion, 77% of these sourced from outside the country. Fifty-six percent of total AUM was sourced from the Asia and Pacific region, while 67% was invested within the region.⁹⁴

Over the past 3 years, annual growth in AUM has averaged 10.7%. Bonds represent a steady 23% of total AUM, and equities, 47%. Alternative investments account for 14% of total AUM; collective investment schemes such as unit trust funds, for 9%.

Banks. Singapore's financial community is anchored in its five large domestic financial banks and dozens of foreign financial institutions. Since Singapore government bonds were first issued to meet banks' needs for a risk-free asset in their liquid asset portfolios, it is no surprise that banks hold a large share of government debt securities. Over time, as other highly rated but nonsovereign state-affiliated entities have become more prominent issuers of local currency bonds, they have gradually assumed greater prominence in the banks' investment portfolios (Figure A41).

Pension funds. The government-managed CPF dominates the country's pension fund landscape. Under the CPF investment scheme, no restrictions apply to CPF's foreign currency and cross-border investments. The CPF is a fully funded scheme that provides Singaporeans retirement benefits as well as funds to pay for medical expenses and the means to finance the purchase of a home. The total value of all members' account balances exceeds S\$253 billion.

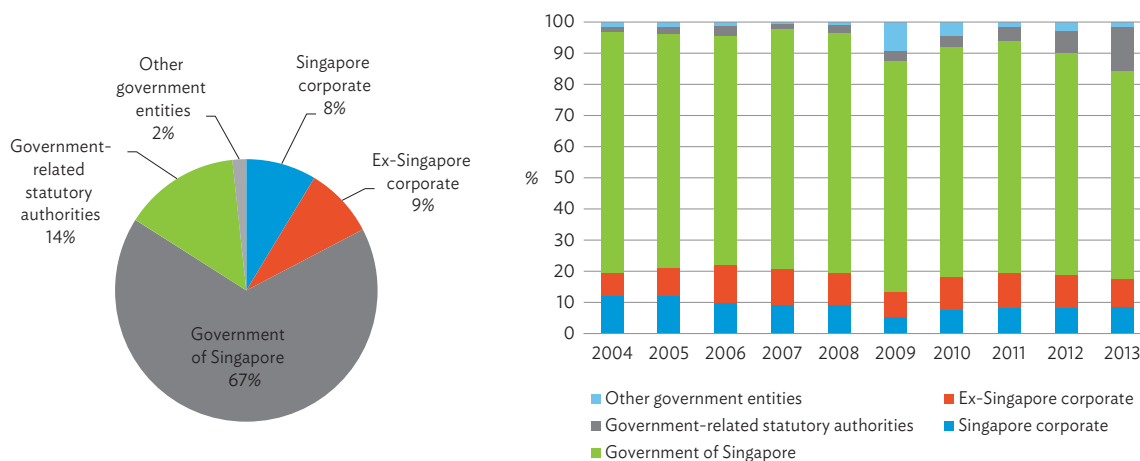
Working Singaporeans and permanent residents contribute 20% of their salaries into the CPF; employers add 16%. The government encourages savings with financial incentives. CPF account earnings are compounded on a tax-free basis, and some accounts come with guaranteed minimum returns and may be topped up with additional bonus income over specific time horizons.

Employee and employer CPF contributions go into four accounts:

- (i) Ordinary Account, for housing, CPF insurance, investment, and education;
- (ii) Special Account, for investment in retirement-related financial products;

⁹⁴ MAS. 2013. *Asset Manager Survey Public Report*. Singapore.

Figure A41: Singapore Banks Bonds and Bills Holdings,
31 December 2013



Source: MAS. 2014. *Monthly Statistical Bulletin: Assets of Domestic Banking Units*. Singapore.

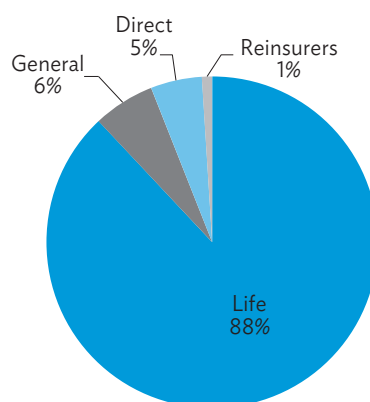
- (iii) Medisave Account, for hospitalization and approved medical insurance; and
- (iv) Retirement Account, to meet basic needs during old age.

The program also allows CPF members to invest their CPF savings in somewhat riskier instruments such as insurance products, unit trusts, fixed deposits, bonds, and shares. Both the CPF and MAS websites offer a variety of investor education and financial planning tools to support prudent and informed investment decision making by the general public.

The CPF invests mostly in Government of Singapore bonds issued specifically to the CPF. These assets, which are issued with tenors appropriate to the asset–liability matching needs of the fund, nonliquid, and are meant to be held to maturity. A small margin of other marketable assets, both government and corporate bonds, is also maintained for liquidity purposes.

Insurance companies. The insurance industry is an important investor in Singapore local currency bonds. Of a collective estimated investment portfolio of S\$133 billion, about S\$81 billion is invested in debt securities, held mostly by life insurers (Figure A42). Insurance companies may place funds in various investment instruments, including bank time deposits, equities, central bank debt issues, mortgage loans, and direct investments, among others. They may also make offshore investments, but these are limited to a maximum of 20% of their total assets. There are 138 life and general insurance companies now operating in Singapore (footnote 94).

Figure A42: Singapore Insurance Industry Bond Holdings, 31 December 2013



	Life	General	Direct	Reinsurers
2009	56,200.2	3,880.9	3,177.3	703.5
2010	60,610.3	4,274.2	3,564.9	709.3
2011	65,045.3	4,451.4	3,783.6	667.8
2012	75,593.4	4,703.5	4,022.9	680.6
2013	76,541.8	4,967.9	4,279.3	688.6

Source: Monetary Authority of Singapore. 2014. *Monthly Statistical Bulletin: Assets of Domestic Banking Units*. Singapore.

Singapore's population is ageing rapidly. The number of senior citizens aged 65 and above will triple to 900,000 by 2030.⁹⁵ Although the ratio of retired to working-age Singaporeans is rising, the country's retirement system and its insurance industry are well funded and do not rely on the pay-as-you-go approach found in some other developed countries.

Sovereign Wealth Funds. Despite being a relatively small country, Singapore boasts the 11th-largest foreign reserves in the world.⁹⁶ Two of the world's largest sovereign wealth funds are domiciled in Singapore: GIC⁹⁷ and Temasek Holdings, respectively, are ranked 8th and 10th largest, respectively, according to their AUM figures.⁹⁸

Aspiring to deliver returns that exceed the long-term rate of inflation, GIC is mandated to take calculated risks over an investment time horizon of 20 years. Its reference portfolio is 65% global equities and 35% global bonds. The investment focus of GIC's S\$406 billion portfolio is almost exclusively external (Figure A43).

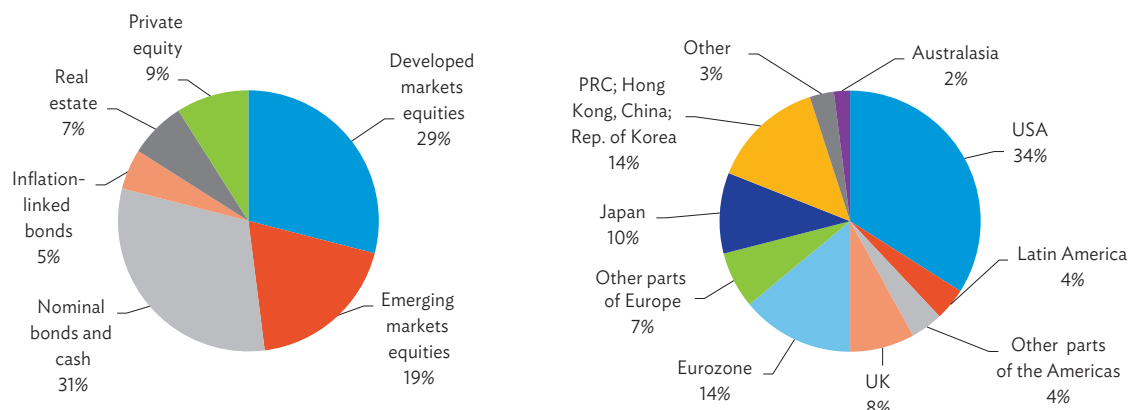
⁹⁵ Life Insurance Association of Singapore. lia.org.sg

⁹⁶ seekingalpha.com. 2014. *Growth the Singapore Way*. 6 October.

⁹⁷ Formerly known as the Government Investment Corporation.

⁹⁸ SWF Institute. swfinstitute.org/fund-rankings

Figure A43: Government of Singapore Investment Corporation Asset Allocation, 31 March 2014



Source: GIC Private Limited, 2014. *Report on the Management of the Government's Portfolio for the Year 2013/14*.

As of 31 March 2014, Temasek's investment portfolio stood at S\$223 billion. Compared with its sister company, GIC, Temasek has more of a local investment focus and certainly an emphasis on countries in Asia and the Pacific (Figure 4). Temasek funds its portfolio through a US\$15 billion global MTN program and a short-term US\$5 billion euro commercial paper program, which are both available to institutional investors but not yet available to retail investors. Temasek's liabilities carry an international rating of AAA despite the lack of an explicit guarantee from the Singapore government.

With only about one-third of its portfolio classified as liquid, Temasek can be viewed primarily as a state-owned private equity firm. A self-described active investor, Temasek urges the companies it invests in to commit to sound corporate governance practices, including the formation of high-caliber, experienced, and diverse boards.⁹⁹

Collective investment schemes. Singapore's collective investment schemes sector comprises unit trust funds (mutual funds), investment-linked life insurance products, and ETFs. It is regional in scope and offers a wide range of investment choices to local investors. As of 1 October 2014, there were over 5,500 funds listed as available to investors in Singapore.¹⁰⁰ Within the Central Provident Fund Investment Scheme (CPFIS), there were 111 unit trusts and 172 investment-linked insurance products.¹⁰¹

Bloomberg lists 50 bond funds domiciled in Singapore with assets under management totaling S\$13.3 billion. The size of the bond fund universe appears small when compared with the overall investment market in Singapore, but market participants indicate that retail investors are less interested in bonds as an asset class than in equities, real estate, and (increasingly) alternative assets such as hedge funds. Mutual funds are an asset class that

⁹⁹ Temasek. 2014. *Annual Report 2013–2014*. Singapore.

¹⁰⁰ Investment Management Association of Singapore. fundsingapore.com

¹⁰¹ http://imas.org.sg/uploads/report/2014/09/10/893_CPFIS_FTC_Quarterly_Report_Q2_2014_Final.pdf

competes with the mandatory and voluntary contributions to the CPF. There are 96 ETFs listed on the SGX, including the ABF Singapore Bond Index Fund.

Infrastructure Financing

Investing in world-class infrastructure was central to achieving the ambitious transformation envisioned in the 1991 Strategic Economic Plan, and has since remained a key element of government policy. The 2010 Report of the Economic Strategy Committee identified the advantages derived by Singaporean businesses from existing infrastructure while at the same time calling for investment in the infrastructure needed to provide the highest quality of life in Asia. This included revitalized housing stock; large new urban developments; and significant investments in transit, renewable energy, and other infrastructure for energy security. Detecting a regional gap in project financing, the committee recommended government initiatives to fill the gap.

Current Approaches

Singapore's investment in infrastructure has come from a variety of sources. Given its sound fiscal footing, the government has the flexibility to use direct budget allocations. A range of government-related entities including government-controlled companies operating on a commercial basis have tapped private financing sources. PPPs are relatively new in Singapore, in part because the financial, managerial, and technical capacity of government and government-related entities reduces the incentive for PPPs in the country compared with many other countries. Eight PPP projects have been awarded over the last decade. These have been used for social infrastructure (Singapore Sports Hub, ITE College West) and for water, sewerage, and waste disposal projects.

Bond Financing

Financing for infrastructure in Singapore has been readily available from bank consortia, and projects have also been partially financed through bonds raised for general corporate purposes by project participants. Project bonds are not common; however, infrastructure-related government-linked entities, conglomerates, and SPVs for infrastructure-linked firms compose 9 of the 30 largest issuers of local currency corporate bonds (Table A25). In addition, the longer-term financing raised through bond issuance by the three largest Singaporean banks, which are all among the 10 largest issuers of local currency debt, contributes to their ability to provide longer-term project finance.

Expanding the Use of Bond Financing

Singapore has a highly developed and well-functioning local currency bond market with a large and sophisticated investor base. Yet project bonds and other institutional investment in infrastructure finance remain a small part of the market, which continues to be dominated by liquid banks pursuing a limited pipeline of projects domestically and elsewhere in ASEAN. Singapore's ability to finance the needed world-class infrastructure investment without project bonds means that there has been limited domestic impetus—much of the interest in project bonds is driven by the potential of Singapore as a regional and global player.

Table A25: **Infrastructure-Related Issuers among the Top 30 Corporate Issuers, 31 December 2013**

Issuer	State-Owned	Amount (\$ billion)	Amount (\$ billion)
Housing and Development Board	Yes	17.6	13.9
SP Power Assets	No	2.4	1.9
Public Utilities Board	Yes	2.1	1.7
Land Transport Authority	Yes	1.8	1.4
Keppel	No	1.5	1.2
PSA International	Yes ^a	1.0	0.8
Hyflux	No	1.0	0.8
Sembcorp Financial Services ^b	No	0.9	0.7
Singtel Group Treasury	Yes ^c	0.9	0.7
Total		29.2	23.1
Infrastructure-related as % of top 30 local currency corporate bond issuers		25.1%	25.1%

^a *AsianBondsOnline* does not include PSA International (formerly the Ports of Singapore Authority) as state owned; however, it is wholly owned by the government holding company Temasek.

^b Sembcorp Financial Services is a financing SPV for Sembcorp Industries, a conglomerate with interests in energy, water, and marine services.

^c Singtel Group Treasury is a financing SPV for Singtel. *AsianBondsOnline* does not include Singtel as state owned. Although it is publicly listed, it is majority state owned through Temasek's 51.88% ownership share.

Source: *AsianBondsOnline*; company annual reports.

Singapore has an abundance of investment capital, so the biggest challenge is to increase the supply of corporate bonds, which could include project bonds. The local currency corporate debt market is modest in size, at \$92 billion—equivalent to about 10% of total domestic bank assets—despite the considerable efforts by the government to increase the size and diversity of the corporate issuer base. The large investor base means that demand for corporate debt issues, especially longer-dated ones, exceeds supply.

Several recent initiatives have focused on facilitating infrastructure projects as part of the government's ongoing efforts to enhance the position of Singapore as a regional and international center. The Infrastructure Finance Centre of Excellence, housed in the Singapore Urban Hub, was established in 2010 in cooperation with the World Bank to support capacity building and provide technical assistance to increase the success of PPPs in the region. International Enterprise Singapore and ADB jointly launched in 2013 an initiative that will work with ASEAN governments to structure IPPs, and also explore the use of ASEAN capital markets to finance these projects.

Clifford Capital, established in 2012 at the initiative of the Government of Singapore, is 40% owned by Temasek with the balance held by a consortium of major financial institutions. Its mandate is to promote the role of Singapore-based companies in infrastructure projects worldwide by acting as a specialist investor for qualifying companies and projects. It is funded by a €1 billion MTN program fully guaranteed by the Government of Singapore.

(AAA). Clifford Capital has expertise in infrastructure projects and the flexibility to provide a range of structured finance solutions, including mezzanine and junior debt, and equity. Qualifying companies are listed or incorporated in Singapore with a significant local presence (three global or regional decision-making functions). Projects may qualify if the company is a significant equity investor, a provider of contract service, or an equipment exporter for the project.

Collectively, these initiatives could contribute to an increased pipeline of infrastructure projects in the region and the expanded use of local currency bonds as a financing option. Each of the initiatives is intended to build on the combination of Singapore's position as a financial center and home to companies with the technical capabilities and expertise required for many infrastructure projects. In addition, Singapore has a highly skilled workforce, including an ample supply of experienced investment professionals, and a robust legal system that makes it a potential contractual domicile for projects undertaken elsewhere in the region.

Thailand

Financial and Capital Markets Overview

Thailand's financial and capital markets are moderately well developed, with most of the key institutional and structural elements in place.¹⁰² Banks, with total assets equivalent to 136% of GDP, are the largest part of the finance sector. Commercial lending remains a critically important source of business financing, although corporate bonds outstanding have been growing. Insurance companies, pension funds, and asset management companies are all significant institutional investors (Table A26). Corporate bonds account for about 20% of GDP, and (rather uniquely) about half of the total is held directly by individuals. Large Thai corporates have cultivated individual investors as an alternative financing source.

Prudential supervision is the responsibility of the Bank of Thailand (BOT) with respect to deposit-taking institutions, and the Office of the Insurance Commission (OIC) for life and general insurance companies. The BOT began the phase-in of Basel III in January 2013 in line with the internationally agreed timetable. The investment activities of insurance companies are governed by specific regulation rather than the prudent-person approach. The most significant restrictions are the prohibition on non-investment grade bonds and the requirement to seek OIC approval to invest in foreign bonds and derivatives.

The primary legislation governing Thailand's capital markets is the Securities and Exchange Act (1992), as amended in 2008. The Ministry of Finance (MOF) has ultimate responsibility for the regulation and oversight of Thailand's capital markets but delegates day-to-day responsibilities to a variety of entities. The Securities and Exchange Commission (SEC) oversees corporate bond issuance and secondary trading, as well as the activities of securities dealers and mutual fund and provident fund management

¹⁰² Parts of this section draw on work completed by Brent Sutton for *Broadening the Investor Base for Local Currency Bonds in ASEAN+2 Countries*.

Table A26: Thailand Financial and Capital Markets Overview

Item	Number	Assets (B billion)	Assets (\$ billion)	Assets (% of GDP)
Commercial banks	30	17,244.2	530.9	142.0
Securities companies	45	223.8	6.8	1.9
Life insurance companies	24	2,275.9	70.1	18.7
Nonlife insurance companies	64	457.7	14.1	3.8
Asset management companies ^a	33	3,988.7	122.8	32.9
Social Security Fund (Thai Provident Fund)	1	837.1	25.8	6.9
Government Pension Fund	1	638.0	19.6	5.3
Listed companies (stock market capitalization)	502	13,856.3	426.6	114.1
Total debt securities outstanding		9,793.7	297.8	80.7
Of which, local currency		9,264.3	281.5	76.3
foreign currency		529.4	16.3	4.4
Government debt securities outstanding		6,986.7	212.3	57.5
Of which, local currency		6,954.2	211.3	57.3
foreign currency		32.5	1.0	0.3
Corporate debt securities outstanding		2,807.0	85.5	23.1
Of which, local currency		2,310.1	70.2	19.0
foreign currency		496.9	15.3	4.1

^a Including companies managing mutual funds and provident funds.

Notes: All data as of the end of 2014, except for securities companies (end of 2013). Exchange rate at the end of 2013 (\$1 = B32.81) and at the end of 2014 (\$1 = B32.48); GDP at the end of 2013 (B11,897 billion) and at the end of 2014 (B12,141 billion).

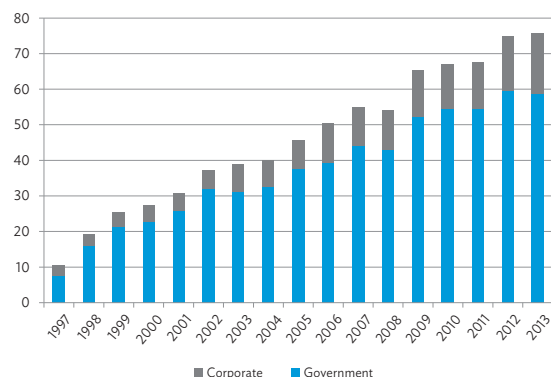
Sources: *AsianBondsOnline*, Bank of Thailand, Government Pension Fund, Office of Insurance Commission, Securities and Exchange Commission, Thai Bond Market Association.

companies. The Thai Bond Market Association (ThaiBMA) is an SRO established under the jurisdiction of the SEC, with responsibility for the development and operation of a fair and efficient bond market. The Public Debt Management Office is responsible for public debt management and the development of the government bond market.

Local Currency Bond Markets

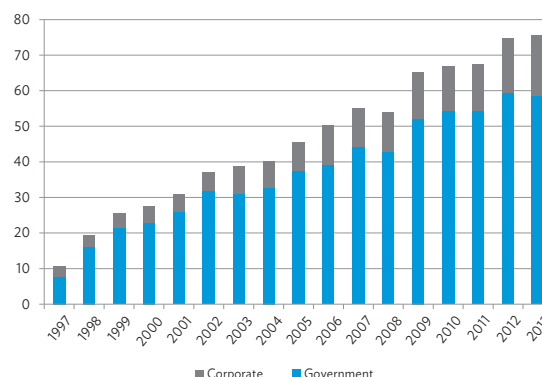
The local currency bond market in Thailand has enjoyed strong growth over the past decade, increasing almost fourfold in nominal terms and almost doubling relative to GDP (Figures A44, A45). The share of corporate securities has increased from about 19% of total local currency bonds outstanding in 2003 to about 22% at the end of 2013. There has been a concerted public effort to broaden and deepen Thailand's capital markets, starting with the first Capital Market Master Plan in 2002. This was followed by the Capital Market Master Plan II in 2006 and a third Capital Market Master Plan in 2009. Central to these plans were efforts to raise professional standards and practices, increase the quantity and variety of capital market instruments, expand the investor base, clarify and modernize the regulatory structure, and improve the infrastructure supporting capital market activities.

Figure A44: Local Currency Bonds Outstanding (B billion)



Source: AsianBondsOnline.

Figure A45: Local Currency Bonds Outstanding (% of GDP)



Source: AsianBondsOnline.

A unique feature of the Thai market is the prominent role played by individual investors, who hold more than 15% of total outstanding debt securities.¹⁰³ Government savings bonds are targeted at individual investors and sold primarily through bank branches, generally with a minimum purchase of B10,000 (\$315). The interest rate on these bonds is 15% above the equivalent rate on bond mutual funds in order to compensate investors for the fact that they must pay a 15% tax on interest payments on bonds held directly but they pay no tax on income from bond mutual funds.¹⁰⁴

Individuals are the largest class of investors in corporate debt securities, holding close to half of the total amount of bonds outstanding. Many corporate bond issues, especially large issues (over B5 billion) from high-quality, “name-brand” issuers, are distributed through the branches of the underwriting banks and are viewed by individuals as deposit substitutes. Some large corporations actively market new issues to individual investors as a means of diversifying their funding base and cultivate their loyalty by creating “club-like” affiliations.¹⁰⁵ Market participants have also commented that corporate bonds are almost always held to maturity, at which point the principal is frequently reinvested in a new issue from the same company.

As in other countries with significant bond markets, nonbank institutional investors are relatively large in Thailand. Insurance companies, asset management companies, and the two large government pension funds are all major purchasers of corporate as well as government debt.

Corporate debt securities can be issued on the basis of a public offering or a private placement. With the exception of limited-issue private placements (those with fewer than

¹⁰³ This includes direct holdings only and does not include debt securities held via mutual funds and provident funds.

¹⁰⁴ PWC. 2011. *Thai Tax Booklet 2011*. Bangkok.

¹⁰⁵ Corporate issuers cultivate investor loyalty by holding activity days and other social events solely for their retail investors. Further, new corporate issues from an existing issuer are often reserved for existing investors only.

10 investors), all private placements must have a credit rating and be registered with the ThaiBMA.¹⁰⁶

Corporate debt securities offered by way of a public offering must go through a two-step process. The first step is approval of the issuer by the SEC. Issuers must submit full financial information and be determined to have management that is ethical and of good character. The second step is approval of the issue, provided after an SEC review of the prospectus. Public offerings must have a credit rating and be registered with the ThaiBMA.¹⁰⁷

In an effort to promote Islamic securities, the Sukuk Regulation was adopted in 2011, followed by tax amendments necessary for *sukuk* structures to operate effectively. Despite interest expressed publicly by several potential issuers, through June 2014 no *sukuk* had been issued in Thailand.

Foreign issuers have been permitted, subject to a three-step approval process, to issue local currency bonds and debentures since 2006. The MOF must approve the issuer and amount, the SEC must approve the issue using the criteria applicable to domestic issuers, and the BOT must approve foreign exchange swap transactions, which are required if the funds being raised are to be used outside Thailand. Issues must have a tenor exceeding 3 years, and all issues must be rated by and registered with the ThaiBMA. A number of regional and international corporates, state-owned entities, and IFIs have issued Thai baht-denominated securities. In early 2013, issuance by the Lao PDR was facilitated by MOF relaxation of the requirement that foreign government issuers have an investment grade rating. Opening the Thai market to non-investment grade sovereigns is expected to contribute to cross-border issuance in ASEAN markets.

Bond Funds

Overview

The Thai government established the first asset management company in 1975 and the first mutual fund, the Sinpinyo Fund, in 1977 with an initial size of B100 million.¹⁰⁸ Despite recurring intervals of political uncertainty, Thailand has a very well-functioning securities and fund management industry, because of a large and fast-growing economy, high household savings and investment rates, a relatively long history of financial liberalization and development, and a strong capital market infrastructure that includes effective government supervision and promotion.

Morningstar's Global Fund Investor Experience survey, published in 2012 and 2013,¹⁰⁹ ranked Thailand third in both years and placed the country in a category on a par with

¹⁰⁶ The issue need not be rated. An issuer or guarantor rating is acceptable.

¹⁰⁷ The SEC has authorized two credit rating agencies: Fitch Ratings (Thailand) and TRIS Rating. TRIS is Thailand's first credit rating agency, established in 1993. A wide range of Thai financial institutions own TRIS. McGraw Hill, owner of Standard & Poor's, also has a 5% ownership share in TRIS.

¹⁰⁸ Association of Investment Management Companies. *Mutual Fund: Background*. http://oldweb.aimc.or.th/en/21_infostats_about.php

¹⁰⁹ In 2013, the survey measured the experience of mutual fund investors in 24 countries in North America, Europe, Asia, and Africa on the basis of public data and interviews with local Morningstar analysts. The survey evaluates these countries against four categories: regulation and taxation, disclosure, fees and expenses, and sales and media.

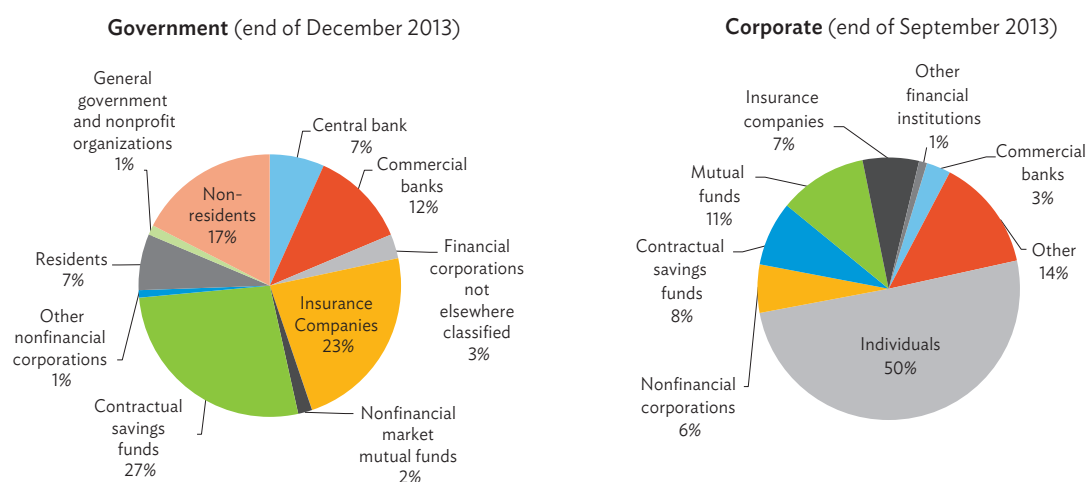
Singapore and the Netherlands, thanks largely to low fees and expenses, regulatory support, and favorable tax treatment (e.g., capital gains tax waivers and tax deductions on long-term investments).¹¹⁰ Nevertheless, the future growth of Thailand's asset management industry is challenged by limited product diversification and slow product development, narrow fund distribution channels dominated by local banks with nationwide branches, and a less sophisticated and financially literate investor base that in the more developed Asian countries.

Thailand's local currency government bond market had B6,989 billion in bonds outstanding at the end of 2013, representing 59% of GDP.¹¹¹ The investor profile of the local currency government bond market is presented in the left half of Figure A46. Contractual savings funds and insurance companies have been the two largest investor groups. In contrast to institutional investors with their large holdings of government bonds, individuals make up the largest investor group and hold half of local currency corporate bonds, as presented in the right half of Figure A46, which had B2,011 billion outstanding at the end of 2013, representing 17% of GDP (footnote 111).

Bond Fund Participants

Mutual funds, a type of collective investment scheme, pool capital from investors and are managed by an SEC-approved investment company. A mutual fund is a juristic person legally separated from its asset management company. A fast-growing class of mutual funds

Figure A46: Thailand Bond Investor Profile



Source: AsianBondsOnline June 2014. *Thailand Bond Market Summary*.

¹¹⁰ *The Nation*. Kingdom's Asset Management Sector Ranked No 3 in World. <http://www.nationmultimedia.com/business/Kingdoms-asset-management-sector-ranked-No-3-in-wo-30206389.html>

¹¹¹ *AsianBondsOnline*. Thailand: Bond Market Indicators. <http://asianbondsonline.adb.org/thailand/data.php>

is the retirement mutual fund, that targets those not covered by any pension plan such as the millions of informal workers.

Infrastructure funds serve as SPVs to raise capital for infrastructure projects and to ease the budgetary burden and keep the public debt in check.

The Thai national pension system, completely restructured in the late 1990s, has adopted the World Bank's Multi-Pillar of Old Age Security Framework. The Government Pension Fund (GPF) is a defined contribution system established in 1997 exclusively for civil servants. Private sector employees were not covered by any public pension scheme until 1999, when the compulsory Old Age Pension System was introduced. First pension payouts started in 2014. The Thai government is developing a new mandatory, defined-contribution retirement savings scheme, the National Pension Fund, to complement existing pension arrangements. SEC-approved private asset management companies manage the fund's assets.

Occupational pension schemes (provident funds) are supplied by commercial banks, finance companies, securities companies, mutual fund management companies, and life insurance companies with a license granted by the finance minister. Provident funds were initiated in Thailand in 1983 to encourage companies in the private sector to set up and mobilize retirement savings for their employees. A provident fund is voluntarily set up between employer and employees, and managed by an SEC-approved asset management company. Fund members cannot withdraw assets from the provident fund before retirement. Dividends and interest earned by the fund are reinvested rather than distributed to the members.

Private funds target high-net-worth individuals and groups and allow them to take part in their own investment policies. A licensed asset manager then allocates the funds according to the return objectives, risk tolerance levels, and investment restrictions agreed on between the investment management company and the client. A private fund is not a juristic person and allows only up to 35 unit holders.

Thailand's insurance industry is fairly small compared with its economy, but has exhibited noteworthy growth. In 2013, Thailand reported a robust 13% growth rate in both life and nonlife insurance premiums,¹¹² a performance that reflects this industry's growth experience over the past decade. This trend is expected to continue because of rising public awareness of the importance of insurance, a fast-growing middle class, and the government's commitment to bolstering insurance penetration.

Size and Scope of Bond Fund Sector

Mutual funds. As of 27 June 2014, 22 asset management companies with 1,473 mutual funds had B3,600 billion under management. The size of the Thai mutual fund industry is equivalent to about one-third of the country's GDP. The top five asset management companies claim over 75% of the market (Table A27).

¹¹² Swiss Re. 2014. *Sigma Study on World Insurance in 2013*. 25 June.

Table A27: Top-Five Asset Management Companies

Asset Management Company	Number of Funds	Total Net Assets (B billion)	Market Share (%)
Kasikorn Asset Management	170	828	23.0
SCB Asset Management	218	768	21.3
Krung Thai Asset Management	128	497	13.8
BBL Asset Management	73	412	11.5
MFC Asset Management	109	22	6.2
Total	698	728	75.8

Note: Data as of 27 June 2014.

Source: SEC.

In the 15-year period following the 1997/98 Asian financial crisis, Thailand's GDP grew by 157%, from B4.6 trillion to B11.9 trillion, mutual fund assets nearly by 800%, bank deposits by 140%, and life insurance policies by 600%.¹¹³

Unlike some other ASEAN countries, Thailand's mutual fund industry has historically been dominated by fixed-income funds (Table A28). In recent years, however, equity funds have experienced growing allocations at the expense of fixed-income funds, because of product development and offerings, tax incentives provided by the government, and gradually increasing sophistication among the retail investor base.

Table A28: Summation of Asset Size, by Classification

Type of Mutual Fund Classified by Underlying Assets	Number of Funds	Total Net Assets (B billion)	Market Share (%)
Fixed-income	685	2,011	55.8
Equities	384	825	22.9
Property (type 1)	50	272	7.5
Infrastructure	3	144	4.0
Other	144	111	3.1
Property and loan (type 4)	39	106	2.9
Mixed	148	98	2.7
Property fund for resolving financial institution problem (type 2)	14	28	0.8
Mutual fund for resolving financial institution problem fund (type 3)	6	6	0.2
Total	1,473	3,600	100.0

Note: Data as of 27 June 2014.

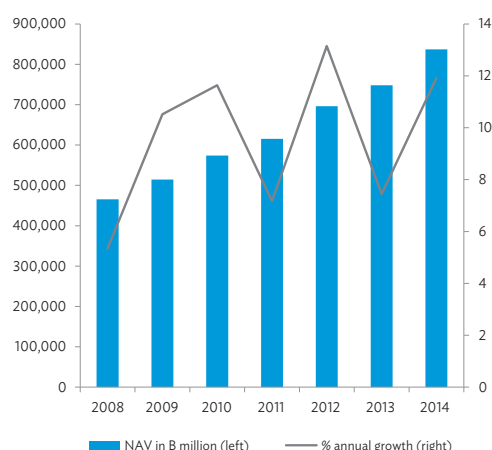
Source: AIMC, *Mutual Fund Market Share*. aimc.or.th

¹¹³ Association of Investment Management Companies. *GDP, Mutual Fund NAV, Deposit and Life Insurance 1992–2013*. http://oldweb.aimc.or.th/en/21_overview_detail.php?nid=2&subid=0&ntype=2

At present, there are no bond ETFs offered in Thailand.¹¹⁴

- (i) Thailand currently has 421 provident funds managing B790 billion worth of assets for 2.6 million fund members. Over 14,000 employers have participated in the provident fund scheme.¹¹⁵ Provident fund assets have grown by about 40% (Figure A47) in the past 5 years and are projected to continue this strong growth because of strong government support.
- (ii) The top five asset management companies—Kasikorn, MFC, Tisco, SCB, and UOB—account for nearly 70% of the provident fund industry, with B544 billion under management. Kasikorn Asset Management tops the list, with a 17.5% market share. As Figure A48 shows, over half of the provident fund assets are invested in debt instruments, one-quarter in bank deposits, and 15% in equities.
- (iii) Private fund assets totaling B430 billion were under the management of 2,477 funds and 22 asset management companies at the end of 2013. Since its start in 1996, the private fund industry has grown in asset value by over 2,000% (Figure A49). Together, the top five asset management companies in the private fund sector—Kasikorn, Tisco, Phillip Securities, Bualuang Securities, and One Asset—operate 1,526 private funds. Kasikorn alone claims a 22% market share. Extrapolations from data for Thailand's mutual and provident fund sectors indicate it is likely that more than half of private fund assets are invested in bonds and fixed-income instruments.

Figure A47: Provident Fund Net Asset Value and Growth, 2008–2014

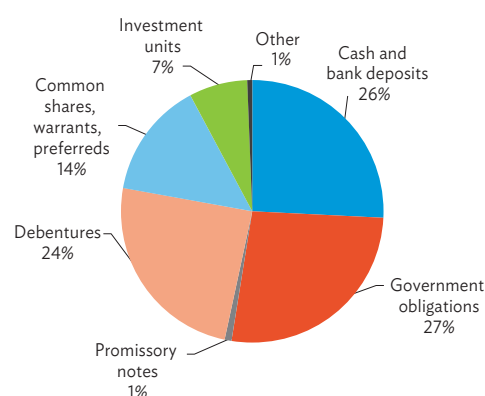


NAV = net asset value.

Note: Provident fund asset allocation as of the end of Dec 2014.

Source: Thai Provident Fund. thaipvd.com

Figure A48: Provident Fund Asset Allocation

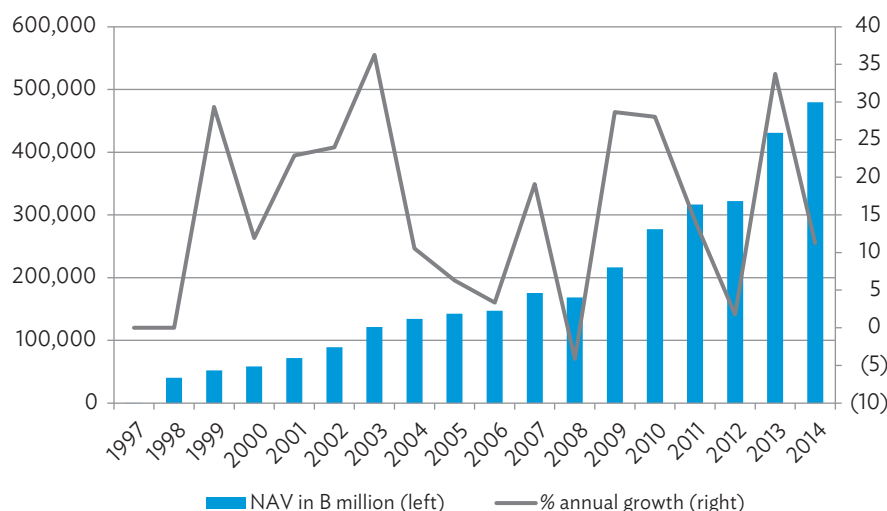


Source: Thai Provident Fund. www.thaipvd.com/content_en.php?content_id=00302

¹¹⁴ The Stock Exchange of Thailand. *ETF: ETF List*. http://www.set.or.th/en/products/etf/etf_list.html

¹¹⁵ Thai Provident Fund. *Thai Provident Fund Report: Quarter 1, 2014*. <http://www.thaipvd.com/upload/pvd1q57en.pdf>

Figure A49: Private Fund Net Asset Value and Growth, 1997–2013



NAV = net asset value.

Note: Provident Fund Asset Allocation as of the end of May 2014.

Source: AIMC. aimc.or.th

At the end of November 2013, 24 domestic and foreign life insurance companies were operating, with over 20 million policies covering a total outstanding of B9.76 trillion in liabilities. The Thai life insurance market is concentrated, with the top five companies—AIA, Muang Thai Life, Thai Life, Siam Commercial, and Bangkok Life—collectively accounting for 70% of the market in terms of premiums collected. The market leader, Hong Kong, China-based AIA, boasts a 25% market share.

Over 80% of life insurers' investment portfolios are allocated to fixed-income instruments (bonds, debentures, and notes) to align with the long time-horizon nature of life insurance companies' liabilities. Close to 10% are allocated to equities and the remaining 10% to loans and other products (Table A29).

At the end of November 2013, the general (property and casualty) insurance space was composed of 54 domestic and 5 foreign companies, and 5 health insurance companies. The total value of general insurance policies reached B63.8 trillion under 43.7 million policies,¹¹⁶ and B221 billion were held by the general insurance companies. Thailand's general insurance sector is less concentrated than its life insurance counterpart. The five biggest general companies according to market share of premiums—Viriyah, Dhipaya, Bangkok, Synmunkong, and Muang Thai—together compose just under 45% of the entire sector. The dominant automobile insurer Viriyah tops the list with a 17% market share.

¹¹⁶ Office of the Insurance Commission. *Number of Policies and Sum Insured of Non-Life Insurance Business*. http://www.oic.or.th/downloads/statistics/nlife/monthly/2556/10/compare/compare_tab10.pdf

Table A29: Investments of Life Insurance Companies, by Asset Class, 2009–2013 (%)

Type of Investment	2009	2010	2011	2012	Nov 2013
Total assets (B million)	995,050	1,181,850	1,414,064	1,628,663	1,760,612
Bonds	65.58	63.73	61.87	59.54	58.68
Debentures	10.41	10.84	11.98	12.88	14.48
Notes	6.77	6.52	9.66	10.21	8.89
Stocks	6.84	9.51	7.39	8.28	7.90
Loans	6.74	5.96	5.37	4.88	4.95
Cash and deposits with financial institutions	1.51	0.95	1.92	2.18	2.14
Investment units	1.20	1.04	0.86	1.23	1.74
Other investment	0.78	1.38	0.88	0.74	1.10
Treasury bills	0.12	0.04	0.04	0.03	0.07
Deposits with the Insurance Commissioner	0.05	0.04	0.04	0.03	0.03
Warrants	0.01	0.01	0.00	0.00	0.00
Savings certificates	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00

Note: Data for 2013 as of the end of November.

Source: Office of the Insurance Commission. oic.or.th

From 2009 to 2013, nearly half of the general insurers' assets were invested in debt securities, including bonds, debentures, notes, and Treasury bills. One-quarter was invested in stocks, over 20% was in bank deposits, and the rest was attributable to other financial products. Over time, the holdings of general insurers appear to be migrating from fixed-income securities toward investments in equities and bank deposits (Table A30).

Structural and Regulatory Framework

Mutual funds in Thailand are established under Section 2535 of the SEC Act. The asset management applicant submits a request to the SEC to set up a mutual fund. After approval is granted by the SEC, an initial public offering cannot begin until the asset management company appoints an independent third-party fund supervisor to safeguard the assets. The main fiduciary duties of the supervisor are ensuring that the investment is in accordance with the fund policy and objectives, reviewing the calculation of the NAV, appointing an SEC-approved auditor to audit the fund's financial statements, and taking legal actions on behalf of the unit holders in case of management misconduct.

Operating in a similar capacity as the ThaiBMA, the Association of Investment Management Companies (AIMC) was established in 1993 as the asset management industry's SRO and was registered and licensed as such by the SEC in 1994. The AIMC's objectives are to promote professional standards and market conduct among industry participants, coordinate with government entities and securities exchanges on investment industry regulatory issues, and promote a savings culture within Thailand.

Table A30: Investments of General Insurance Companies, by Asset Class, 2009–2013 (%)

Type of Investment	2009	2010	2011	2012	2013
Total assets (B million)	121,387	151,212	167,688	196,027	221,081
Bonds	26.83	35.17	27.89	25.86	25.45
Stocks	20.88	23.73	24.99	26.77	26.06
Cash and deposits with financial institutions	19.06	14.97	18.47	29.88	31.62
Debentures	10.36	8.71	7.74	7.86	7.74
Investment units	8.84	7.54	5.87	4.65	4.31
Notes	6.83	5.53	11.81	1.99	1.03
Loans	3.40	2.84	2.32	1.62	1.25
Treasury bills	2.73	0.60	0.08	0.39	1.98
Deposits with the Insurance Commissioner	0.76	0.60	0.56	0.55	0.39
Savings certificates	0.09	0.11	0.13	0.12	0.12
Other investments	0.18	0.14	0.10	0.07	0.05
Warrants	0.04	0.06	0.04	0.24	0.00
Total	100.00	100.00	100.00	100.00	100.00

Note: Data for 2013 as of the end of November.

Source: Office of the Insurance Commission. oic.or.th

The Thai government offers generous tax incentives for retirement savings by opting for an EEE tax scheme, in which contributions to the provident fund, returns on investment, and benefit payouts are all tax exempt.¹¹⁷ Employee contributions up to 15% of salary (to a maximum of B490,000) per year are tax exempt, while employer contributions are deductible as expenses against corporate income taxes. Interest and dividends generated from the investment as well as capital gains are also exempt from tax. No taxes are levied on benefit payouts upon and after retirement.

More than 80% of Thailand's mutual funds are sold through domestic banks, which often prefer distributing proprietary products rather than those of competitors. The narrow distribution network limits the investing public's access to some investment products and makes it difficult for nonbank asset managers to capture retail savings.¹¹⁸

The SEC regulations require that an infrastructure fund be a closed-end fund of at least B2 billion in size and invest 75% of its assets within 6 months of registration. The regulation also outlines 10 types of infrastructure projects permissible for investment. Multi-tranche solutions are allowed by law.

¹¹⁷ Thai Provident Fund. *Tax Benefit*. http://www.thaipvd.com/content_en.php?content_id=00308

¹¹⁸ Deloitte. *Growth Opportunities for Financial Services in Thailand*. http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/FSI/US_FSI_GrowthOpportunitiesforFinancialServicesThailand_112812.pdf

Under The Provident Fund Act B.E. 2530, management companies of provident funds must hold a private fund management license. To protect and allow fund members' savings to grow while diversifying fund risk, the SEC established and enforces regulations in the following areas: types of asset classes funds can invest in, investment limits with respect to asset classes and companies, and disclosure to fund members of investment information and nonconforming investment actions.¹¹⁹ Moreover, NAV calculations under the mark-to-market approach are specified by the AIMC and are audited by NAV verifiers for correctness and compliance with rules.

The asset management companies and financial institutions that manage private funds must have obtained a private fund management license from the MOF, and must be members of the AIMC.¹²⁰ Since fund customers are also fund owners, benefits earned from fund investment activities—including dividends, interest, and capital gains—are subject to taxes at the same rate as that for direct investment in such securities.¹²¹ Private funds in Thailand are distributed through investment advisers with a license granted by the MOF on the basis of the SEC's recommendation.

A risk-based capital framework for insurance companies was implemented in Thailand in 2011 and the development of phase II of the framework started in 2013 with an expected completion date of 31 December 2014. In 2013, the minimum capital adequacy ratio was increased to 140%. In addition, the OIC is developing and implementing a stress-testing framework largely inspired by the 2011 catastrophic floods, after which the general insurance companies claimed a total loss of B126 billion in a single year.¹²² The OIC rolled out a 5-year Insurance Development Plan Vol. 2 in 2009 with the goal of developing the country's insurance system and adapting to international supervisory standards.

Infrastructure Financing

Thailand has announced an 8-year infrastructure development plan totaling B2.4 trillion, or about 20% of GDP.¹²³ About 20% of the total will be financed from the government budget and 45% through borrowing by state-owned enterprises. PPPs are expected to account for 20% of the needed financing, and the revenues of state-owned enterprises and the infrastructure funds (described below) for 10% and 5%, respectively. Major elements of the plan are mass transit, railway network expansion, road and water transport, customs facilities, and air transport.

Current Approaches

Infrastructure projects in Thailand have generally been financed from the government budget, or for those involving private investment, through bank consortia. The scale of projected infrastructure investment exceeds budget capacity, prompting greater

¹¹⁹ Thai Provident Fund. *Investment Regulations*. http://www.thaipvd.com/content_en.php?content_id=00327

¹²⁰ AIMC. *Private Fund: About Private Fund*. http://oldweb.aimc.or.th/en/22_infostats_personal_about.php

¹²¹ Footnote 120.

¹²² The Society of Actuaries of Thailand. *Industry Update and RBC Development*. http://www.actuaries.org/FUND/singapore/IndustryUpdateRBCDevelop_Pongpuengpitak.pdf

¹²³ *Bangkok Post*. 2014. Mega Project Budget Cut. 17 June; *Bangkok Post*. 2014. PPP Will Fund 20% of New Infrastructure. 5 August.

consideration of options to attract private investment. New PPP legislation to streamline the project approval process took effect in 2013, for the funding and operation of public services through a partnership between the public sector and private entities.

Tax incentives were introduced in 2012 to promote the use of infrastructure financing funds (IFFs). Individual investors in these are closed-end mutual funds receive a 10-year exemption from personal income tax on dividends from the funds. There is also an exemption from the value-added tax, the specific business tax (SBT), and stamp duties for the transfer of the assets from the originator to the IFF, provided certain conditions are met. These funds provide a means of securitizing the revenue streams from existing assets, facilitating new investment by existing infrastructure owners and operators. Packaging as a mutual fund opens up the possibility for individual investor participation, broadening the investor base and building on the tradition of Thai corporates' cultivating retail funding sources, albeit in this case indirectly through a mutual fund.

The first fund to take advantage of the incentives was the BTS Rail Mass Transit Growth Infrastructure Fund, launched in April 2013. This IFF securitizes the revenues from 23.5 kilometers of the Bangkok SkyTrain, which BTS Bangkok operates as concessionaire through its Mass Transit System subsidiary. BTS Group Holdings retained 33% of the fund; however, the \$1.2 billion raised provides capital available for investment in future infrastructure projects.

The True Telecommunications Growth Infrastructure Fund was established in May 2013 for the procurement of 6000 telecommunications towers and a fiber-optic grid from its parent, True Corporation. The revenue stream comprises rental fees for the towers and grid. A third IFF was launched in October 2013 by Amata B. Grimm Power, a company with five generating plants. The revenue stream for this fund is the sales from two existing plants, essentially securitizing the revenues from these assets. The planned fund size is B6.3–B6.6 billion, and the proceeds will finance about 9% of the estimated B70 billion construction cost of 16 planned new plants. The state-owned Electricity Generating Authority of Thailand delayed its 2014 plans to launch an IFF because of political conditions.

Bond Financing

The Thai corporate bond market is dominated by state-owned enterprises, banks, and other financial firms. Only two of the 30 largest local currency corporate bond issuers—True Corporation (telecommunications) and Bangkok Expressway (toll road)—are infrastructure related. Neither company has used project bonds, instead raising funds for general corporate purposes, which may include new infrastructure projects. Straight bonds predominate; with very little market for structured products.

Expanding the Use of Bond Financing

Despite their relatively large numbers, Thai institutional investors have little appetite for fixed-income products other than highly rated plain-vanilla debt. In part this is attributable to restrictive investment policies enshrined in regulation. Tax issues also impair bond market development more generally. Ultimately, Thai institutional investors would have to

gain expertise in project bonds to spur the development of this segment of the market. The removal of the current disincentives to invest in issues other than government and straight, highly rated corporate debt might encourage them to gain the required expertise.

The adoption of the prudent-person approach to investment policies would contribute to bond market development. The investment activities of insurance companies are currently highly regulated. Risk-based capital rules were introduced in 2012 and insurance companies have responded by adding capital or reducing portfolio risk. The OIC had indicated a willingness to consider moving to a more principle-based regulatory structure for investment activities; however, the amendments proposed in 2013 did not address the current restrictions. Perhaps the most binding from the perspective of bond-market development is the prohibition on investment in non-investment grade assets, which inhibits the growth of a high-yield market.

Mutual funds are limited by the SEC to no more than 5% of NAV in a single unrated or non-investment grade security, and no more than 15% in all unrated and non-investment grade securities. This eliminates the possibility of high-yield bond funds, which could help bring new issuers to the market. Provident funds are also subject to the same investment restrictions as mutual funds, making it impossible to devote a small portion of the portfolio to the higher-yield or active trading mandates that could attract new issuers to the market and help enhance secondary market liquidity.

The Social Security Fund (SSF), which holds 10% of all outstanding local currency debt securities, is subject to the Social Security Committee Regulations on Investment of the Social Security Fund, 2006. The most significant requirement is investing at least 60% of the fund's assets in "highly secure assets" (investment-grade, fixed-income securities). Similarly, the GPF Act requires investing at least 60% of GPF assets in "sound" assets. GPF fixed-income investments amount to about 4% of outstanding local currency securities. A prudent-person approach could allow both these large investors to dedicate a small portion of their funds to higher-yield or active trading mandates to promote bond market development.

Even within the current investment restrictions, the SSF and the GPF could play a catalytic role in developing the project bond market. The participation of such large institutional investors could assure the successful offering of bonds from pilot projects, as long as the private or PPP structure was sufficiently robust to attract an A rating. As large institutional investors, the SSF and the GPF are well positioned to develop the needed internal expertise in project finance and infrastructure investment.

The SBT constrains the investment activities of insurance companies as they must pay 2.75% on interest income and capital gains. Further, the tax is applied on "dirty prices" (it is not adjusted for accruals) and capital losses cannot be netted against capital gains. In contrast, the SBT rate paid by banks was lowered to 0.01% in 2009, and mutual funds and pension plans are not subject to the tax at all. These tax measures discourage insurance companies from holding and trading debt instruments, and impairs liquidity by bifurcating the secondary market on the basis of the tax regime applicable to participants.

Currency controls discourage foreign investment in local currency bonds. The 15% withholding tax is also an obstacle to foreign investment, although any changes in this policy must be considered in the broader context of government revenue requirements and the desire to influence capital flows. Foreign investors hold relatively few local currency debt securities, although this amount has been increasing. The bulk of foreign holdings are in the emerging-market debt portfolios managed by global investment management firms on behalf of large institutional investors. These portfolios are generally benchmarked to the J.P. Morgan Global Bond Emerging Market Global Diversified Index, where Thailand has a 10% weighting.

There are currently no restrictions on the buying and selling of Thai local currency bonds by foreign investors.¹²⁴ However, Thai currency controls add an extra layer of administrative complexity to investing in local currency bonds. Although foreign currencies can be transferred into Thailand without limit, these funds must be deposited in a foreign currency account of an authorized bank, and details of the transaction, including the source and purpose of the funds, must be reported to the BOT.

Foreign investors are also required to open with an authorized bank a nonresident baht account and a nonresident baht account for securities (NRBS) to handle the purchase and sale of local currency bonds, and to receive coupon payments. Deposits to and withdrawals from these accounts must be accompanied with supporting documents that detail the nature of the transaction. There are no limits on the amount of foreign currency that can be converted into Thai baht, although the total daily outstanding balance in an NRBS is limited to B300 million unless the BOT approves beforehand a temporarily higher limit. Failure to comply with these rules could result in forced conversion by the BOT at a penalty rate. Because global asset management companies typically hold all of their clients' assets in a single omnibus account, with many transactions going through a single account on the same day, complying with the B300 million limit can be challenging.

Viet Nam

Financial and Capital Markets Overview

Viet Nam has a bank-dominated finance sector, although most of the other elements of developed financial and capital markets are in place (Table A31). The banking sector grew extremely rapidly through 2011. Credit expanded at a rate of about four times average GDP, far outpacing deposit growth, from 2001 to 2011. In 2012, concerns over credit quality and liquidity risk in the banking sector crystalized in an uptick in reported nonperforming loan (NPL) ratios and significant liquidity support from the State Bank of Vietnam (SBV) to banks facing increasing difficulty funding themselves. The banking industry's loan-to-deposit ratio exceeded 110% in 2011, indicating high dependence on volatile funding

¹²⁴ To control capital inflows, Thailand imposed an unremunerated reserve requirement (URR) on foreign investors between 18 December 2006 and 3 March 2008. This rule required 30% of all incoming foreign currency to be held in a non-interest-bearing account, allowing the remaining 70% to be invested in Thai securities. The URR on unhedged investments in Thai equities was lifted the day after it was imposed (because of a sharp drop in the Thai stock market), and on Thai government debt securities with maturities exceeding 3 months, in March 2007. The URR was lifted entirely on 3 March 2008.

Table A31: Viet Nam Financial and Capital Markets Overview

Item	Number	Assets (D billion)	Assets (\$ billion)	Assets (% of GDP)
Total banks		6,446,226	303.4	163.7
State-owned commercial banks	5	2,876,174	135.4	73.0
Joint-stock commercial banks	34	2,780,976	130.9	70.6
Joint-venture, foreign-owned, and branches	59	701,986	33.0	17.8
Cooperative banks, people's credit funds		87,090	4.1	2.2
Total insurance companies (end of 2012)	45	119,638	5.7	3.7
Life insurance companies	14	78,757	3.8	2.4
General insurance companies	29	35,907	1.7	1.1
Reinsurance companies	2	4,974	0.2	0.2
Securities companies	105			
Fund management companies	43	100,000	4.7	2.5
Finance companies and leasing companies	23	68,673	3.2	1.7
Social Insurance Agency (Sep 2014)	1	292,366	13.8	7.4
Listed companies (stock market capitalization)	678	1,121,275	52.8	28.5
Total debt securities outstanding		925,199	43.5	23.5
Of which, local currency		866,348	40.8	22.0
foreign currency		58,851	2.8	1.5
Government debt securities outstanding		883,152	41.6	22.4
Of which, local currency		853,408	40.2	21.7
foreign currency		29,744	1.4	0.8
Corporate debt securities outstanding		42,047	2.0	1.1
Of which, local currency		12,940	0.6	0.3
foreign currency		29,107	1.37	0.7

Notes: All data are as of the end of 2014, except as noted. Exchange rate at the end of 2012 (\$1 = D20,828), at the end of 2013 (\$1 = D21,036), and at the end of 2014 (\$1 = D21,246). GDP = D3,245 trillion at the end of 2012, D3,584 trillion at the end of 2013, D3,937 trillion at the end of 2014.

Sources: *AsianBondsOnline*, State Bank of Viet Nam, Ministry of Finance, State Securities Commission of Viet Nam.

sources. While the ratio fell below 95% by 2013, this was still well above the range of 80% usually viewed as indicative of a stable funding base.

Responding to the pressures on the banking sector, the Government of Viet Nam initiated the Scheme for Restructuring the System of Credit Institutions in 2012. This included plans to restructure the state-owned commercial banks by raising capital and improving risk management and liquidity. The commercial banks were grouped into three categories: (i) healthy, (ii) temporarily short of liquidity, and (iii) weak. Healthy banks were encouraged to consolidate voluntarily to increase scale and competitiveness, and were expected to support weak banks with liquidity or through mergers. The SBV provided liquidity support to banks facing temporary problems. Weak banks were also provided with SBV liquidity

support while resolution options were pursued. Progress has been slow, but the structure of the banking sector has generally been preserved so far, with few closures or mergers.

Views of the soundness of the Vietnamese banking sector are obscured by loan classification and provisioning standards that differ from international standards. Ratings agencies estimate that total NPLs in the banking sector are about 15% of gross loans, or more than three times the reported levels.¹²⁵ One element of the government's restructuring plan is the establishment of the Vietnam Asset Management Company (VAMC), to which banks with NPLs of 3% or more of total loans can sell bad loans in exchange for 5-year zero-coupon bonds. While this removes the bad debts from the books of the banks, it does not address the bank's capital problems, and zero-coupon bonds do not provide liquidity or an earning asset, minimizing the benefit to the recipient banks. VAMC had purchased about 1% of total bank loans from more than 30 banks by the end of 2013, and was expected to acquire a further 2%–4% of bank loans in 2014.

The bad-debt overhang in the banking sector is likely to persist for several years, given at the very gradual pace of bank restructuring. This may provide further impetus to the development of local currency bond markets; however, the small size of domestic institutional investors, and the generally poor financial condition of Vietnamese corporates, in particular state-owned entities, will dampen growth prospects.

Contractual savings institutions are small. Life insurance penetration remains low: total premiums are equal to about 0.7% of GDP.¹²⁶ Most securities companies and fund management companies are quite small themselves, and many are affiliated with other financial institutions, primarily banks. The state Social Insurance Agency provides mandatory social insurance and retirement savings for employees in the formal sector, covering about 15% of the workforce.¹²⁷ It currently invests its surplus only in deposits at state-owned financial institutions.

The two stock exchanges have a combined market capitalization of about 11% of GDP. The Hanoi Stock Exchange (HSX) focuses on smaller company listings and also lists all government and some corporate bonds. The Ho Chi Minh Stock Exchange (HOSE) lists many of the larger companies and some corporate bonds. A major impetus for the growth of the capital markets has been the "equitization" of state-owned enterprises, with public listings of corporations in which the government retains a significant ownership interest. The restructuring plan for the state-owned commercial banks includes seeking private shareholders with government retaining a controlling interest.

The State Securities Commission (SSC), established in 1996, is responsible for developing and overseeing the capital markets. This function includes regulation-making authority, licensing, surveillance and enforcement, and the training and licensing of industry practitioners.¹²⁸ The HOSE and the HSX are SROs with authority over market participants. Insurance supervision is exercised by the Insurance Supervisory Authority under the

¹²⁵ See Moody's Investor Services. 2014. *Banking System Outlook Vietnam*. February; and Standard and Poor's. 2014. *Vietnam Banking Outlook*. February.

¹²⁶ A. M. Best. 2011. *Vietnam's Insurance Market Awakening to Further Change*. New Jersey.

¹²⁷ Economist Intelligence Unit. 2011. *Financial Services Report: Vietnam*. London.

¹²⁸ Decision of the Prime Minister 63/2007/QĐ-TTĐ.

Ministry of Finance. The SBV is the prudential regulator for banks, which are the largest investors in bonds, and through their securities affiliates play a major role in brokerage, advisory services, and underwriting.

The Enterprise Law, 2005, provides the foundation for companies to issue various types of bonds as permitted by law and the entities' articles of incorporation. The Law on Securities, 2006, establishes the requirements for the sale of securities to the public. In accordance with Vietnamese legal traditions, the law is further elaborated in 37 decisions and decrees covering topics ranging from the functions and responsibilities of the SCC to requirements for bond issuance. SBV Decision 07/2008/QD-NHNN governs the issuance of debt by banks, which have been the largest issuers of bonds other than government and government-related entities.

The public-offering requirements for bonds and equities are virtually identical. An issuer must submit to the SCC a dossier for registration that includes a prospectus and other prescribed documents. The SCC is required to approve, or reject with reasons, the public offering within 30 days of receipt of a complete dossier. The SCC review focuses on the completeness of the dossier and the fulfillment of the prospectus and other requirements rather than the merits of the issue.

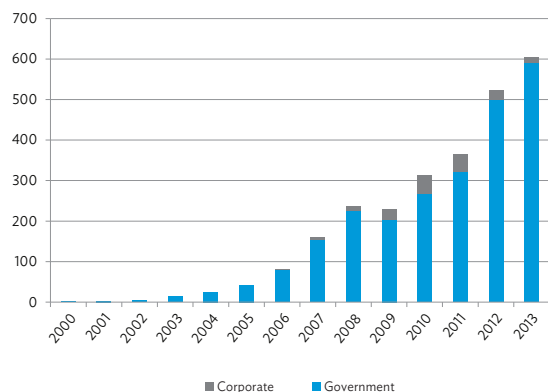
Local Currency Bond Markets

The Vietnamese local currency bond market includes about 500 government bond issues—among them, bonds issued by the Bank for Investment and Development of Viet Nam, municipal governments, and state-owned enterprises—totaling D605 trillion (\$28.8 billion) at the end of 2013, an increase of more than 100% over the 2008 figure (Figure A50). This reflects in large part government financing requirements related to bank restructuring and the need to seek alternatives to bank finance due to the distress in the banking sector. Despite the large nominal increase, outstanding issues relative to GDP have declined, because of inflationary pressures (Figure A51). The local currency corporate bond market is much smaller than the government debt market; it comprises about 45 issues totaling D32 trillion. The corporate debt market has declined in both absolute terms and relative to GDP since 2011, reflecting the difficult financing environment for both state-owned and private enterprises as the banking system undergoes restructuring.

Initial steps for bond market development in Viet Nam were made in the early 1990s. The passage of the first Law on Companies and Private Enterprises in 1990 set the framework for the equitization of state-owned enterprises, which began to issue bonds in 1992. This was followed in 1996 by the establishment of the SCC with a development and regulatory mandate, and in 1998 by decisions to establish securities trading centers in Ha Noi and Ho Chi Minh City.

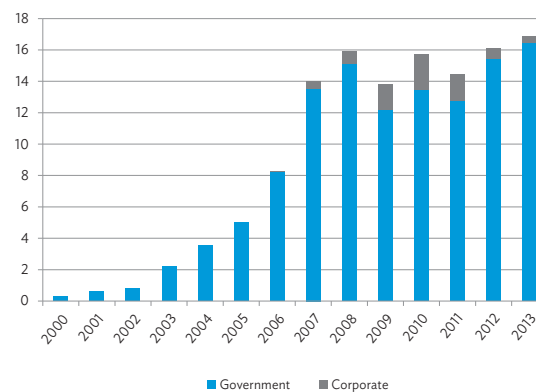
The first strategy for securities market development was approved in 2003 and updated in 2007 and 2012. Current objectives include increasing equity market capitalization to 70% of GDP by 2020 and establishing the bond market as an important channel for raising and allocating capital for economic development. A new Law on Securities is planned for 2015.

Figure A50: Local Currency Bonds Outstanding (D trillion)



Source: AsianBondsOnline.

Figure A51: Local Currency Bonds Outstanding (% of GDP)



Source: AsianBondsOnline.

Private sector corporations first began to issue bonds in 2006. After strong growth in 2007 and the first half of 2008, corporate bond issuance was severely curtailed by the general dampening effects of the global financial crisis. Issuance rebounded in 2009–2010; however, the fallout from the liquidity pressures in Viet Nam’s banking sector effectively closed the corporate bond market in 2011 as banks, the largest purchasers of bonds, faced growing liquidity constraints.

All government bonds are listed on the HSX, and corporate bonds may be listed on either the HSX or the HOSE. Government bonds are held in dematerialized form by the Vietnam Securities Depository (VSD). Corporate bond listing requirements established by the exchanges include minimum paid-in capital amounts, a minimum time in business of 2 years, and a minimum of at least 50 bondholders. When a corporate bond is listed, the physical securities will be deposited at the VSD. Unlisted bonds, which compose the bulk of the corporate market, are typically held as immobilized certificates in the vaults of the bank acting as custodian and registrar.

Banks are by far the largest purchasers of bonds. About three-quarters of all Vietnamese local currency bonds are held by the 10 large domestic financial institutions, and much of the rest are held by the Vietnamese subsidiaries of two large insurance companies, Prudential and Manulife, and by smaller banks and insurance companies. There are no other domestic institutional investors, fund managers tend to focus on equities rather than fixed-income investments, and foreign investment in Vietnamese local currency bonds is limited. Viet Nam is not included in the J.P. Morgan Global Bond Emerging Market Global Diversified Index, and thus is not included in the portfolio of many emerging-market debt funds using this popular index as a benchmark.

The Social Insurance Agency currently does not invest in the capital markets. It is restricted by decree from investing in designated state-owned financial institutions, so the surplus in the retirement and other funds is held in bank deposits. The agency does

hold some special government bonds, which have been issued directly to it to pay for the government's contributions, but these are not tradable and are not included in the total size of the bond market.

Bond Funds

The 44 fund management companies licensed by the SSC offer a range of fund products and advisory services to institutional and retail investors. Most funds are private capital pools, but there are four closed-end funds listed on the HOSE, with total assets of about D2 trillion (about \$95 million) at the end of May 2012. Aggregate data on the fund management business are not available, but data for HOSE-listed funds and publicly available data for the larger private funds indicate that funds under management may be in the range of D20–D35 trillion, with only a small portion devoted to fixed-income investments. Given the underdeveloped state of domestic institutional investors, it is not surprising that many of the funds are targeted primarily at foreign investors.

Infrastructure Financing

Viet Nam's enormous need for infrastructure investment is estimated at 10%–11% of GDP per year from 2014 through 2020, equivalent to about \$20 billion in 2015 alone. Infrastructure projects in Viet Nam have been financed largely from the government budget, and through central government bond investment program, and municipal bond issuance. These sources are likely to meet only around half of the needed investment. There is a need to attract private capital.

Viet Nam has a history of PPP projects, averaging about \$1.4 billion per year from 1994 to 2012.¹²⁹ Large-scale projects have been concentrated in the power sector, mostly in the form of build–operate–transfer projects. One of the first was the Phu My 3 project, completed with an ADB loan and a political risk guarantee, and a Japan Bank for International Cooperation loan in support of commercial bank financing. The revenue stream was provided by a 23-year off-take agreement with state-owned Electricity Viet Nam. Despite Phu My 3 and some other successful projects, however, growth in PPPs has been slow.

The legal framework for PPPs is not fully developed, and perhaps more importantly, the complex and time-consuming process of approval has prevented many projects from achieving a successful close.¹³⁰ There may also be tension between government priorities and investors' requirement for a commercial return.¹³¹ Considerable further work is required to enhance government capacity to complete the project preparation phase and negotiate PPPs, develop transparent approaches to investor selection, and standardize approaches to legal structures and agreements.

¹²⁹ A. N. Siackhachanh and P. M. Dickie. Private Investment for Infrastructure Development in Selected ASEAN+3 Member Countries. Manila: ADB.

¹³⁰ Lovells LLP. 2009. *Investing in Infrastructure in Vietnam*. London.

¹³¹ J. Harris and S. Boots. 2012. Viet Nam Infrastructure: Needs and Challenges. In Rod Morrison, ed. *The Principles of Project Finance*. Farnham, England: Gower Publishing Limited. pp. 319–336.

Project bond financing has not been used for infrastructure projects in Viet Nam. The nascent local currency corporate bond market lacks the necessary depth and expertise. International investors would be deterred by the lack of proven legal structures to facilitate project finance. There has been very limited indirect use of bonds for project finance. One of the first local currency bond issues by state-owned Electricity Viet Nam in 1992 was used to finance a high-voltage transmission line; however, repayment was guaranteed by the Ministry of Finance and not dependent on project revenues. About 18% of bonds issued by state-owned entities from 1990 to 2010 were by Electricity Viet Nam or were related to other infrastructure.¹³²

Expanding the Use of Local Currency Bonds

The local currency bond market will have to develop considerably if it is to play a significant role in infrastructure finance. The ongoing program of capital market development in Viet Nam has already identified most of the key initiatives required to expand the local currency bond market. These relate to the framework for regulation and supervision, the supporting infrastructure and specific development measures, and the need to build on the successes so far.

Following the recent introduction of a government debt auction calendar, establishing a primary dealer system and enhancing liquidity by focusing on benchmark issues are important next steps. The bond trading and settlement infrastructure must be improved. There are still many paper-based processes between buyers and sellers of bonds and the stock exchange trading platforms, the securities depository, and the settlement bank.¹³³ Current processes do not provide real-time gross settlement, as transactions are netted. New initiatives are planned, and it will be important that the results meet international standards, both to increase efficiency and minimize risk for local participants, and to make the local currency bond market more attractive to international investors.

One of the challenges in the corporate bond market is the lack of data on prices and trades, not only because the market is extremely thin, but because most corporate bonds are issued through private placement and trade and settled on a negotiated basis between the parties. An exempt regime, which allows the bonds to be listed but not traded on the exchange, combined with a requirement for the seller in an OTC transaction to report the trade details promptly to the exchange, would make more comprehensive bond pricing and trading data available through the bond trading platforms of the exchanges. Liquidity would increase and pricing would become more transparent. Plans for capital market development include establishing a corporate bond information hub and requiring the timely disclosure of trading information. Supplementary measures will be the release of government bond investor guidelines and the establishment of a government bond website.

Expanding the investor base to provide viable alternatives to bank financing is crucial to bond market development. The insurance sector, although small, can be expected to

¹³² Q. H. Vuong and T. D. Tran. 2010. Corporate Bond Market in the Transition Economy of Vietnam, 1990–2010. *Centre Emile Bernheim Working Paper No. 10/001*. Brussels. Note that most of the corporate bonds identified by Vuong and Tran are classified as government bonds in other sources such as *AsianBondsOnline* since these early issues by state-owned enterprises generally had explicit government guarantees.

¹³³ ADB. 2012. *ASEAN+3 Bond Market Guide*. Manila.

develop rapidly as the size of the middle-class increases. Public and private pensions offer the potential to establish large domestic institutional investors.

The Social Insurance Agency manages a range of social programs, including health insurance and retirement savings. A number of reforms have been proposed to expand participation and coverage; however, the funding and investment policies of the agency also need to be reviewed.¹³⁴ A transition to an actuarially sound funding base, coupled with investment policies to match the assets of the fund to its liabilities, could turn the Social Insurance Agency into a significant institutional investor and to address concerns about the sustainability of the fund. The agency's bond portfolio, which now accounts for 15% of its total assets, could expand.

The need to develop superannuation funds has already been identified as part of the capital market development strategy, and the legal framework is expected to be completed in 2015. Self-employed and many small and medium-sized enterprise employees need to provide for their own retirement, and those participating in the government-run retirement fund could benefit from additional voluntary retirement savings. The development of a fiscal and prudential framework for individual and group retirement plans could contribute to the growth of domestic pools of capital, and put in place the third pillar of retirement savings.

¹³⁴ T. V. Son. 2009. *Experiences of Social Pension in Vietnam, 2001–2009*. Paris: OECD; T. V. Son. 2006. *Vietnam: Development of Income Security*. Geneva: International Labour Organization.

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Local Currency Bonds and Infrastructure Finance in ASEAN+3

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

The need for infrastructure investment among ASEAN+3 members is well documented, with estimates for needed investment through 2020 reaching as high as US\$550 billion. Local currency financing of infrastructure projects has the important advantage of avoiding the currency risk that can arise when a project generating revenues in the domestic currency has foreign currency-denominated debt service requirements. This study was undertaken under ABMI and funded by the Government of the PRC. It addresses two key questions: (i) Why is local currency bond financing not more widely used for infrastructure projects in ASEAN+3? and (ii) What can be done to promote infrastructure bond financing?

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